IEP-SAC JOURNAL

2020-21

BUILD BETTER WORLD
PAKISTAN
SAUDI ARABIAN CENTER
www.iep-sa.org

FOR

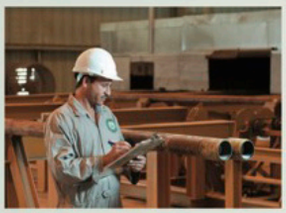
CYBERSECURITY CONNECTED AUTONOMOUS VEHICLES

Trends and Future Directions

FUSION BOND EPOXY

ahqsons.com

WATE-KOTE



AL-QAHTANI
PIPE COATING INDUSTRIES
Tariq A.H. AL Qahtani & Bros.

شركة القحطاني
لصناعات تغليف الأنابيب
طارق عبد الهادي القحطاني وإخوانه

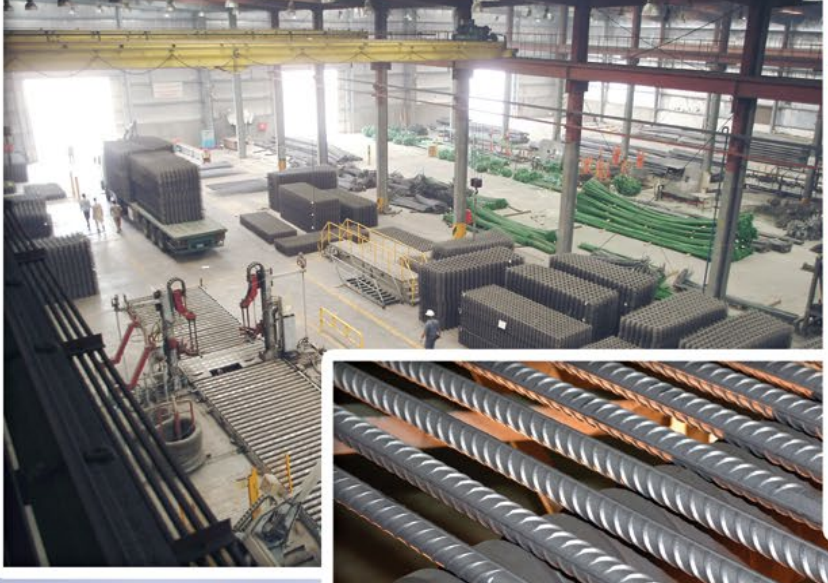
Kingdom of Saudi Arabia
P.O. Box 1980 Dammam 31441
Tel (013) 857 5400 | (013) 857 4150 Fax (013) 857 2255 info@apqei.net

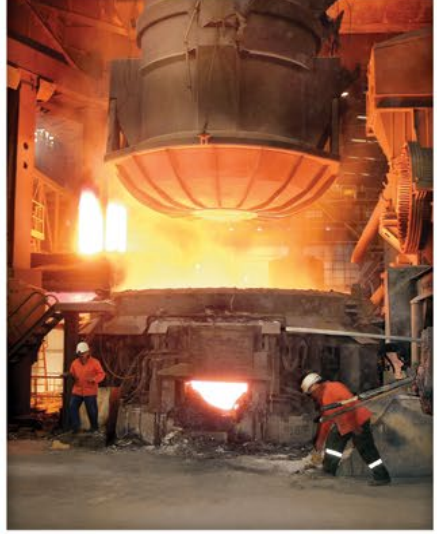
U.S.A. Office | Houston
Tel 001 713 781 0366 Fax 001 713 811 344 info@saosi.com

TÜV NORD CERT GmbH ISO 9001

المملكة العربية السعودية
ص.ب ١٩٨٠ الدمام ٣١٤٤١
هاتف ٥٤٠٠ ٨٥٧ (٠١٣) | ٤١٥٠ ٨٥٧ (٠١٣) فاكس ٢٢٥٥ ٨٥٧ (٠١٣) info@aqpei.net

مكتب الولايات المتحدة الأمريكية | هيوستن
هاتف ٠٣٦٦ ٧٨١ ٧١٣ ٠٠١ فاكس ٣٤٤ ٨١١ ٧١٣ ٠٠١ info@saosi.com





حديد الإتفاق
AL-ITTEFAQ STEEL

Since its inception Al-Ittefaq has grown by leaps and bounds has been pursuing continuous growth through balancing, modernization and expansion of its production facilities. As a result the plant which at inception was capable of producing about 1,000 tons per month of structural steel through manual process now stands as one of the largest privately owned rolling mills in the GCC and the second largest in the Kingdom.

Subsidiaries that includes…DRIC Plant having capacity to produce 1.4 Million Tons of DRI, 02 Melt Shops NASCO & ASCOproducing 02 Million Tons of Billets, 03 Rolling Mills in Dammam and 02 are in Jeddah having a combined capacity of 2.6 Million Tons of Re-Bars and having Down Stream Industries in Dammam, Riyadh and Jeddah are vertically integrated.

Quality activities of the ISPC are controlled and monitored from the beginning and this monitoring is sustained to the finished products till it is dispatched. The satisfaction of our customers is the biggest proof of the quality of our products.

شركة الحديد الاسفنجي
DIRECT REDUCTION IRON Co.

شركة الفيصل للصناعات الحديدية
AL-FAISAL STEEL PRODUCTS CO.

الشركة الوطنية للحديد
NATIONAL STEEL CO.

الشركة العربية للحديد
ARAB STEEL CO.

HEAD OFFICE :

P.O.Box : 2705, Dammam 31461. Kingdom of Saudi Arabia
Tel : +966 13 8579922 / 8576622
Fax : +966 13 8579014
Website : www.alittefaqsteel.com
Email : group@alittefaqsteel.com

In This Issue
CONTENTS

From the Chairman's Desk 4
Message From Ambassador Of Pakistan 6
Message From The President IEP Pakistan 8
Message From The Secretary General IEP Pakistan 10
Annual Report By General Secretary IEP SAC 12
Award And Scholarship Committee Report 16
IEP-SAC Standing Local Council 18
IEP-SAC Standing Committees 2020-21 20
Scenes from IEP-SAC Activities 22
Message from Chairman IEP-EP 28
IEP-SAC-EP Council Eastern Region 30
Eastern Province Standing Committees 2020-21 32
Scenes from Eastern Province activities. 34
Policy and Engineering Considerations for Pakistan's Water Security Challenge 38
Subcontracting Practices on Construction Projects in Pakistan .. 44
Causes Of Time Overruns And Possible Remedies For Mega Petrochemical Projects In Saudi Arabia 54
Graphene—"A wonder material" that could change the World... 66
Housing Sector Of Pakistan Issues & Solutions 72
Directory
- Architects And Town Planners 76
- Chemical Engineers 78
- Civil Engineers 82
- Computer Engineers 94
- Electrical Engineers 96
- Electronics Engineers 116
- Mechanical Engineers 122
- Engineers from Other Discipline 136

IEP Membership Form 140
New Directory Registration Form 142

BUILD BETTER WORLD
PAKISTAN
SAUDI ARABIAN CENTER
www.iep-sa.org

Editorial Board & Printing Committee

Dr. Awais Mahmood
Chief Editor & Convener

Engr. Prof. Dr. Rafiq M. Choudhry
Co- Convener

Engr. Naveed Ahmad

Engr. Ijaz Akhtar
(Members)

IEP-SAC Journal is published yearly by the Institution of Engineers Pakistan, Saudi Arabian Center (IEP-SAC), Riyadh, and distributed to the engineering community in Saudi Arabia. To promote discussion of issues in the field of engineering and ensure coverage of all responsible points of view, conflicting opinions and views may appear, however, IEP-SAC cannot accept any liability for such views nor for any errors or omissions.

Designed By:
Najam ul Majeed
(Cell: 0500253948)
Email: najam_majeed@yahoo.com

MAKE 2021 YOUR YEAR OF SUCCESS

Message from Chairman IEP-SAC

The year 2020 has been unlike any past year. The global pandemic led to major changes in the operation of all kinds of businesses throughout the world, which had a great impact on the engineering industry in ways no one could have predicted. But challenges always create opportunity. It's time to make 2021 your year of success.

Al-Hamdolillah, before start of Covid-19 in KSA, we organized all our seminars and picnic as usual; however the annual seminar planned in April, 2020 could not be executed due to lock down situation. Although by the grace of Allah SWT we managed to organize two seminars during mid of our 2019-20 session; one in November and the other in December, 2019. Even during the difficult time of pandemic we managed to organize a mid-term on-line seminar in September, 2020 on the topic "University-Industry Liaison and Pakistani Diaspora" delivered by Prof. Dr. Sarosh Hashmat Lodhi, V.C. NEDUET, Karachi.

It is well known and proven fact that a large portion of the economic growth of any nation is the result of knowledge intensive activities which involve academic and systematic research on issues and problems faced by the industry. In developed nations the systematic research was introduced in the society by gradual legislation. From this forum I would like to raise the voice of all Pakistani engineers in KSA to our government to make appropriate legislation, so that a knowledge sharing relationship between academia and industry could be developed. We always insist on the quality and standardization of the education; since collapse of education system is the collapse of nation.

In the annual seminar on 15th January, 2021, we are going to present our new IEP-SAC digital journal for the year 2020-21. Sustaining our legacy from past several years, this journal includes messages from various organizations and personalities, numerous technical papers, annual report by the GS, Eastern region sub-centre report, scholarship committee report, pictures of various events in Central and Eastern regions and the famous directory of Pakistani Engineers in KSA with recent updates.

The Institution of Engineers Pakistan – Saudi Arabian Centre (IEP-SAC) is providing a platform to all Pakistani engineers in KSA to excel their skills, share knowledge through seminars and technical papers, socialize among engineers along with their families, and help needy / meritorious engineering students in Pakistan; all done under the patronization of Pakistani Embassy.

On behalf of IEP-SAC, I would like to express the gratitude to the Custodian of the Two Holy Mosques, King Salman bin Abdul Aziz Al-Saud, Crown prince HRH Muhammad bin Salman bin Abdul Aziz and the Government of the Kingdom of Saudi Arabia for their hospitality and cooperation to Pakistani community and engineers in KSA. We are grateful to H.E. the Ambassador of Islamic Republic of Pakistan and embassy staff for their unceasing support and patronage to IEP-SAC. I extend my accolade to all of our council members in Central and Eastern regions for their dedication and commitment towards the IEP-SAC goals and objectives.

We shall exert our utmost efforts to come up to the expectations of our beloved father of nation Quaid-e-Azam Mohammad Ali Jinnah, which he mentioned at the time of inaugural of IEP in 1948 that we shall not only benefit the engineers themselves by improving their technical knowledge but also bring lasting benefits to public services which they are called upon to perform.

Finally, I would like deliver a message in the form of a hadith which has been narrated by Abu Huraira (May Allah be pleased with him. The Messenger of Allah, peace and blessings be upon him, said, "The wise saying (i.e. Knowledge or حکمت) is the lost property of the believer, so wherever he finds it then he has a right to get it." So, it is our duty to find the knowledge and get it with high excellence.

Best regards and good wishes for all

(Engr. Syed Muhammad Iqbal Ahmed)
Chairman, IEP-SAC, KSA
Friday 15th January, 2021G

Arabian Electrical Transmission Line Construction Co. Ltd.

A Tamimi Company
& ICC (Pvt.) LTD JOINT VENTURE COMPANY






Arabian Electrical Transmission Line Construction Company (AETCON) is a joint Venture of a TAMIMI CO and ICC(PVT) Limited Pakistan. ICC Further expanded its business in the Kingdom of Saudi Arabia For the Construction of Substations And Transmission Lines On Turnkey basis and registered AETCON in 1998.

AETCON in 1998 registered in Kingdom of Saudi Arabia to undertake Turnkey Projects for the Construction of Overhead / Underground Transmission Lines .The Company Specializes in Power Transmission and Distribution Systems, Electrical & Communication Systems, along with all associated Civil Works including Design, Procurement of Material, Transportation, Storage, Erection, Testing and Commissioning. AETCON progress in the field of High Voltage Transmission Line, stretching almost over the entire terrain of Kingdom of Saudi Arabia. AETCON has grown rapidly to become the leaders and nowadays became the most trusted names in the Kingdom of Saudi Arabia. Quality, Performance, Customer Oriented Attitude and Quest for Excellence are the paramount importance for AETCON.

AETCON QUALITY POLICY

At AETCON, it's a continuing process geared at achieving still better results in the future. Every member of AETCON is committing to achieve the highest possible Quality of project products and processes to meet the stated and implied needs of both the external and internal clients

SAUDI ARABIA OFFICE :
ARABIAN ELECTRICAL TRANSMISSION-LINE CONSTRUCTION CO. LTD. (AETCON)
A TAMIMI COMPANY & ICC (PVT) LTD. JOINT VENTURE - LIMITED LIABILITY COMPANY
P.O BOX 172 DAMMAM 31411 TEL : 00 966 3 - 889 - 1609, 889 - 1596, 889 - 1576 - FAX : 889 - 1640 - SAUDI ARABIA
E-mail : aetcon@aetcon.com

PROJECT OFFICE-RIYADH :
Al-kharaj Camp E-mail : aetconriyadh@gmail.com

PAKISTAN OFFICE :
242 - A ANAND ROAD, UPPER MALL, P.O BOX 1280, LAHORE - 54000, PAKISTAN E-mail : icc@iccpvt.com
PHONES: (042) - 5757123 - 28 FAX: 92 - 42 - 571 2594, 575 3664 URL : www.iccpvt.com

From The
Ambassador of Pakistan

No.Amb-1/2021 11 January 2021

I am pleased to note that the Institution of Engineers of Pakistan-Saudi Arabia Chapter (IEP-SAC) publishes an informative magazine every year. I am hopeful that like past, the Journal for the year 2020-21, would also provide useful and upto-date information in the relevant fields to the Pakistani Engineers, Architects and Town Planners working in the Kingdom of Saudi Arabia.

It is encouraging that Engineers from Pakistan have played a significant role in the development of the Kingdom. They are also playing a constructive role in promoting the soft image of Pakistan through their hard work, professionalism and commitment. I am confident that in future the Pakistani Engineers will continue to discharge their duties professionally. Pakistani Engineers have also contributed in strengthening the friendship between Pakistan and Saudi Arabia.

I am happy to learn about the social and philanthropic activities being undertaken by the Pakistani Engineers. I appreciate the efforts of IEP-SAC for providing scholarships to deserving students studying in various engineering colleges and universities in Pakistan.

I extend my best wishes to IEP-SAC and Pakistani Engineers for more success in their future endeavors. I assure them of full support of the Embassy in their activities towards promoting goodwill for Pakistan in the Kingdom and their contributions towards the development of Saudi Arabia.

Raja Ali Ejaz
Ambassador
of the Islamic Republic of Pakistan
Kingdom of Saudi Arabia

MESSAGE FROM THE PRESIDENT OF
THE INSTITUTION OF ENGINEERS PAKISTAN

It gives me immense pleasure to know that the Institution of Engineers Pakistan (IEP), Saudi Arabia Centre (IEP-SAC) is holding 55th Annual Technical Seminar on 15th January 2021 and bringing out its annual publication, "The IEP-SAC Journal", on the occasion.

On behalf of the Institution of Engineers Pakistan (IEP), I avail this opportunity to congratulate IEP–SAC for its continued and consistent efforts in making positive head way in pursuit of its enormous goals by providing unlimited opportunities, incentives, professional recognition and leadership potential. Your scholarship program for the needy students in Public Sector Engineering Universities in Pakistan and Azad Kashmir deserves all praise.

Publication of IEP-SAC Journal containing important Articles on current engineering issues and holding Technical Seminars always help to exchange knowledge and information for the best use of engineering profession and building professional ties among the professional engineers of different nationalities, thus building positive image of our country. We are proud of this achievement of IEP-SAC and wish for its great success in coming events and assure full support and acknowledgement on behalf of IEP.

Engr. Dr. Javed Younas Uppal

President, The Institution of Engineers, Pakistan

MESSAGE FROM THE SECRETARY GENERAL OF THE INSTITUTION OF ENGINEERS PAKISTAN

I am pleased to learn that the Institution of Engineers, Pakistan (IEP) Saudi Arabia Centre (IEP-SAC) is organizing its 55th Annual Seminar on 15th January 2021 and publishing its annual magazine on this occasion.

Holding of technical Seminars and Publishing the technical Journals play an important role in sharing the technical knowledge and expertise among the fellow Engineers and are a great Contribution in disseminating the technical knowledge.

The efforts of Institution of Engineers Pakistan Saudi Arabia Center (IEP-SAC) in this regard are commendable and deserve highest appreciation. The seminar will definitely help in advancement of Engineering Knowledge and welfare of Engineering Community working in Saudi Arabia.

I pray for the success and useful outcome of the event.

Engr. Amir Zamir Ahmed Khan

Secretary General, The Institution of Engineers, Pakistan

Annual Report by General Secretary

The year 2020 is now gone, but it has left quite many scars and unanswerable queries. Some see this year as a redemption for humanity, and others see it as a precursor to the greater challenges we are yet to face. Whatever the case maybe, this year opened up many new tangents for us to ponder. After all the advancements in Science and Technology, we saw the social fabric torn apart by a virus. The enormity of the challenge showed us the vulnerabilities of our societies and the lifestyles we follow. This year forever changed the lives of millions of us; the families who lost their dear ones during this pandemic.

This is just one side of the story. The other side is the way people responded to this pandemic. The authorities implemented the restrictions and the masses adopted the new rules and modes of operations instantly. Never has any vaccine been released in such a short time, and that also in enormous quantities. The tech companies quickly adopted their infrastructure to the sudden surge for internet bandwidth, users' connectivity and processing powers for services availability. Businesses embraced the situation and adopted remote working modes. When the paradigm shifted for established businesses, new business venues were also quickly explored and adopted.

Institution of Engineers Pakistan Saudi Arabian Chapter (IEPSAC) was not an exception during this situation. The organization also adopted the changed realities and introduced online meetings and seminars. Never had IEPSAC conducted any online technical seminar before. This year several technical seminars were conducted in Central and Eastern regions which were appreciated by the community. The details of IEPSAC events since the previous publication of the annual journal in May 2019 is as follows:

IEPSAC Annual Seminar 2019

The annual seminar was arranged on Thurs Apr 11, 2019 at King Salman Social Center. The topic of the seminar was "PAKISTAN WATER SECURITY INFRASTRUCTURE – ROLE OF ENGINEERING PROFESSION" delivered by Prof. Shahbaz Khan, Director Regional Science Bureau for Asia and the Pacific and UNESCO Representative for multiple Asian countries and the Research Director for Irrigation system in Australia. The Chief Guest at the occasion was the Welfare Attaché at the Embassy of Pakistan in Saudi Arabia, Mr. Abdul Shakoor Shaikh.

In his presentation, Professor Khan said that Pakistan could become from "Water deficit" to "Water Secure" country by adopting the research based globally accepted methods. The systematic approach to achieve this objective in the next 10-12 years should focus to have sufficient and reliable water supplies, healthy and resilient rivers and productive water agriculture. He advised the engineering community

to lead the awareness campaign of water challenges and present the workable solutions to the decision and policy powerhouses in the country. The session was followed by the question and answer session which was conducted by Dr. Rafiq Choudhry.

The chief guest, Mr. Abdul Shakoor Sheikh said that Pakistani engineers are playing a vital role in the development of the brotherly country of Saudi Arabia. He praised the expertise and hard work of the learned guest speaker to present the water crisis of Pakistan and suggesting workable solutions. The Chairman of IEPSAC, Engr. Syed Muhammad Iqbal praised the guest speaker for traveling all the way from Jakarta to deliver the scholarly and informative lecture on the subject.

Shields were presented to the advertisers and sponsors of IEPSAC in recognition of their support for the organization. Certificates of appreciation were also presented to the authors of research papers published in IEPSAC annual journal 2019. The IEPSAC 2019 annual journal and a souvenir gift were distributed among the participants and the event concluded with the dinner.

IEPSAC Mid-Term Seminar

To raise the awareness on the global issue of Environmental Pollution, IEPSAC arranged a technical seminar on Friday, 22nd of Nov. 2019 on the topic "Environmental Pollution: Causes, Effects and Control with Emphasis on Islamic Perspective" delivered by Engr. Syed Mubashir Hussain Kirmani. The chief guest at the occasion was the Welfare counselor of the Embassy of Pakistan, Mr. Mahmoud Lateef.

The Engr. Kirmani, a Civil Engineer having more than 52 years of experience in diversified fields and author of twenty-five technical papers in international journals, said that the main human-induced sources of Air pollution are power plants, automobiles, waste management, deforestation and others. Since the industrial revolution, the concentration of greenhouse gases in the atmosphere has disrupted the earth's delicate climate balance, causing a rise in global temperature. He said that this mammoth issue of environmental pollution is self-inflicted by humans. He mentioned several verses of the Holy Quran describing the ill effects of the human actions on the environment. Engr. Kirmani said that the Islamic perspective to control Environmental pollution based on the teaching of Quran and Sunnah is the best ethical code of conduct to build a low-emission climate resilient future.

Engr. Rizwan Ahmad, the Chairman of IEPSAC Eastern region and Guest of Honor on the occasion, appreciated the informative presentation by Engr. Kirmani. The chief guest, Mr. Mahmoud Lateef said that it is an irony that the developed countries in general enjoy clean environment and good quality of life, while the 3rd world countries, like Pakistan suffer from the environmental pollution issues caused by industrial powers of the world. Engr. Syed Muhammad Iqbal, the chairman of IEPSAC, said that IEPSAC had been instrumental in raising the awareness on the important global issues from engineering perspective. He thanked the attendees of the event for making it a successful seminar through their participation.

IEPSAC Mid-Term Seminar

Rector, NUTECH PAKISTAN, LT. GEN. (RTD) Khalid Asghar delivered a seminar on the topic "Pakistan's Need for Vocational Education and Training" on Dec 30, 2019. The Chief Guest on the occasion was the Ambassador of Pakistan, his Excellency Raja Ali Ejaz. Gen. (RTD) Khalid

Asghar said that Human resource development is our national imperative. Well-structured Engineering Technologies and Skills education through Vocational institutions is the only way forward for us. With this objective in mind, National University of Technology (NUTECH) is established as a pioneer 'University for Industry' to create, develop and promote emerging technologies and skills for the country.

The Ambassador of Pakistan to Saudi Arabia, His Excellency Raja Ali Ejaz informed the audience that MoU was signed between NUTECH and Saudi Institutions during the visit of Gen. Khalid Asghar to Saudi Arabia. He also appreciated IEPSAC for arranging a seminar on Vocational training on a short notice once the availability of Gen. Khalid Asghar was confirmed.

Family Picnic

Annual family picnic was arranged on Friday, Feb 07 2020 at a venue in Muzahimiyah. This yearly event has become a tradition for IEPSAC where people enjoy relaxing atmosphere and fun activities all day long. Activities were arranged for every age group and kept the families engaged for the whole day. Several dignitaries from the Embassy of Pakistan in Saudi Arabia attended the event along with their families. Children were enthralled to compete in various games organized. Youth had a chance to burn their energies in Cricket, table tennis and several other group activities. Large crowds were gathered to watch the teams compete in Cricket tournament, tug of war and musical chair. Poetic and literary values mesmerized the participants during the Musha'era and Quiz competition. Numerous gifts were given during the lucky draw session. Female section was ever energetic with games, performance, riddles, jokes and enjoyment for all age groups. A local caterer provided delicious breakfast and lunch prepared at the venue. Tea and snacks were made available during the whole day.

First Online Mid-Term Seminar

Due to unexpected and uncertain pandemic situation, the Annual seminar of IEPSAC could not be arranged in summer. Therefore, the council decided to conduct an online seminar for the local Pakistani Engineers community. The online event was organized on Thurs Sep 10, 2020. Prof. Dr. Sarosh Hashmat Lodi, the VC of NED University of Engineering and Technology was the keynote speaker who delivered a lecture on a very relevant topic for overseas Pakistani community "University Industry Liaison and Pakistani Diaspora".

In his presentation, Dr Sarosh Lodi said that the rapid technological development in recent past has been reshaping the modern world by revolutionizing the industrial practices. To bridge the gap between academic knowledge and industrial practices, it is critically important to strengthen the linkage between academia and industry. From industry perspective, University-Industry Linkage (UIL) is effective in terms of having technological development at lower cost of research by virtue of availability of low-cost workforce as students and faculty of University are at one place. From university perspective, academicians get to know the latest demand of the local, national and international markets. Dr Lodi said that Pakistani Diaspora can play a vital role in bridging the gap between industry and academia.

The Chief Guest of the event and Political Office at the Embassy of Pakistan, Mr. Saif appreciated the models presented by Dr Lodi in his presentation. He also commended the seminar

arrangement by IEPSAC on this relevant topic.

IEPSAC Central Region Council

The approved by-laws of IEPSAC necessitates the election of the Chairman at the end of the biennial term. The election was conducted on Oct 23, 2020. The Council re-elected Engr. S. M. Iqbal as the chairman of IEP-SAC for the next biennial term of 2021-22. Engr. Iqbal said that he was humbled by the demonstration of trust and confidence on him by the council members. He attributed the successes of the organization during the past two years to the Help of Allah SWT and excellent teamwork of council members. He nominated Engr. Asim Siddiqui as the General secretary, who later on nominated Engr. Farooq Iqbal as the Joint secretary of the organization. The council ratified the nominations and appreciated their capabilities and offered full support to them.

The convener of IEPSAC Scholarship committee, Engr. Shaikh Akhtar Hussain shifted to Canada after his retirement from the company. The Council thanked him for his instrumental role in driving the scholarship program of IEPSAC and bid him farewell. Two new members, Engr. Imran Ashraf and Engr. Dr. Fakhir Hasni joined the council in early 2020. The council hoped that their profiles and caliber would be a valuable addition to the council and would help towards the causes of IEPSAC.

IEP-SAC has three (3) centers in KSA, comprising a main center in Riyadh (Central Region) and two sub-centers in Eastern and Western regions. All centers are very active in organizing various technical seminars and other social events mainly for the Pakistani engineering community in KSA. Detailed reports about the activities of the sub-centers from their chairmen with photographs are also included on the subsequent pages of this annual journal.

We express our gratitude to the Custodian of the Two Holy Mosques, King Salman Bin Abdul Aziz and the Crown Prince Muhammad Bin Salman for facilitating Pakistanis in general and Pakistani engineering community in particular to contribute towards the development of our brotherly country Saudi Arabia. We are also thankful to the patronage and support of the Ambassador of Pakistan His Excellency Raja Ali Ejaz and his team throughout the year. The contribution of IEP-SAC Eastern region (Engr. Rizwan Ahmed and his local council members) in raising the funds for our scholarship program is highly appreciated. I wish to extend my thanks to all engineers, sponsors, advertisers, press/media personnel and well-wishers for their cooperation and continuous support to IEP-SAC.

Warmest Regards,

Engr. Mohammad Asim Siddiqui

General Secretary, IEPSAC

Report from Award and Scholarships committee

An Engineer plays an important role in the development of any country and build a better world. IEP-SAC, Saudi Arabian Chapter of The Institute of Engineers Pakistan under the patronage of the Embassy of Islamic Republic of Pakistan in Saudi Arabia along with other technical and social activities is also playing its role in supporting Engineering education in Pakistan.

By the grace of Allah the Almighty, the IEP-SAC scholarship program for needy and academically sound students in the Engineering Universities and Colleges of Pakistan was launched 23 years ago in the year 1996. With the joint efforts of IEP-SAC, Local Council members, and others, it has been expanding ever since and presently 96 students from the below listed 12 public-sector universities and colleges are benefiting from this program.

1. University of Engineering and Technology, Lahore
2. University of Engineering and Technology, Taxila
3. University College of Engineering and Technology (Bahauddin Zakariya University), Multan
4. Institute of Chemical Engineering and Technology (University of the Punjab), Lahore
5. Dawood University of Engineering and Technology, Karachi
6. NED University of Engineering and Technology, Karachi
7. Mehran University of Engineering and Technology, Jamshoro
8. Quaid-e-Awam University of Engineering Sciences and Technology, Nawabshah
9. NWFP University of Engineering and Technology, Peshawar
10. Baluchistan University of Engineering and Technology, Khuzdar
11. Mirpur University of Science and Technology, Mirpur (AJ&K)
12. Khawja Fareed University of Engineering and Information Technology, Rahim Yar Khan

It is not worthy from the list, this scholarship program serves all the four provinces of the Islamic Republic of Pakistan and the State of Azad Jammu and Kashmir. The rules and regulations, selection criteria and application forms can be accessed and printed from IEPSAC website. By the blessings of Allah the Almighty, 21 batches of the scholarships have been completed so far and 22nd batch was launched in September 2019, benefiting meritorious and needy students from this scholarship program who will serve the humanity and our homeland after graduation.

The continuity of IEP-SAC scholarship program has not only been maintained during last 23 years, but it has also been expanding gradually with the help of financial contributions from various philanthropists, individuals, and organizations in Saudi Arabia. I take the opportunity to offer the readers of these lines in general and the Pakistani community and engineers in particular to join hands with us in this noble and just cause. It is a great service to the Engineering community in Pakistan. It is my humble request to all to put our maximum efforts in contributing and expanding the scholarship program to the needy and deserving engineering students in Pakistan.

Your suggestions to improve this noble cause further will be most welcomed. Please do not hesitate to contact any of the members of IEP-SAC Awards and Scholarships Committee or Local Council for any suggestion or information.

Arch. Farooq Iqbal, Convener

IEP-SAC Awards and Scholarships Committee

مجموعة عبدالله الخريف

ABDULLAH KHURAIF GROUP

Healthcare, Agriculture, Industry, Trading & Engineering Contracting

Abdullah Khuraif Group Introduction:Abdullah Khuraif Group is a private enterprise located in Riyadh City under the Ministry of commerce & Industry Commercial Registration CR No. 1010213518, VAT#300037238900003, Chamber Of Commerce No: 77261 Riyadh. Our group has many years of experience in the market of Healthcare, Agriculture, Industry, Trading & Engineering Contracting, where our company has a very good reputation among the & international companies as well.

Our Markets:

Engineering & Architectural Firms
Constructions & Contracting Firms
Developers in Various Fields such as;
Healthcare, Agriculture, Industry, Trading & Engineering Contracting
Government / Public & Private Projects
Owners

فرع المقاولات العامة وإعادة تأهيل وأعمال التشطيبات والعزل المائي والحراري

Rehabilitations & Waterproofing Division

Introduction & Activities:

- Khuraif Group Rehabilitation & Waterproofing Division is working as approved Trade Special Contractor in All Kind of Waterproofing Works, Structural Strengthening & Concrete Repairs Works. The purpose of establishing (Rehabilitation & Waterproofing Division) is to provide total solutions to the ever-growing Construction Sector in the Kingdom of Saudi Arabia.
- Khuraif Group is well supported by a team of well Experienced Management, Engineers, Supervisors and Skilled Technicians for the daily accomplishment at every project and through their dedication.
- Khuraif Group is offering a good quality of workmanship at every job that they commit.
- Khuraif Group offers a wide & diversified range of high-quality services in different type of Rehabilitations & Waterproofing works such as:
- All kind of concrete repairs & Structural Strengthening works.
- Architectural Finishes, Masonries & Painting works.
- All kind of Waterproofing Systems which includes Modified Bituminous membranes, SIKA/INSUWRAP PVC Compartment and/or General Application Systems & EPDM membranes etc.
- Thermal Insulation by using Polystyrene, Rigid Polyurethane & Sprayed Polyurethane systems.
- Cementitious Waterproofing Systems.
- Liquid Applied Waterproofing Systems.
- All kind of Painting works.
- Epoxy Works, wide range of industrial flooring with Epoxy & different kinds of surface hardeners & Screed Grouting.
- Light Weight Cement Foaming.
- General Electro-mechanical & Plumbing works

Mirza Munir Baig
General Manager
Rehabilitation &
Waterproofing Division

Abdullah Al-Khuraif
Chairman
Abdullah Khuraif Group

Office: Abdullah Bin Zubair Road, Khuraif Medical Complex Building-Urijah/Post Box: 20616, Riyadh: 11465 KSA

PHONE +966114301600 / CELL +966507254505 / VAT # 300037238900003

www.khuraifGroup.com / info@KhuraifGroup.com / KhuraifGroup@gmail.com

IEP-SAC Local Council 2020-21

Central Region

Engr. S M Iqbal Ahmed
Chairman
Chief Electrical Engineer
Omrania & Associates,
Ph (Off): (011) 2930195
Mobile: 056-107-6903
Email: smiqbal01@yahoo.com

Engr. Mohammad Asim Siddiqui
General Secretary
Technical Architect
Nokia Networks
Ph (Off): (011) 440-6154
Mobile: 055-523-6107
Email: siddiquiyusuf@yahoo.com

Engr. Farooq Iqbal
Joint Secretary
Principal Architect
Saudi Consulting Services (Saudconsult)
Ph (Off): (011) 465-9975 x 1620,
Mobile: 050-712-9256
Email: fiqbal@saudconsult.com

Engr. Dr. Awais Mahmood
Assistant Professor
King Saud University, Riyadh
Mobile: 054-579-8315
Email: mawais@ksu.edu.sa

Engr. Dr. Fakhir Husani
Professor Jamia Imam Saud University

Engr. Farhan Sohail Yezdani
Regional Marketing Specialist
ABB Electrical Industries Ltd.
Ph (Off): (011) 4845600x5204
Mobile: 054-232-3578
Email: fsohail42@yahoo.com

Engr. Dr. Hafiz Imran
CEO
TeleNoc
Mobile: 056-9202510
Email: imran@telenoc.org

Engr. Imran Zaheer
Executive Manager
Mobily
Riyadh
Mobile: 056-566-0799
Email: imzaheer@gmail.com

Engr. Ijaz Akhtar
Project Manager
Saudi Telecom Company
Riyadh
Mobile: 055-910-1539
Email: ijazak@hotmail.com

Engr. Imran Ahsraf
Director Strategy and Business Development at Dawiyat Integrated Telecommunications and IT
Mobile: 056-560-0667
Email: imranrhl@yahoo.com

Engr. Mohammad Yousuf Ismail
SENIOR GIS CONSULTANT
MOMRA
Riyadh
Mobile: 056-977-9314
Email: engmyousaf@gmail.com

IEP-SAC Local Council 2020-21

Central Region

Engr. Mubashir H. Kirmani
Chief Engineer & Technical Advisor
Saudi Technical Limited (STL)
Mobile: 050-725-4876
Email: smhkirmani@gmail.com

Engr. Mian Abdul Hamid
IS & Governance Consultant
Saudi Electricity Co.
Ph (Off): (011) 461-9368
Mobile: 050-185-8073
Email: hamid1947@hotmail.com

Engr. Naveed Ahmad, PMP
Sr. Operations Manager
ABB Power Generation & Water
Ph (Off): (011) 265-3030
Mobile: 050-549-1307
Email: engr.naveedahmad@gmail.com

Rana Sarfaraz
Program Manager
Hayat Al Qassim
Mobile: 050-0048075
Email: ror13502@gmail.com

Engr. Prof. Dr. Rafiq M. Choudhry
Professor
Al Imam Mohammad Ibn Saud Islamic University
Mobile: 054-3946548
Email: Choudhry03@gmail.com

Engr. Riaz Ahmed
Remote Support Engineer
Philips Healthcare Saudi Arabia Ltd
Mobile:050-316-4358
Email: riazahmed111@gmail.com

Engr. Shaikh Asrar Ahmed
CEO
Maxil Technologies
Ph (Off): (011) 2924010
Mobile: 056361999
shaikh@maxil.net

Engr. S M Jaleel Hasan
Chief Executive Officer
AB Contracting
Mobile: 050-448-7027
Email: jaleel.hasan@gmail.com

IEP-SAC Standing Committees 2020-21

Central region

Technical Seminar Committee	
Name of LC Member	**Role**
Engr. Prof. Dr. Rafiq M. Choudhry	Convener
Engr. Dr. Awais Mahmood	Co-Convener
Arch. Farooq Iqbal	Member
Engr. Rana Sarfraz	Member

Scholarship Committee	
Name of LC Member	**Role**
Arch. Farooq Iqbal	Convener
Engr. Ijaz Akhtar	Co-Convener
Engr. Prof. Dr. Rafiq M. Choudhry	Member
Engr. Dr. S. M. Fakhir Hasani	Member

Sponsorship & Advertisement Committee	
Name of LC Member	**Role**
Engr. Riaz Ahmed	Convener
Engr. Dr. Hafiz Imran	Co-Convener
Arch. Farooq Iqbal	Member
Engr. Shaikh Asrar Ahmad	Member
Engr. Muhammad Yousaf Ismail	Member
Engr. Abdul Qadir Akbani	Eastern Province

Publication Committee	
Name of LC Member	**Role**
Engr. Dr. Awais Mahmood	Convener
Engr. Prof. Dr. Rafiq M. Choudhry	Co-Convener
Engr. Naveed Ahmad	Member
Engr. Ijaz Akhtar	Member

Liaison Committee	
Name of LC Member	**Role**
Engr. Mian Abdul Hamid	Convener
Engr. Rana Sarfraz	Co-Convener
Engr. Dr. Hafiz Imran	Member
Engr. Shaikh Asrar Ahmad	Member

IT & Media Committee	
Name of LC Member	**Role**
Engr. Muhammad Yousaf Ismail	Convener
Engr. Dr. Hafiz Imran	Co-Convener
Engr. Dr. S. M. Fakhir Hasani	Member
Engr. Rana Sarfraz	Member

Events Committee	
Name of LC Member	**Role**
Engr. Farhan Sohail Yezdani	Convener
Engr. Riaz Ahmed	Co-Convener
Engr. Dr. Awais Mahmood	Member
Engr. Muhammad Yousaf Ismail	Member

Finance Committee	
Name of LC Member	**Role**
Engr. Ijaz Akhtar	Convener
Engr. Syed Jaleel Hasan	Co-Convener
Engr. Riaz Ahmed	Member

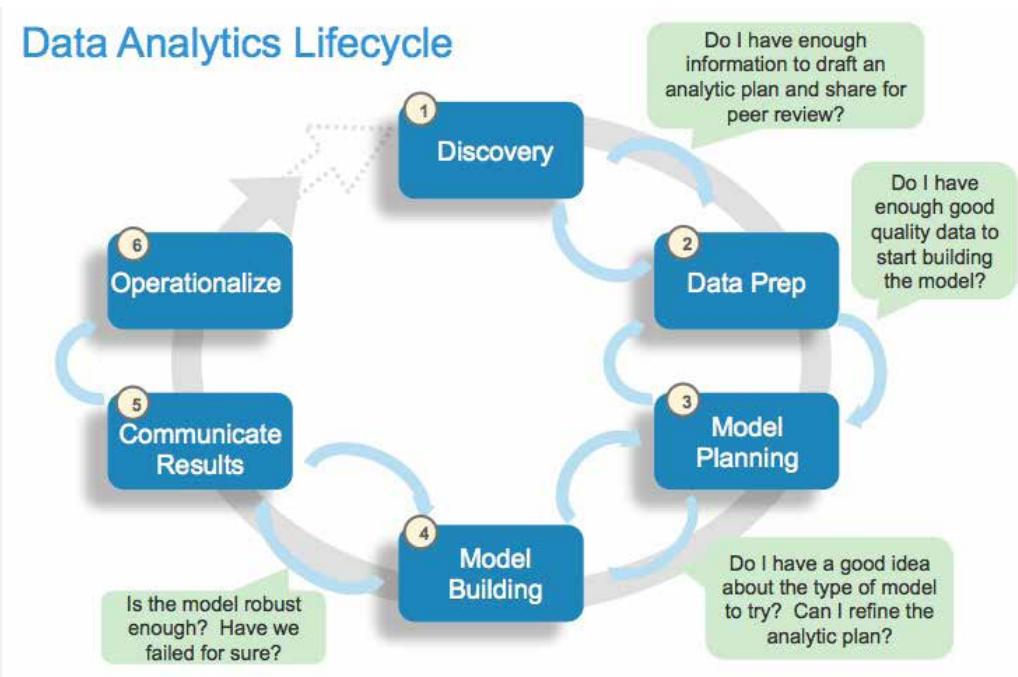
Advisors	
Name of LC Member	**Role**
Engr. S. M. H. Kirmani	Advisor
Engr. Syed Jaleel Hasan	Advisor
Engr. Shaikh Asrar Ahmad	Advisor

What is Data Science?

Data Science is a blend of various tools, algorithms, and machine learning principles with the goal to discover hidden patterns from the raw data. How is this different from what statisticians have been doing for years?

The answer lies in the difference between explaining and predicting.

Data science continues to evolve as one of the most promising and in-demand career paths for skilled professionals. Today, successful data professionals understand that they must advance past the traditional skills of analysing large amounts of data, data mining, and programming skills. In order to uncover useful intelligence for their organizations, data scientists must master the full spectrum of the data science life cycle and possess a level of flexibility and understanding to maximize returns at each phase of the process.



SCENES FROM IEP–SAC **Activities**

CENTRAL REGION

Family Picnic

SCENES FROM IEP–SAC **Activities**

CENTRAL REGION












SCENES FROM IEP–SAC **Activities**

CENTRAL REGION

52nd IEP SAC Technical Seminar

Environmental Pollution: Causes, Effects and Control with Emphasis on Islamic Perpective









SCENES FROM IEP–SAC **Activities**

CENTRAL REGION









SCENES FROM IEP–SAC **Activities**

CENTRAL REGION

First Online Mid-Term Seminar












SCENES FROM IEP–SAC **Activities**

CENTRAL REGION








Message from Chairman IEP-EP

The Almighty blessed us with the Islamic republic of Pakistan on 14th August 1947 and put it on the horizon of the world map. The dream of Sir Allama Muhammad Iqbal, around December 1930, was later espoused by M. Ali Jinnah in the "Two Nation Theory" and adopted into the famous 23rd March 1940 Lahore resolution.

Allama Iqbal's dream came true eventually with a total area of 796096 sq. km and a now thriving 203 million inhabitants. Pakistan is home to K-2, the second highest peak of the world, with 108 peaks above 7000 meters including 5 of the world's 14 highest independent peaks.

The first Muslim nuclear power, having over 150 universities, 400 technical and vocational institutions, Pakistan also boasts the world's largest earth filled dam, Tarbela Dam, and has the world's biggest canal irrigation system.

Helping to build a Better Pakistan, the Institution of Engineers Pakistan (IEP) was founded with the blessing of the father of the nation, Quaid-e-Azam Muhammad Ali Jinnah in 1948, and has now expanded to 10 centres in Pakistan and overseas centres in Kingdom of Saudi Arabia for more than 22 years.

IEP is member of:

- World Federation of Engineering Organization
- Consortium of Affiliates for International Program
- Federation of Engineering Institutions of Islamic countries
- Federation of Engineering Institutions of South and Central Asia
- Commonwealth Engineers Council

- American Association for Advancement of Science (AAAS)
- 33 other Foreign Professional Societies

Eastern province sub-centre is actively performing its roles and responsibilities to establish and promote excellent relationship and interaction among its members and other professionals. We provide opportunities for the exchange of engineering and scientific information, organize technical visits, research studies, conferences, seminars and workshops on engineering subjects.

We have organized following technical seminars this year:

1. "Global issues of water scarcity with

special reference to Pakistan" by Engr. Syed Mubashir H. Kirmani.

The discussion focuses on the fact that several countries in the world including Pakistan are approaching from water stress to water Scarcity Phase. In this presentation, Strategies to mitigate the water issues and possible options of building large and small dams in Pakistan and a comparative study of possible Large Dams was discussed.

2. "Combating Cybersecurity Challenges in Smart Cities" by Prof. Muhammad Khurram Khan.

   The increase in connectivity of smart cities may expose them to a diverse set of Cybersecurity risks, which could put the entire city operations and lives of its inhabitants at jeopardy. In this speech, we explored various technical and technological concerns that could be faced by the smart cities along with research contributions as future directions in this domain.

3. "A practical perspective on disruptive interventions for smart mobility and traffic safety deployments in Saudi Arabia" by Engr. Muhammad Farhan Butt, Dr.

Road traffic injuries account for 30% of all deaths worldwide and are one of the major causes of death among people 15–29 years old. Saudi Aramco chair for traffic safety research, in collaboration with stakeholders, is making a real difference by conducting applied scientific research on deployment of impactful mitigation measures in Saudi Arabia. This webinar highlights some of the key efforts made by Aramco safety chair on the subject.

We appreciate support of our sponsors, fellow engineers, local industries, Saudi Council of engineers and Jordanian Engineers Association for their valuable contribution in our success.

Finally, Thanking Almighty ALLAH for providing us resources, energy and opportunities to serve our engineering community.

Rizwan Ahmed,

Chairman,
IEP-SAC-EP

IEP-SAC-EP Council 2020;
Eastern Region

Engr. Rizwan Ahmad
Business Development Director
Sark Management Consulting
Mob: 00 966 50 490 5682
rizwan_asr@yahoo.com

Engr. Akhtar Jawaid Niazi
Vice Chairman
Executive Technical Manager
Qudrat Al Taacah Cont. Est.
Tel: 013 881 6466 050 389 3042
ajniazi_sa@yahoo.com

Engr. Mohammad Abrar Shami
General Secretary
Project Manager - Smart Grid Projects
Saudi Electricity Co. (EOA)
Tel: 013 858 6869 053 024 8100
mshami65@gmail.com

Engr. Ismet Amin Khawaja
Ex-Chairman
General Manager
Foundation Buildings Cont. Co. Ltd.
Tel: 013 864 6593 - 050 588 0792
iakhawaja@gmail.com

Engr. Abdul Qadir Akbani
Finance Secretary
Eng'g. & Facility Development Mgr.
Al Qahtani Pipe Coating Industries
Tel: 013 857 4150 - 0503 852602
abdul.qadir@aqpci.net

Engr. Asad Ali Hassan
Eastern Region Sales Manager-OEMs
Eaton Corporation
Mob: 055 433 0422
asadalihassan@hotmail.com

Engr. Asad Zuberi
Operations Manager
Allied Maintenance
Tel: 013 865 9765 - 0505 829 186
zuberiasad@gmail.com

Engr. Muhammad Farhan Butt, Dr.
Saudi Aramco Chair Professor & Director
Imam Abdulrahman bin Faisal University
Mob: 013 333 1717 - 054 467 0499
mfarhan54@gmail.com

Engr. Itlaque Ahmad Khan
Senior Mechanical Inspector
United Code Insvestment
Mob: 056 933 8154
itlaque@gmail.com

Engr. Khalid Hussain
General Manager
Intl. Contracting Resources Est.
Mob: 013 881 6466 - 050 384 7053
khalidmdqest@yahoo.com

Engr. Mohammad Azam Randhawa
General Manager
KMM Dammam
Mob: 050 686 7084
azam32925@gmail.com

Engr. Mohammad Jawaad
Senior Structural Engineer
Assystem Radicon Gulf Consult - Kentz
Mob: 056 433 4637
jawaadhere@hotmail.com

Engr. Muhammad Anwar
Lead Bridge Engineer
Assystem Radicon Gulf Consult - Kentz
Mob: 054 619 2669
anwar_mce@hotmail.com

Engr. Muhammed Karim, PMP
Project Manager
Saudi Electricity Co. (HQ)
Mob: 013 858 6791-053 220 9456
karimsec@hotmail.com

Engr. Muhammad Munawar uz Zaman
Deputy General Manager
Keller Turki Co. Ltd.
Mob: 013 833 3997 - 056 077 2962
munawarzaman2000@gmail.com

Engr. Nabeel Pervaiz Malik
Senior Key Account Manager
Shell Lubricants
Tel: 013 834 6421 - 050 054 3360
npmalik@hotmail.com

Engr. Pervez A. Naushahi
General Manager
Ground Engineering Contractors
Tel: 013 887 3577 - 050 580 9867
gec-kho@gecsaudi.com

Engr. Samiuddin Chughtai
Operations Manager - Projects
Gulf Consolidated Contractor Co. Ltd.
Tel: 013 845 7777 - 050 587 4716
samipk003@yahoo.com

Engr. Syed Arshad Raza, Dr.
Assistant Professor
Imam Abdulrahman Bin Faisal University
Tel: 013 333 2055 - 050 365 2588
arsh127@hotmail.com

Engr. Tariq Bin Zafar
General Manager
MAAZ Inspection / Testing / Training
Tel: 013 895 0481 - 050 681 4659
tariqalhussaini@gmail.com

IEP-SAC Standing Committees 2020; Eastern Region

IEP-SAC Journal 2020-21

Technical Seminar Committee	Reception Committee
Engr. Ismet Amin Khawaja (Convenor) Engr. Mohammad Abrar Shami (Co-Convenor) Engr. Akhtar Jawaid Niazi Engr. Abdul Qadir Akbani Engr. Muhammad Munawar uz Zaman Engr. Nabeel Pervaiz Malik Engr. Pervez A. Naushahi Engr. Samiuddin Chughtai	Engr. Italaq Ahmad Khan (Convenor) Engr. Mohammad Jawaad (Co-Convenor) Engr. Akhtar Jawaid Niazi Engr. Asad Ali Hassan Engr. Asad Zuberi Engr. Khalid Hussain Engr. Samiuddin Chughtai Engr. Muhammad Anwar
IT and Media Committee	**Sponsorship and Advertisement Committee**
Engr. Nabeel Pervaiz Malik (Convenor) Engr. Asad Ali Hassan (Co-Convenor) Engr. Muhammad Anwar Engr. Pervez A. Naushahi Engr. Rizwan Ahmad	Engr. Abdul Qadir Akbani (Convenor) Engr. Ismet Amin Khawaja (Co-Convenor) Engr. Mohammad Azam Randhawa Engr. Muhammad Munawar uz Zaman Engr. Pervez A. Naushahi Engr. Rizwan Ahmad Engr. Tariq Bin Zafar
Finance Committee	**Social Events Committee**
Engr. Abdul Qadir Akbani (Convenor) Engr. Khalid Hussain (Co-Convenor) Engr. Mohammad Jawaad	Engr. Khalid Hussain (Convenor) Engr. Mohammad Abrar Shami (Co-Convenor) Engr. Abdul Qadir Akbani Engr. Nabeel Pervaiz Malik
Membership Committee	
Engr. Samiuddin Chughtai (Convenor) Engr. Muhammad Anwar (Co-Convenor) Engr. Italaq Ahmad khan Engr. Mohammad Abrar Shami Engr. Muhammad Farhan Butt, Dr. Engr. Mohammad Jawaad Engr. Muhammed Karim, PMP Engr. Syed Arshad Raza, Dr.	

Annual Event, graced by H. E. Raja Ali Ejaz, Ambassador of Pakistan in Kingdom of Saudi Arabia, on the topic of "Global Issues of Water Scarcity with Special Reference to Pakistan" by Engr. Syed Mubashir H. Kirmani held on March 14, 2019 at Karawan Compound Community Hall, Al Khobar.











SCENES FROM IEP–SAC **Activities**

EASTERN REGION












Technical Seminar on the topic of "Combating Cybersecurity Challenges in Smart Cities" by Prof. Muhammad Khurram Khan held on November 21, 2019 at Karawan Compound Community Hall, Al Khobar.












SCENES FROM IEP–SAC Activities

EASTERN REGION












Policy and Engineering Considerations for Pakistan's Water Security Challenge

Shahbaz Khan

*UNESCO Regional Science Bureau for Asia and the Pacific

Abstract

Pakistan is a country already facing water shortages for urban as well as rural water uses. A number of comprehensive water sector reports, a climate change policy and a national water policy exist but implementation remains limited due to financial, political and institutional challenges. The Indus river basin water system is the backbone of the water security in Pakistan and is suffering structural and non-structural issues of adequate water storage, timely water conveyance, efficient water distribution, and appropriate consumptive use challenges. Inspirational integrated approaches such as Integrated Water Resources Management could not be implemented due to national and provincial mandates on the management of surface and ground waters and associated equitable distribution of costs and benefits among stakeholders. This paper presents an overview of the challenges and possible policy and engineering options through a diagnostic water balance analysis considering population, cropping patterns, system efficiencies and storage options.

Keywords

Efficiency, climate responsive, irrigation, Indus storage, water balance diagnostics, SDGs

Introduction

Pakistan is a country characterised by great landscape variations from snow-covered northern mountains to irrigated floodplains of Indus, vast coastal lands and extremely dry desserts of the Balochistan Plateau. The Indus Valley civilization dates back to the Bronze Civilization approximately to 5500 BCE, and was founded on abundance of water supplies to the fertile floodplains. Since independence in 1947 Pakistan has been struggling with managing its water resources as more than one third of the water resources have origins outside of Pakistan. This has resulted in water-distribution treaty between India and

Pakistan, brokered by the World Bank in 1960, giving control over waters of Beas, the Ravi and the Sutlej to India, while control over the water flowing in the Indus, the Chenab and the Jhelum, which constitute major source of water to this vast agrarian economy, was given to Pakistan. With rising population and increasing demands for water, water security has been becoming a major concern as the per capita annual water availability has dropped from 5,260 cubic meters in 1947 to less than 1,000 cubic meters in 2018. According to some studies, Pakistan is ranked 46 among 48 nations in the Asia-Pacific region, with only Kiribati and Afghanistan having a lower water security index. Pakistan is also among the top 10 most climate vulnerable countries in the world. The looming shortages and worsening quality of water have become serious threats to food, health, energy, job security and, therefore, to the delivery of 2030 Agenda for Sustainable Development Goals (SDGs). Cities have run out of safe drinking water, agriculture shows lower crop yields as crops remain thirsty, there are vast salinized floodplains below Kotri Barrage, and drying polluted wetlands like Lake Manchar have become sad environmental disasters. A National Water Policy (Government of Pakistan 2018) and a National Climate Policy (Government of Pakistan 2012) exist, but the crisis seems to become worse as implementation roadmaps and action plans are missing. This situation requires extraordinary measures as business-as-usual is no longer an option. This article provides a diagnostic water balance analysis of existing data on water availability, water demands, future water availability scenarios and implementable solutions to lead Pakistan from water scarcity to water security.

Water Balance Diagnostics

A schematic of the Indus water system showing the main rivers of Jhelum, Chenab, Ravi, Sutlej and Indus, along with the key river and water infrastructure is given in Figure 1. The storage capacity and water diversion capacities are given in Million Acre Feet (MAF). The key statistics of the Indus river system are: three major water reservoirs with combined capacity of 13.86 MAF, power generation capacity of 6902 MW, 18 water diversion barrages, 45 main canals with a total length of 56,073 km, 12 link canals between rivers with a total length of over 700 km and 107,000 km of water courses. The Kotri barrage is the furthest downstream water diversion barrage for irrigation.

According to 2030 Agenda, Sustainable Development Goal 6 is to ensure water security leaving no one behind. To implement 2030 Agenda SDG 6 we need a paradigm shift from issues to solutions (Khan 2016). According to the UNESCO International Hydrological Program (IHP), water security

Figure 1. Schematic of water system and key infrastructure (Ministry of Water Resources and others)

is defined as "the capacity of a population to safeguard access to adequate quantities of water of acceptable quality for sustaining human and ecosystem health on a watershed basis, and to ensure efficient protection of life and property against water related hazards -- floods, landslides, land subsidence, and droughts". UNESCO IHP, 2012).

The diagnostic analysis shows that for a period of forty years (1977 to 2017) the minimum, maximum and average flows in Indus River are 67, 112 and 90 MAF, respectively. The same statistics for Chenab River are 18, 33 and 26 MAF, respectively, and for Jhelum River are 12, 32 and 23 MAF, respectively. The overall minimum, maximum and average availability of water from these rivers is 99, 183 and 144 MAF, respectively (Figure 2).

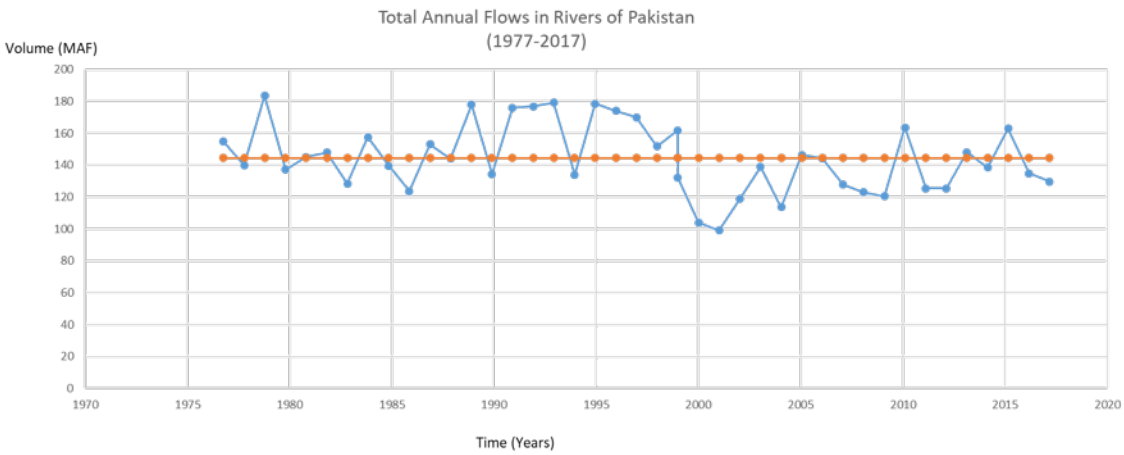


Figure 2 Total Annual Surface Water Flows in Pakistan (1977-2017)

The effective water available from underground water recharges from rivers and the vast irrigation system is estimated to be around 50 MAF. There are several key questions to be answered. Are these water resources and rainfall over the irrigated and arid (barani) areas enough for consumptive water uses? Is too much water escaping the productive use below the Kotri Barrage to the ocean? Additionally, Pakistan's water storage capacity from existing large dams Mangla and Tarbela is less than 14 MAF and is continuously decreasing due to sedimentation. Another key question is: Can an additional 6 to 10 MAF of water from planned dams make Pakistan water secure?

Figure 3 gives an overview of water flows for last forty years below Kotri Barrage, showing maximum, minimum and average flows as 92, 0.3, and 27 MAF, respectively. There has been many years (e.g. from 2002-2003) when there were no substantial flows downstream of Kotri Barrage, which means all the available water was diverted due to low supplies. Under such future scenarios, will managers be able to fill existing and new dams? A close examination of the water balance of Pakistan shows water losses from dams to fields and within the farmer fields of from 25 to 50 percent, due to the use of flood irrigation and poor system management (Khan et al 2006). Such losses are too high by international standards. Some of these losses can be recovered through t extra expense of energy to pump from the groundwater, while others are unrecoverable as they end up in saline, unusable groundwater or evaporate back to the skies.

The storage yield curves of the Indus river basin show good potential for 20 MAF of surface water storage. Given the data showing the history of low flows below Kotri, there will be years when managers will be unable to fill existing storages. The existing dams and network of barrages and canals have been

able to divert around 105 MAF successfully. The additional surface storages can store around 10 MAF flows in the Indus Basin during normal and flood years. During flood years (e.g. 2010) more than 50 MAF of water flowed below Kotri Barrage. During such years there is an option of using these flows to recharge groundwater by diverting floods to the thirsty landscapes such as Thar.

Many of the summer crops grown in Pakistan, such as rice and sugarcane, demand the highest amounts of water to grow them. Meanwhile, the largest winter crop and staple food crop, wheat, remains under irrigated. Can there be options to limit area of rice and sugar cane and tailor Pakistan's cropping patterns to present and future water availability?

A diagnostic water balance analysis scenario developed by the author based on existing frameworks given by Khan et al (2010) and Kang at al 2009 climate change impacts review is presented in Table 1. The water security is calculated based on the available data of flows, groundwater availability, rainfall, projection of population to 245 million persons, construction of additional dams (e.g. with 10 MAF storage), and climate change impacts for a possible 2 degree rise in temperature, to understand water deficits. Other unpublished scenarios are available and not quoted here for brevity reasons.

Table 1. Diagnostic water balance analysis (Source: Author)

% Water Deficiency	Scenario
35	2030 water deficit Business as usual 2C temp rise
31	With dams by 2030 but business as Usual 2C Temp Change
13	2030 with dams and 50 efficiency gains
0	2030 with dams, increased efficiency and changed cropping patterns

The rough percent water deficiencies in Table 1 indicate the net difference of total water supply and demand – these numbers may need further improvement through detailed data and analysis. The business as usual assumes current inefficient water supply and water use practices.

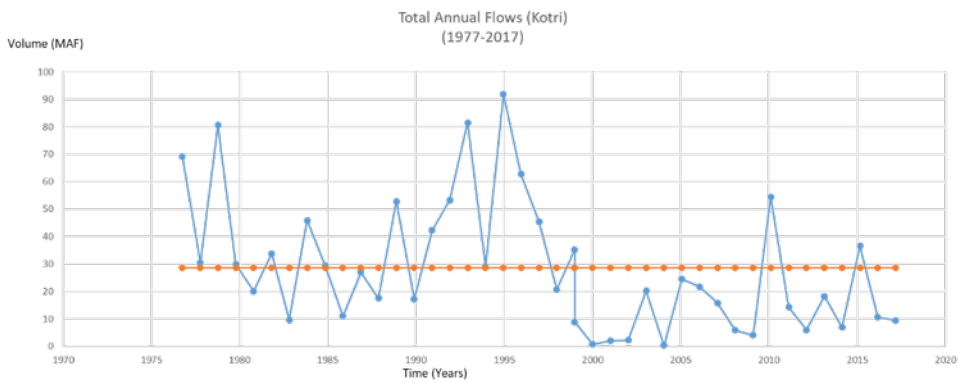


Figure 3. Annual Flows in River Indus Below Kotri Barrage (1977-2017)

Plausible Policy Options in a Nutshell

In a nutshell, dams and artificial recharge of aquifers are urgently needed, but increased water storage capacity in Pakistan cannot solve the water security problem alone. Similar conclusions were drawn for the Murray-Darling Basin by Khan et al 2007. A key conclusion from these scenarios is there is a need to invest in more dams as well as

invest in water savings and appropriate storage options. Greater gains need to be made by saving the huge water losses (equivalent to storage of over 5 new dams) through investment in proven water efficiency technologies (Khan et al 2007 a and b). At the farm level such technologies can include the use of drones for cropping mapping, water control devices such as smart valves, laser levelling, cheap drip irrigation, wetting front detection systems, crops on beds etc. to reduce water losses. There can also be investment in leakage hotspot to reduce losses from the supply system to saline groundwater and reduce unproductive evaporation in the system. To improve water availability one can recommend rooftop and micro catchment harvesting, artificial recharge of areas such as Thar with flood waters, and storage of water in soils through conservation measures such as using polymers and other technologies. Given the transboundary nature of water resources, with over 30 percent of water supplies coming from upper catchments of Jhelum and Chenab rivers across the borders, there is a need to construct a minimum linkage infrastructure. For example, linking Indus River below Tarbela Dam with Jhelum River to be able to supply minimum water needs for strategic water and food security plans.

Where can be the practical entry points for the road to a water secure Pakistan? Many studies are available, for example, Water Sector Task Force (WSTF) Islamabad (2012), but implementation remains limited. The urgent need is to provide safe drinking water as a basic human right to all citizens of Pakistan. There can be interesting learning from the example of South Africa where 25 litres/capita/day is adopted as a basic human right, free of charge, after which there is a sharply increasing pricing regime. If one uses such an approach, less than 2 MAF are needed to provide basic water supply to all Pakistanis. The author recommends adopting a 100 litres/capita/day and replacing hazardous groundwater with surface water supplies from canals running close to our cities such as Lahore and Faisalabad, and provide desalinised seawater to cities such as Karachi. Land based wastewater treatment such as being used by the National University of Science and Technology (NUST), through a UNESCO project, can provide economical solution to treat waste waters from the cities, which are currently being used to grow unsafe vegetables in the surroundings of most cities.

The existing water institutions and governance system has been unable to tackle the water security challenge of Pakistan. There is a need for a National Water Commission working under the directions of the National Water Council representing all stakeholders. Reforms to water education and continuous professional development are needed through international collaborations. A national research university of water management similar to Hohai University in China is recommended, closely linked with the Ministry of Water Resources. The schematic of a water roadmap is given in Figure 4.

There must be a focus on improved governance, trans-boundary data availability and more extensive water investments in controlling analysis at the urban water supply system and irrigation districts levels for targeted improvement of water efficiency, availability and water equity. A sustained 10-year effort is needed for a Water Secure Pakistan, including construction of critical water infrastructure (dams and artificial recharge of aquifers), governance according to 21st century water management standards, and technology for water resilience and water efficiency. The business-as-usual approach is no longer an option for Pakistan!

Acknowledgements

An abridged version of this article titled "Pakistan's water economy: getting the balance right" by the author was published in Daily Tribune July 28, 2018 and an expanded version

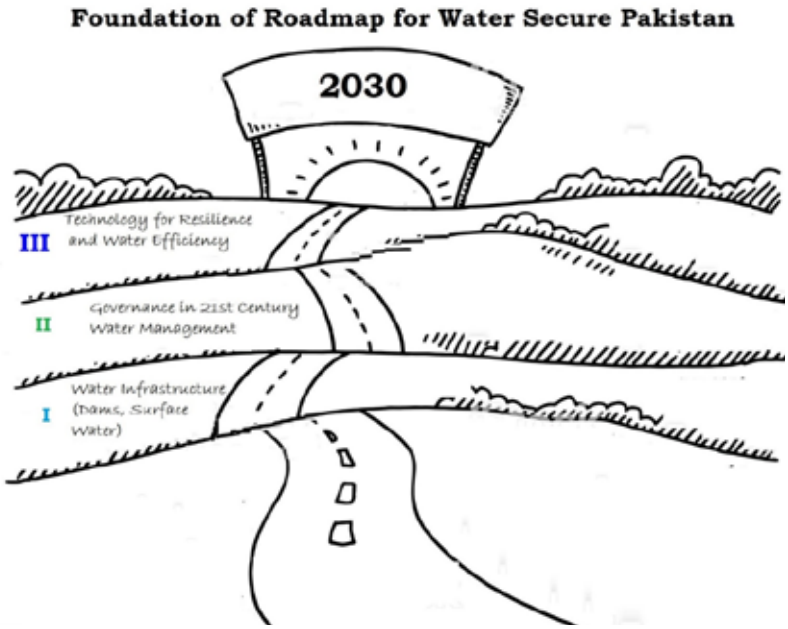


Figure 4. Elements of a Possible Water Security Roadmap for Pakistan

in the World Water Policy on June 18, 2019.

References

Government of Pakistan (2012), National Climate Change Policy.

Government of Pakistan, Ministry of Water Resources (2018) National Water Policy

Khan S, 2016. Opinion Editorial: Sustainable Development Goal 6 and Agenda 2030 – A Paradigm Shift in Water Management to Realise the Future We Want for All. New Water Policy and Practice Journal. Volume 2, Number

Kang, Y, Khan S and Ma Xiaoyi (2009) Climate change impacts on crop yield, crop water productivity and food security – A review. 1-10. Published online Progress in Natural Science Elsevier. doi:10.1016/j.pnsc.2009.08.001.

Khan S., Rana T., Yuanli C., Blackwell J. (2006) Can irrigation be sustainable? Agricultural Water Management 80:87–99

Khan S., Malano, H, Davidson, B and Ahmad, A and Mushtaq, S and Allan, C (2007a) Optimised irrigation productivity and river health through Pick & Mix strategies catchment water cycle management, alternative cropping systems, real water savings and aquifer storage and recovery. Darling Heights, Qld.: CRC for Irrigation Futures, 2007.

Khan S and Abbas A (2007b) Upscaling water savings from farm to irrigation system level using GIS based agro-hydrological modelling. Irrig. and Drain. 56(1), 29-42. DOI: 10.1002/ird.284.

Khan, S., Rana, T., Hanjra, M.A., (2010). A whole-of-the-catchment water accounting framework to facilitate public–private investments: an example from Australia. Water Policy doi:10 .2166/wp .2009. 2027.

UNESCO-IHP (2012) Strategic Plan of International Hydrological Program Eighth Phase. UNESCO IHP Paris.

Water Sector Task Force (WSTF) Islamabad (2012). A productive and water-secure Pakistan: Infrastructure, institutions, strategy, the Report of the Water Sector Task Force of the Friends of Democratic Pakistan.

Subcontracting Practices on Construction Projects in Pakistan

By

Prof. Dr. Rafiq Muhammad Choudhry

Abstract

Contractors undertake the services of subcontractors to achieve certain objectives such as obtaining cost reductions, risk sharing and securing access to specialized services. Subcontracting practices in the construction industry of Pakistan led to identification of the main problem areas. This not only helps examine the overall satisfaction and the quality of service provided by subcontractors but also focuses on ways to improve the quality of construction. A questionnaire survey was conducted to investigate the extent and involvement of construction firms in subcontracting, reasons for subcontracting, and the selection criteria of subcontractors. Additionally, interviews were conducted with researchers, professionals and experts of the industry. The results revealed a widespread use of subcontracting and sub-subcontracting in the construction industry, primarily done to save time and money. Results show that 53% of the respondents are satisfied with their current subcontracting experiences, whereas 47% of the respondents want positive changes to be made in subcontracting arrangements. The findings of this research will help subcontractors to improve their performance and assist stakeholders in the successful execution of a quality project through the judicious employment of subcontractors.

Introduction

Prime contractors rely heavily upon the

specialized services of subcontractors to reduce costs and increase efficiency on construction projects. Through their specialized services, subcontractors execute specific tasks that prime contractors could not perform efficiently (Markowitz 2007). These tasks are assigned to lower-tier contractors known as subcontractors. On numerous building projects, commonly 80% to 90% of the tasks are performed by subcontractors (Hinze and Tracey 1994). Most prime contractors sublet large portions or all of the specialized work on their projects due to their inability to perform specialist tasks, e.g. plumbing, electrical work and insulation etc. While prime contractors are commonly known to sublet portions of their work, subcontractors also sublet a portion of their contract to other specialized firms, commonly known as lower-tier subcontractors or sub-subcontractors.

In the housing sector of Hong Kong the employment of direct labor accounts for around 1% of the construction work whereas 99% of the work is subcontracted (Lai 1987). The extensive practice of subcontracting is also reported in other countries, including the UK (Flanagan and Gray 1989) and Japan (Kimura 2002). It is argued that prime contractors maximize their profits by minimizing their performance costs through subcontracting (Richter 1982).

Subcontracting is practiced for a variety of reasons. It is not possible for companies to own, operate, control, and maintain specialized plant and equipment as these generally receive limited usage on a typical project (John 1991). Because of these unique skills, subcontractors are able to execute their specialized work tasks more efficiently and at a lower cost than prime contractors (Lin 2003).

In the construction industry of Pakistan, subcontracting practices are extensively used in residential, commercial and civil engineering projects. Even though a major portion of a construction project is usually executed by subcontractors, the issues regarding subcontracting are seldom acknowledged and addressed. The objective of this research was to examine the existing subcontracting practices in the construction industry of Pakistan, identify the major problem areas and to explore the overall satisfaction with the quality of service provided by subcontractors in Pakistan.

Methodology

This study used mixed research method and a questionnaire survey was utilized as the main research instrument. It was decided that the information would be obtained through mailed questionnaires and personal interviews, which would yield detailed information. A detailed literature review was conducted and a number of questionnaires (developed by other researchers) were examined. Tailoring the study to the construction industry of Pakistan, the survey instrument was finalized based on the research of Sit and Wong (1989) and John (1991). The questionnaire was further modified by incorporating feedback of the pilot survey to suit it for the construction industry. For this purpose, ten questionnaires were presented in different organization: universities (2), clients (2), consultants (2) and contractors / subcontractors (4), followed by interviews with each participant. A five-point scale with one being 'extremely important' and five being 'not important' was utilized to solicit the perceptions on the degree of importance of various practices.

The questionnaire was sent to top registered firms with the Pakistan Engineering Council (PEC), including clients, consultants and contractors. According to PEC data, the number of building and civil engineering establishments registered in Pakistan reached 26,000. For this population size, Dillman (2000) provided a sample size of 61 is enough with ±10% sampling error and for 95% confidence level. Random sampling is good when population structure have no significant variation. In this research, the judgmental sampling method is used and

the questionnaires were sent to 130 top registered firms: clients (30), consultants (30), and contractors / subcontractors (70). Out of the 130 questionnaires sent out, 69 were returned for final analysis. These included responses from 17 clients, 19 consultants and 33 contractors / subcontractors. This represented a response rate of 56.7%, 63.3% and 47.1% respectively. Table 1 shows an overall response rate of 53%.

filled the questionnaire. The respondents were initially contacted by telephone or email followed by face-to-face interview. Duration of each interview was 45 minutes to 1 hour. After conducting twelve (12) interviews, saturation was reached and efforts were diverted towards analysis. Executive Directors had extensive management as well as far-reaching experience in subcontracting and provided valuable information to the researchers.

Table 1. Responses to the Questionnaire

Groups	Questionnaires Sent	Questionnaires Returned	Response Rate
Clients	30	17	56.7%
Consultants	30	19	63.3%
Contractors/ Subcontractors	70	33	47.1%
Total	130	69	53.0%

According to Owen and Jones (1994), a response rate of 20% is considered satisfactory. In construction, a good response rate is around 30% (Black et al. 2000), therefore, the response rate in this research is considered acceptable. Respondents were amply qualified and experienced in the construction industry. Approximately 55% of the respondents had accumulated over 10 years of construction experience, while 45% had 5 to 10 years of construction-related experience. Interviews were conducted to complement and validate the survey questionnaire. Only executive directors of the companies were interviewed as they were supposed to possess the maximum knowledge regarding the firm's existing practices on subcontracting and their pros and cons. These interviews were conducted with the respondents who had

The collected data were analyzed using the Statistical Package for Social Sciences (SPSS) through frequency analysis, relative importance by mean scores, and one-way ANOVA or Kruskal-Wallis tests for parametric and non-parametric data to find out significant differences between responses of client, consultants and contractors on any particular aspects of subcontracting. The "Kruskal-Wallis test" is used for non-parametric data whereas "one way ANOVA" is used for parametric data. In this research, ranking is based on sample population mean. A 0.05% level of significance was considered to represent statistically significant relationships in the data.

Results and Analysis

Of the respondents, 80% represent building construction and the other 20% worked on civil engineering projects. The number of full-

time employees of the respondent organizations varied from one to six hundred (mean = 173 and mode = 85), resulting in considerable diversification among the respondents. The number of subcontractors on the lists of the companies varied from 5 to 200 (mean = 65.51 and mode = 50). The firms were between 3 to 36 years old with an average of 17 years (mode = 20 years).

Existing Subcontracting Practices

The results show that subcontracting is indeed very extensive. Out of 69 respondents, 55% responded that they 'always' and 42% that they 'mostly' subcontracted at least some portion of their projects. None of the respondents stated that they 'occasionally' or 'never' subcontracted any of their project work (see Fig. 1).

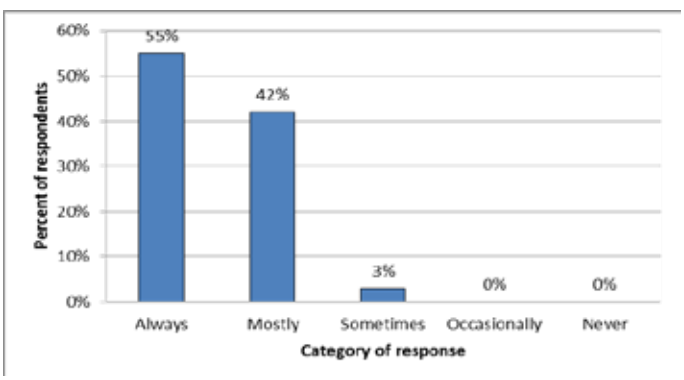


Fig. 1. Frequency of subcontracting by respondents

Respondents confirmed the extensive practice of sub-subcontracting in the construction industry, as 43% of the respondents stated that they 'mostly' and 32% stated that they 'sometimes' practiced or observed the practice of sub-subcontracting on their projects (see Fig. 2). The information gleaned from the interviews revealed that the respondents consider the current subcontracting system to be very complex. The primary source of the complexity is attributed to the practice of subcontractors awarding contracts to lower-tier subcontractors, or sub-subcontractors. When multiple tiers of subcontractors exist on a project, communication links between the client and the subcontractors are weakened. This makes it difficult for the client to communicate directly with some of those firms that actually perform the work. Interviews further revealed that the subcontracting practices are fostered by either domestic subcontractors that are hired by the prime contractor or nominated subcontractors, which in turn, are firms that are pre-selected by the client, but the subcontract that they enter establishes a binding contract solely with the prime contractor. Respondents stated that domestic subcontractors are employed in labor-intensive tasks such as excavating, formwork, rebar work and painting. Nominated subcontractors are most commonly employed for work involving piling, HVAC, elevators and in other specialized work.

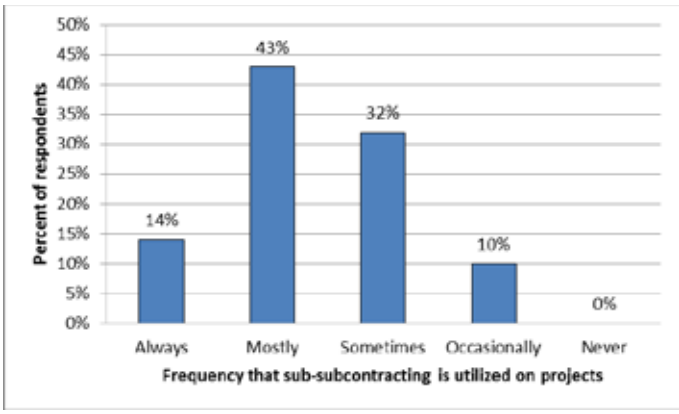


Fig. 2. Frequency that sub-subcontracting is utilized on projects

When asked about the resources provided by subcontractors, respondents stated that labor was commonly the only resource provided by the subcontractors. It is not common for subcontractors to provide materials (see Table 2). The mean value for providing labor is 1.36 indicating it lies between 'always' and 'mostly' indicating that labor is often provided by the subcontractors. Providing plant and equipment and providing materials with means of 2.68 and 2.74, respectively, lie between 'mostly' and "sometimes'. The results show that labor resources are the most

commonly provided resources. The values of the Kruskal Wallis Test (labor = 0.838), (plant = 0.143) and (material = 0.825), demonstrate that plants are rarely provided by subcontractors. Research participants were asked about the reasons for subcontracting their work. Out of nine choices given, multiple reasons were selected for opting to subcontrat (see Table 3). The most common reasons are to save time (mean=2.04), save costs (mean=2.07), absorb price instability (mean = 2.20) and to gain access to specialized skills that are lacking in the firm (mean=2.57). Regarding the selection of subcontractors, respondents revealed that there are no prequalification criteria for the selection of subcontractors. Contrary to prime contractors, there is no requirement for the registration of subcontractors in Pakistan. Most subcontractor selections are made from a list prepared by the prime contractors, generally based on the experience gained from working with the subcontractors on previous projects.

Almost 94% of the respondents revealed that they review their list of subcontractors periodically with particular emphasis paid to performance, while the remaining 6% stated that they had no system of evaluating subcontractors. The most widely used method of developing a slate of viable subcontractor is through their own maintained lists (mean = 1.59); second is negotiation (mean = 2.70); followed by open bidding (mean = 3.52), the least preferred method. The respondents considered the most imperative criteria for the selection of subcontractors to be the bid price (mean = 1.36), followed by the ability to complete the work on time (mean = 1.46) and lastly the quality of the work (mean = 1.64) (see Table 4). The values of the Kruskal Wallis test reveal a high level of consistency of the opinions of the three groups (clients, consultants, and contractors) on the selection criteria of subcontractors (Table 4). Results indicate that 60% of the contracts between the contractors and subcontractors are in written format and most of these do not use a standard form of contract. For contracts between subcontractors and sub-subcontractors, 21% of the respondents indicated that the contracts were in writing. Since a few sub-subcontract agreements are written, it is difficult to prevent or control the practice of subcontracting with lower-tier subcontractors. Regarding the terms of the contract, 52% of the respondents indicated that the terms of the contract are generally dictated by the prime contractor. Since the subcontractors are often not involved in the preparation of

Table 2. Responses to the Questionnaire

Resources Provided by the Subcontractor	Mean	Kruskal Wallis Test (sig)
Labor Resources	1.36	0.838
Plant and equipment	2.68	0.143
Materials	2.74	0.825

Table 3. Reasons for Subcontracting

Reasons	Traditional	Lack Specialized Skill	Beyond Capacity	Reduce Cost	Reduce Risk	Save Time	Absorb Fluctuation	Maintain Relation	Tax Advantage
Mean	3.84	2.57	3.26	2.07	3.17	2.04	2.20	3.36	4.67

1 = most common response, 5 = least common

Table 4. Basis for Selection of Subcontractors

Selection Criteria	Price	Quality	Ability to Complete Work On Time	Subcontractors Resources	Personal Relationship
Mean	1.36	1.64	1.46	1.97	3.07
Sig.	0.063	0.069	0.809	0.963	0.060
Kruskal-Wallis significant at 0.05					

contract provisions, it is understandable that this could lead to disputes.

More than 70% of the respondents stated that problems do arise due to subcontracting. 75% of the respondents stated that extensive negotiation is the most commonly used method to resolve problems with subcontractors. When asked about resolving problems with formalized methods such as arbitration or mediation, 18% of the respondents indicated that they had made use of arbitration and mediation, while 7% stated they had resorted to other legal means to resolve disputes.

Analysis of Major Problem Areas

Respondents were asked about the main problem areas of subcontracting, whether it included quality, work progress, lack of cooperation, excessive material wastage, or difficulty in coordinating activities. Respondents indicated that quality (mean = 2.35) was the major problem area of subcontracting followed by work progress (mean = 2.81) and lack of cooperation (mean = 2.94) (see Table 5). The results of the Kruskal Wallis test show that there is no significant difference of perception regarding major problem areas of subcontracting among clients, consultants and the contractors. The Kruskal Wallis test revealed a value of 0.982 (significance < 0.05) for quality (see Table 5) which shows a strong agreement of all the groups.

On the issue of construction quality, 62% of the respondents assessed quality as being 'most important' or 'important' (see Fig. 3).

Table 5. Main Problem Areas of Subcontracting

Problem Areas	Quality	Progress	Lack of Cooperation	Excessive Material Wastage	Difficult to Coordinate Activities
Relative Importance by Mean	2. 35	2. 81	2.94	3.03	3.03
Kruskal Wallis. Sig.	0.982	0.941	0.919	0.829	0.272

Interviewees revealed that subcontractors are more prone to risks and end up in bankruptcy due to the lack of business acumen among smaller enterprises. Many of these firms bid on projects without thoroughly evaluating the relevant project information. The respondents generally felt that the quality of the working environment in the construction industry is unsatisfactory and, this in turn, is an impediment towards improving construction quality.

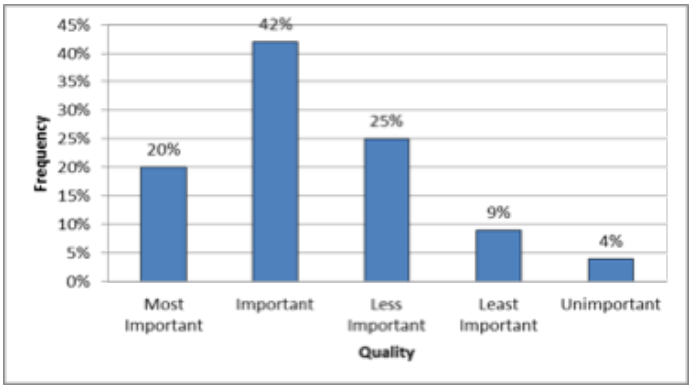


Fig. 3. Problem of management of construction quality due to subcontracting

Performance and Level of Satisfaction with Subcontracting

Respondents were asked to rate the performance of subcontractors on a scale ranging from 'very good', 'good', 'fair', 'bad', and 'very bad'. Respondents graded the performance of subcontractors as 'good' 42%, 'fair' 55%; and 'bad' 3%. None of the respondents regarded it as 'very good' or 'very bad' (see Fig. 4 and Fig. 5). Interviews revealed that subcontracting is not an ideal arrangement when it affects the quality of work negatively. Respondents still consider subcontracting as a better arrangement than employing their own direct labor and the results of Kruskal Wallis test provided a value of 0.991 (significance < 0.05) confirm the consistency of the views of clients, consultants and contractors on the issue of the practice of subcontracting (Fig. 4). When asked if they were satisfied or dissatisfied with the current practice of subcontracting, 54% of the respondents indicated that they were satisfied with the existing subcontracting system, while 26% were 'not satisfied' and 20% had no comments (see Fig. 6). Nonetheless, interviews indicate that current subcontracting practices need improvement. Despite concerns, respondents generally feel that subcontracting will continue to flourish as long as it provides flexibility and other benefits to construction firms.

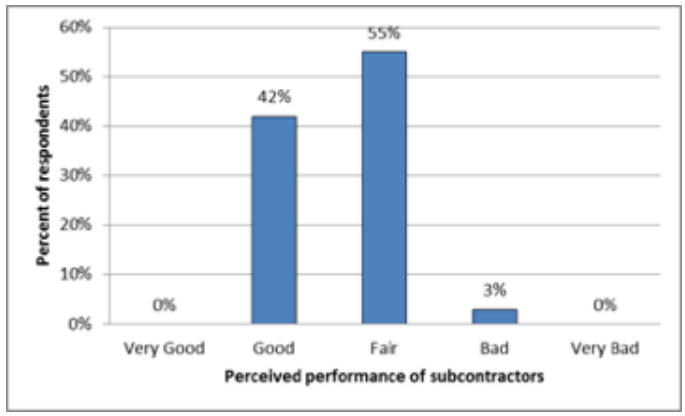


Fig. 4. Respondents views of subcontractor performance

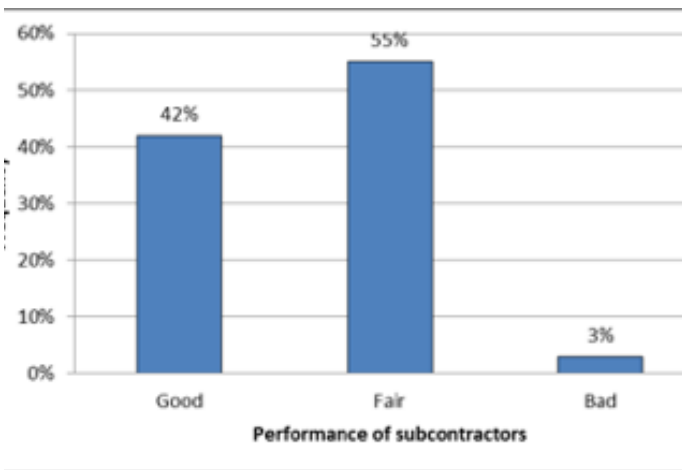


Fig. 5. Performance of subcontractors

Ways to Improve the Quality of Construction

Respondents were asked to show their level of agreement that the 16 subcontracting

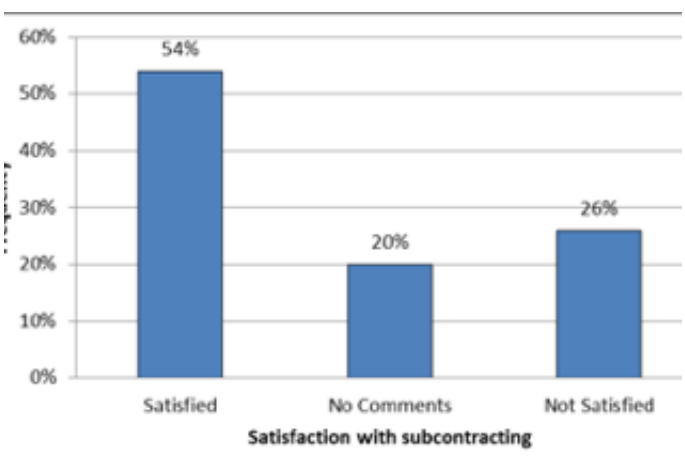


Fig. 6. Satisfaction with subcontracting

practices improve construction quality. Responses were obtained on a five-point Likert-scale with options ranging from 'strongly agree' ('1') to 'strongly disagree' ('5'). Of the various measures to improve construction quality, respondents (N = 69) expressed the strongest agreement that quality would improve with increased tender price (mean = 1.68), followed by training of supervisory staff (mean = 1.70), reducing the number of layers of subcontractors (mean = 1.78), and the technical training of construction workers (mean = 1.97). The results show that the utilization of more direct labor (mean = 3.22) to improve construction quality received the lowest priority among the choices i.e. respondents do not favor the utilization of direct labor by prime contractors as an alternative to subcontracting. They stated that prime contractors generally employ direct labor in the basic trades e.g. concreters, carpenters and bricklayers. Respondents revealed that direct labor was employed to undertake complicated assignments that were not adequately defined in a subcontract.

Discussion

A major finding of this research is that there is no prequalification registration or system in place for the performance evaluation of subcontractors which will continue to affect construction quality. This result is consistent with the findings of Loh and Ofori (2000) who found that registered subcontractors were perceived as performing better than non-registered ones. With an increasing awareness of the problems caused by substandard workmanship by subcontractors, countries such as Singapore have introduced a centralized subcontractor registration system of trade subcontractors as a means to eliminate incompetent subcontractors from being invited to submit bids. The list is particularly useful in helping to identify a suitable subcontractor for specific projects. In Hong Kong, a voluntary subcontractor registration scheme has been in place since 2003, which is comprised of a primary registry with relatively simple and accommodating entry requirements (HKSAR 2003). Palaneeswaran et al. (1999) reveal that a centralized subcontractor performance appraisal system would not only assist prime contractors in appraising subcontractor performance during and after the completion of a project but would also serve as a common basis for recording, comparing, sharing and benchmarking subcontractor performance.

Another finding of this research is the general lack of the use of standard form subcontract agreements. To safeguard the interests of subcontractors and prime contractors, it is wise to utilize a standard form of subcontract. In Malaysia, the Construction Industry Development Board (CIDB) has published the Model Terms of Construction Contract for subcontract work. The publication is consistent with the strategic recommendations of the Construction Industry Master Plan (CIMP 2006-2015) which promotes professionalism in the construction industry (CICC 2007). Overly simple contracts and oral contracts lead to disputes and work suspensions, as they frequently do not address many of the issues that may arise during the execution of construction work.

The widespread use of multi-tier subcontracting was found to be a common construction practice. In Hong Kong, it was contended that multi-tier subcontracting causes inefficient communications and the lower-tier subcontractors are not fully aware of the clients' requirements and this contributes to substandard work (Wong and So 2004). Prime contractors and subcontractors should evaluate their relative roles and responsibilities to ensure that their roles are essential, reinforcing and contributory.

In Pakistan, the lack of infrastructure for technical and professional training of subcontractors contributes to poor quality workmanship. Workers generally acquire their work skills through on-the-job training with guidance from experienced supervisors/ workers. Training programs for construction

workers have been made available in Hong Kong through the Construction Industry Training Authority (CITA), which was established in 1975. The programs offered by CITA and other qualified institutes (e.g. the Vocational Training Council through its Institutes for Vocational Education) are key means through which workers register as Registered Construction Workers under the Construction Workers Registration Ordinance (HKSAR 2005). Apart from the training of workers, manager training is essential to exercise better control, achieve higher degrees of integration of activities and meet the full technical requirements of the projects.

Concluding Remarks

There is a general sense that poor construction quality exists in the construction industry and that it is partially attributable to the current subcontracting practices. To improve the existing subcontracting practices, collaborative efforts of all the stakeholders are essential. Within the overall context of subcontracting in the construction industry, the following conclusions are drawn from this study:

1. There is widespread use of subcontracting (and even multi-tier subcontracting) in the construction industry. This practice affects communications between the clients and prime contractors and ultimately influences the prompt dissemination of information to the subcontractors.

2. Subcontracting practices in the construction industry are not being regulated through any regulatory authority or statutory body. There are no established criteria for the selection of subcontractors and the present registration system focuses on prime contractors.

3. There is no common practice of using standard form of contracts between prime contractors and subcontractors and the terms of the contract are primarily determined by the prime contractors, resulting in the potential exploitation of subcontractors. Subcontractors are exploited to a certain degree as the prime contractors hold the power not to award work to the subcontractor in the projects to follow.

4. Multi-tier subcontracting makes quality management more difficult because of profit absorption at the different levels. With additional subcontractors involved and the lack of infrastructure for the professional and technical training of subcontractors, efficient operations are compromised.

5. Approximately half of the parties involved in the construction process are generally satisfied with subcontracting and they feel strongly opposed to the use of direct labor by prime contractors. It is concluded that the use of direct labor is not very practical because of the high degree of uncertainties, fluctuations in construction workload and higher administrative overhead costs associated with direct hire arrangements.

References

Black, C., Akintoye, A., and Fitzgerald, E. (2000). "An analysis of success factors and benefits of partnering in construction." *International Journal of Project Management,* 18(6), 423-434.

Construction Industry Contracts Committee (CICC). (2007). Model Terms of Construction Contract between Contractor and Subcontract for Subcontract Work. Construction Industry Development Board Malaysia (CIDB), Kuala Lumpur.

Dillman, D. A. (2000). "Mail and Internet Surveys: The Tailored Design Method." *Rehabilitation Counseling Bulletin April 2001*, New York: Wiley, 178-180.Federal Bureau of Statistics (FBS). (2010). *Labour force survey report*, *Pakistan Statistical Year Book-2010*, Statistics Division, Federal Bureau of Statistics, Government of Pakistan.

Flanagan, R., and Gray, C. (1989). *The changing role of specialist and trade contractors.* Chartered Institute of Building (CIOB), Ascot, UK.

Hinze, J., and Tracey, A. (1994). "The contractor-subcontractor relationship." *Journal of*

Construction Engineering and Management, 120 (2), 274-287.

HKSAR. (2003). Operational framework of the voluntary subcontractor registration scheme, Provisional Construction Industry Co-ordination Board, Hong Kong Special Administration Region, Hong Kong.

HKSAR (2005). Laws of Hong Kong (Cap 583): Construction Workers Registration Ordinance. The Government of Hong Kong Special Administration Region.

John, Y. H. W. (1991). "A Study of Subcontracting in the Hong Kong Construction Industry and its Impact on the Management of Quality." MBA. Thesis, University of Hong Kong, Hong Kong.

Kimura, F. (2002). "Subcontracting and the performance of small and medium firms in Japan." *Small Business Economics,* 18(1/3), 163-175.

Lai, M. Y. M. (1987). "A review of the subcontracting system in the Hong kong construction industry." MS. Thesis, University of Hong Kong, Hong Kong.

Lin, P. H. (2003). "Decision support for subcontracting procurement based on multi attribute utility theories." *Proc., Construction Research Congress*, Honolulu, Hawaii, ASCE, Reston, Va.

Loh, W. H., and Ofori, G. (2000). "Effect of registration on performance of construction subcontractors in Singapore." *Engineering Construction and Architectural Management*, 7(1), 29-40.

Markowitz, J. L. (2007). "Exploratory study of subcontracting." MS. Thesis, University of Florida, Florida.

Owen, R., and Jones, R. (1994). *Statistics,* Pitman, London.

Palaneeswaran, E., Kumaraswamy, M. M., and Tam, P. W. M. (1999). "Identifying best practices in contractor selection for enhanced harmony and profit." *Proc., Profitable Partnering in Constr. Procurement Symp.*, S. Ogunlana, ed., Chiang Mai, Asian Institute of Technology, Bangkok, Thailand, 637-647.

Richter, I. M. (1982). *Handbook of Construction Law and Claims*, R.S Reston, Virginia.

Sit, K. H., and Wong, K. P. (1989). "*Small and medium industries in an expert-oriented economy*." Centre of Asian Studies.The University of Hong Kong, Hong Kong.

Wong, F.K.W., and So, L..S.L. (2004). "Multi-layers subcontracting practice in the Hong Kong construction industry." *Construction Safety Management Systems*, Rowlinson, S. Eds., Spon Press, London, 147-160.

About the Author: Rafiq Muhammad Choudhry Ph.D., P.E., M.ASCE, (rchoudhry@imamu.edu.sa) holds PhD in Civil Engineering and a Professor of Construction Engineering and Management, Department of Civil Engineering, *Al Imam Mohammad Ibn Saud Islamic University*, Riyadh, Saudi Arabia. Prof. Rafiq has worked in academia and in the construction industry in Pakistan, Thailand, China, Australia, and Saudi Arabia. He has over 29 years of teaching, research and industry experience. His research interests include construction engineering, contract management, occupational safety and health, risk management, planning and scheduling, estimation and cost control in construction projects. He has completed several research projects and won numerous awards including *Best Researcher Award* from *National University of Sciences and Technology* in 2010 and *Distinct Faculty Awards* from *King Faisal University* in 2016. Prof. Rafiq is a member of several professional societies including American Society of Civil Engineers. Currently, Prof. Rafiq is the Associate Editor of an ASCE publication *Journal of Civil Engineering Education*. He organized number of conferences, seminars and published over 95 papers in refereed journals and conferences. Prof. Rafiq has over 2,400 citations (https://scholar.google.com/citations?user=sTx-9EkAAAAJ&hl=en).

Causes Of Time Overruns And Possible Remedies For Mega Petrochemical Projects In Saudi Arabia

Dr. Arshad A. Amjad
arshadamjad@gmail.com

Because of major investment, owners have been increasingly recognizing the need for timely completion of petrochemical projects in Saudi Arabia. However, numerous unexpected problems and changes during engineering and construction phases has lead to time and cost overruns. The prime objective of this paper is to identify the major causes of time overruns in Saudi Arabian petrochemical industry and their relative importance as perceived by different participant groups and to suggest remedies to minimize their affects for petrochemical projects. A questionnaire survey based upon one hundred ten predetermined delaying factors, grouped into ten major factor categories, was conducted during April -June 2009 from a randomly selected sample of owners, EPCm and EPC contractors working on different petrochemical projects in Saudi Arabia. They were requested to indicate their degree of importance. The importance of delaying factors and categories were measured and ranked for different participant groups. The results suggest a strong consistency in perception between owners, EPCm and EPC contractors for the ten major factor categories. However, there was substantial disagreement between owners, EPCm and EPC contractors in respect to the ranking of individual factors. This indicates a difference in priorities that each participant group perceives.

INTRODUCTION

In September 1976, Kingdom of Saudi Arabia decided to set up hydrocarbon and mineral base industries in the country. The aim was to diversify the Kingdom's sources of income from oil, utilizing natural gas as raw material to manufacture petrochemicals, which was

previously burned at the wellheads. Two new industrial cities Jubail and Yanbu along with infrastructure and other associated facilities were built on the east and west coasts and the petrochemical industry that has expanded exponentially during the last three decades is based in these cities[1,2].

Petrochemical is a highly advanced industry and requires major capital investment. One of the prime objectives of owners is to complete the project on time. "Completion period" often serves as a benchmark for assessing the performance of a project and the efficiency of the project organization [3]. Ashley et al. [4], Pinto and Slevin [5], and Chan and Kumaraswamy [6] found that a project is usually regarded as "successful" if it is completed on time, within budget and to the specified quality standards. Moreover, Rwelamila and Hall found that timely completion of project was frequently seen as major criterion of project success [7]. However, severe criticisms of the industry arise if projects take longer than planned [8, 9, 10,].

Generally, project delays occur during engineering and construction phases where unforeseen factors along with co-operation and co-ordination between many separate parties such as owners, contractors, manufacturers and suppliers are involved [11, 12]. Research on delays and the causes for construction projects have been reported by Wood [13], Mobbs [14], NEDO [15, 16], Naoum [17], Fereig and Qaddumi [18], Arditi et al. [19], Okpala and Aniekwe [20], Mainsfield et al. [21], Assaf et al. [22], Kaming et al. [23], Chalabi and Camp [24] and Chan and Kumaraswamy [25, 26, 27]. Most of them stressed that adequate construction planning at early stages of the project is important to limit time and cost overruns. Russell and Skibniewski [28] concluded that decision criteria in Contractor's selection plays an important role in the delivery of construction project.

Chan and Kumaraswamy [3] and many other researchers agree that project delays are a common issue in the international construction industry of today and the same has been observed in Saudi petrochemical industry as well. Therefore, in order to understand the causes of time overruns in Saudi petrochemical projects it was considered worthwhile conducting a survey having the following objectives.

1. To identify the principal causes of time overruns and their relative importance.
2. To study the difference in the perceptions of the major participants of the industry namely, owners, engineering procurement and construction management (EPCm) contractors, and engineering procurement and construction (EPC) contractors as to the factors causing time overruns.
3. To test for any agreement on the time overruns factors and factor categories between any two groups of respondents.

RESEARCH METHODOLOGY

This study was undertaken into two phases. As part of a research program in 2003 principal author [27] conducted literature review and determined one hundred ten delaying factors (causes of time overruns) influencing construction projects in Saudi Arabia that were validated by a number of case studies. In the second phase, these delaying factors were grouped into ten major factor categories namely (1) manpower, (2) engineering, (3) owner's organization, (4) contractor's organization, (5) contractual relationship, (6) project planning and control, (7) variations, (8) project environment, (9) finance and (10) materials and procurement; and a questionnaire was developed. The authors adopted a scale of 1 to 5 to assess the effect of each delaying factor as follows.

- Extremely significant – 5

- Very significant – 4
- Moderately significant – 3
- Slightly significant – 2
- Not significant – 1

The questionnaire along with a covering letter briefly stating the objectives of survey was sent by e-mail to the selected respondents, later the responses were expedited by phone and e-mails. The respondents were requested to rank the individual delaying factors in order of importance based upon their local experiences in Saudi Arabia.

The questionnaire was sent to one hundred and eighteen (118) randomly selected owners, EPCm and EPC contractor's representatives working on different petrochemical projects in Saudi Arabia. Eighty six (86) completed questionnaires were returned, six (6) of them were found incomplete and therefore were excluded from the survey, finally yielding a response rate of 68%, which includes 24 responses from EPC contractors and 28 responses each from owners and EPCm contractors.

METHODS ADOPTED FOR DATA ANALYSIS

Assaf et al. [22] and Chan and Kumaraswamy [3] adopted the "mean score" method to determine the relative importance of the causes of time overruns in Saudi Arabia and Hong Kong respectively. Authors adopted the same technique for the analysis of data collected from the current questionnaire survey. A five-point scale as described earlier was used to calculate mean score for each factor/factor category and accordingly ranks were assigned in descending order. The assigned ranking made it possible to cross compare the relative importance of the factors/factor categories as perceived by each participant group. The mean score for each factor / factor category was calculated from the following equation.

$$\mathbf{MS = \Sigma\ (f*s)/n} \text{ ---------- (1)}$$

where *"f"* is frequency of respondents to each rating (i.e. 1-5) for each factor/factor category, and *"s"* is score given to each factor/factor category by the respondents and ranges from 1 to 5 where "1" is not significant and "5" is extremely significant; and *"N"* is the total number of responses for the concerning factor.

Spearman rank correlation coefficient analysis is commonly used to measure correlation between two sets of ranking. The rank correlation coefficient (r_s) ranges from -1 to +1. A correlation coefficient of +1 suggest a perfect linear correlation whereas a value -1 means negative correlation which suggest that high ranking on one is associated with low ranking on the other. In case of zero value, no linear association exists [30]. Kometa et al. [31], Chan, and Kumaraswamy [3] used Spearman rank correlation to test the agreement in ranking. The authors used the correlation analysis to test the agreement in ranking for individual factors and factor categories between various groups. Wessa, P. on line statistics software [32] was used to analyze the data. Authors used *"t-test"* at a 95% confidence interval to test the following H_1 hypothesis for fifteen most significant delay factors and ten major factor categories. H_0 denotes the null hypothesis and is accepted if the observed *"t"* value is less than standard critical *"t"* value for (*n-2*) degree of freedom.

Fifteen most significant delay factors

H1: The two groups of participants in the petrochemical industry of Saudi Arabia

agree on the ranking of importance of delay factors.

H_0: The otherwise

Ten major delay factor categories

H1: The two groups of participants in the petrochemical industry of Saudi Arabia

agree on the ranking of importance of delay factor categories.

H_0: The otherwise

PRESENTATION OF SURVEY RESULTS

Experience is an important factor of ranking exercise. The experience of the participants who took part in this questionnaire survey ranges from 8-40 years. Therefore, it is considered that the information provided by them regarding the importance of causes of time overruns in Saudi petrochemical projects are reasonably reliable.

Mean scores (MS) and the ranks of the top twenty five significant factors selected from one hundred ten predetermined factors causing time overruns for Saudi petrochemical projects as postulated by the owners, EPCm and EPC contractors are presented in Table 1-3.

Table 4 shows the fifteen most significant delay factors as perceived by the owners, EPCm and EPC contractors calculated through the following "weighted average" *(WA)* equation utilizing mean scores (MS) of each individual factor of the participant group from Table1-3. In this equation *"n/N"* represents the sum of

$$\mathbf{WA = \Sigma\,[(n/N)*MS]} \text{ ---------- (2)}$$

products of the proportion of questionnaires received from each participant group where n = 28 for owners and EPCm contractors group and 24 for EPC contractor group and N = 80.

Table 5 summarizes the mean scores and ranks for the ten-delay factor categories as postulated by owners, EPCm and EPC contractor groups in Saudi petrochemical industry. The mean score of each factor category was taken as the "mean" of the individual factors within the same category. The "weighted average" (*WA*) for each factor category was obtained utilizing equation 2 above.

One of the objectives of this study was to test agreement, if any, on the time overrun factors and factor categories between any two groups of respondents. Table 6 presents the results of Spearman's rank correlation coefficient and t-values for the fifteen most significant delay factors as postulated by different participant groups. The analysis indicates that observed t-values for all three groups (while comparing them with each other) for any agreement are less than critical t-values at 95 % confidence interval, which suggest a significant disagreement between all three groups. Hence, the null hypothesis H_0 for all three-participant groups is accepted.

Table 7 presents the results of Spearman's rank correlation coefficient and t-values for the ten major factor categories contributing to delays in Saudi petrochemical projects as perceived by different participant groups. The analysis shows that observed t-values for all three groups (while comparing them with each other) for any agreement are higher than critical t-values at 95% confidence interval, which suggest a significant agreement between all three groups. Hence, the hypothesis H_1 for all three-participant groups is accepted.

Delaying factors	Mean Score (MS)	Rank (R)
Non – performance of contractor or its sub-contractors	4.286	1
Poor organization of contractors	4.179	2
Late appointment of skilled personnel by owner for owner Project Management Team	4.107	3
Poor project Planning	4.071*	4
Inaccurate estimation of project durations by owners or unrealistic contract durations imposed by owner	4.071	5
Poor quality of project management by owner's project management team	4.036	6
Shortage of skilled labor	4.000	7
Slow or late delivery of material by manufacturers	3.964	8
Frequent changes in scope of work during engineering by the owners	3.929	9
Poor/unsuitable leadership of engineering design team from owner's organization	3.893*	
Organization of owner's project team	3.893	11
Lack of co-ordination between various parties working on the project	3.893	12
Mistakes and discrepancies in design documents (e.g. specifications, drawings, BOQ, project cost etc.) during engineering	3.857	13
Ineffective decision making procedure by owners	3.821*	14
Poor co-ordination of project inter phase by owner's or integrated project management team	3.821	15
Late selection of consultants or engineering contractor by owner	3.821	16
Inaccurate estimation of time required to import a material	3.786	17
Slowness of owner's decision making process	3.750*	18
Poor project implementation and management by owner's or integrated project management team	3.750	19
Design errors by designers due to unfamiliarity with local conditions and environment	3.750	20
Project priorities identified by owner	3.750	21
Design changes during construction	3.714	22
Lack of communication among integrated engineering design team	3.679*	23
Lack of trained professionals and management support to model the construction operation.	3.679	24
Shortage of material in local market	3.679	25

*Equal mean scores (MS) of individual factors firstly ranked according to the number of respondents scoring 5 and secondly 4 or more

Table 1. Owner's responses to the ranking of top 25 significant factors causing time overruns in petrochemical projects (N=28)

Delaying factors	Mean Score (MS)	Rank (R)
Slow or late delivery of material by manufacturers	4.286	1
Design changes during construction	4.250	2
Non – performance of contractor or its sub-contractors	4.143	3
Frequent changes in scope of work during engineering by the owners	4.000*	4
Poor quality of project management by owner's project management team	4.000	5
Excessive bureaucracy (paper work too many permits, overlapping authority) in owner's organization	4.000	6
Shortage of material in local market	3.964*	7
Poor co-ordination of project inter phase by owner's or integrated project management team	3.964	8
Slowness of owner's decision making process	3.893*	9
Poor communication between owner and contractors	3.893	10
Inaccurate estimation of time required to import a material	3.893	11
Lack of co-ordination between various parties working on the project	3.857	12
Poor project planning	3.821*	13
Organization of owner's project team	3.821	14
Allocation of project responsibility by owner	3.786*	15
Obtaining work permit to import manpower	3.786	16
Late release of permits by the government	3.786	17
Contract documents prepared on an incomplete engineering design	3.750*	18
Design errors by designers due to unfamiliarity with local conditions and environment	3.750	19
Poor/unsuitable leadership of engineering design team from owner's organization	3.750	20
Changes in type and specification of material during construction	3.750	21

Poor organization of contractors	3.750	22
Financial stability of owner	3.714*	23
Poor project implementation and management by owner's or integrated project management team	3.714	24
Unavailability of professional construction managers	3.714	25

*Equal mean scores (MS) of individual factors firstly ranked according to the number of respondents scoring 5 and secondly 4 or more

Table 2. EPCm Contractor's responses to the ranking of top 25 significant factors causing time overruns in petrochemical projects (N=28)

Delaying factors	Mean Score (MS)	Rank (R)
Shortage of material in local market	3.833*	2
Slow or late delivery of material by manufactures	3.833	3
Slowness of owner's decision making process	3.750	4
Lack of co-ordination between various parties working on the project	3.708	5
Shortage of skilled labor	3.667	6
Design changes during construction	3.625	7
Ineffective decision making procedure by owners	3.583*	8
Poor quality of project management by owner's project management team	3.583	9
Excessive bureaucracy (paper work too many permits, overlapping authority) in owner's organization	3.583	10
Uncooperative owner / his representative	3.542*	11
Inaccurate estimation of project duration by owners or unrealistic contract durations imposed by owner	3.542	12
Poor communication between owner and contractors	3.500*	13
Late release of permit by the government	3.500	14
Frequent changes in scope of work during engineering by the owners	3.458*	15
Poor organization of contractors	3.458	16
Design errors by designers due to unfamiliarity with local conditions and environment	3.417*	17
Organization of owner's project team	3.417	18
Conflict between owner and contractor	3.375*	19
Lack of trained professionals and management support to model the construction operation.	3.375	20
Unavailability of professional construction managers	3.375	21
Mistakes and discrepancies in design documents (e.g. specifications, drawings, BOQ, project cost etc.) during engineering	3.333*	22
Inaccurate estimation of time required to import a material	3.333	23
Unavailability of specialist sub - contractors	3.333	24
Poor /unsuitable leadership of engineering design team from owner's organization	3.292	25

*Equal mean scores (MS) of individual factors firstly ranked according to the number of respondents scoring 5 and secondly 4 or more

Table 3. Engineering Procurement & Construction (EPC) Contractor's responses to the ranking of top 25 significant factors causing time overruns in petrochemical projects (N=24)

Delaying Factor	Owner		EPCm Contractor		EPC Contractor		Weighted average	
	Mean Score (MS)	Rank (R)	Mean Score (MS)	Rank (R)	Mean Score (MS)	Rank (R)	Mean Score (MS)	Rank (R)
Non – performance of contractor or its sub-contractor	4.286	1	4.143	3	3.917	1	4.125	1
Slow or late delivery of material by manufacturers	3.964	7	4.286	1	3.833*	3	4.037	2
Poor quality of project management by owner's project management team	4.036	5	4.000*	5	3.583*	8	3.888	3
Design changes during construction	3.714	13	4.250	2	3.625	7	3.875	4
Shortage of material in local market	3.679	14	3.964	7	3.833	2	3.825*	5
Lack of co-ordination between various parties working on the project	3.893*	10	3.857	9	3.708	5	3.825	6

Frequent changes in scope of work during engineering by the owners	3.929	8	4.000	4	3.458*	12	3.813*	7
Poor organization of contractors	4.179	2	3.750	12	3.458	13	3.813	8
Slowness of owner's decision making process	3.750	12	3.893	8	3.750	4	3.800*	9
Shortage of skilled Labor	4.000	6	3.714	14	3.666	6	3.800	10
Inaccurate estimation of project duration by owners or unrealistic contract durations imposed by owners	4.071*	4	3.679	13	3.542	11	3.775	11
Organization of owner's project team	3.893	9	3.821*	11	3.417	14	3.725	12
Excessive bureaucracy (paper work too many permits, overlapping authority) in owner's organization	3.536	15	4.000*	6	3.583	10	3.713	13
Poor project planning	4.071	3	3.821	10	3.167	15	3.712	14
Affective decision making procedure by owners	3.821	11	3.679	15	3.583	9	3.700	15
*Equal mean scores (MS) of individual factors firstly ranked according to the number of respondents scoring 5 and secondly 4 or more								

Table 4. Mean scores and ranks for 15 most significant factors causing time overruns in petrochemical projects by all three groups of respondents

Delaying Factor	Owner		EPCm Contractor		EPC Contractor		Weighted average	
	Mean Score (MS)	Rank (R)	Mean Score (MS)	Rank (R)	Mean Score (MS)	Rank (R)	Mean Score (MS)	Rank (R)
Contractor's organization	3.807	1	3.736	2	3.408	1	3.662	1
Material & procurement	3.648	2	3.872	1	3.369	3	3.643	2
Connatural relationship	3.412	6	3.659	3	3.393	2	3.493	3
Engineering	3.615	3	3.505	6	3.137	4	3.433	4
Owner's organization	3.519	4	3.561	4	2.980	8	3.372	5
Project planning and Control	3.437	5	3.298	9	3.028	6	3.266	6
Variations	3.274	7	3.485	7	2.993	7	3.264	7
Manpower	2.940	8	3.509	5	3.125	5	3.195	8
Finance	2.902	9	3.360	8	2.747	9	3.016	9
Project Environment	2.469	10	2.850	10	2.452	10	2.597	10

*Equal mean scores (MS) of individual groups firstly ranked according to the number of respondents scoring 5 and secondly 4 or more.

Table 5. Mean scores and ranks for 10 major factor categories causing time overruns in petrochemical Projects by all three groups of respondents

Participants	Observed Spearman's rank correlation coefficient *rs*	Observed *t*- ratio	Critical *t* – value (0.05)	Probability *P*-value	Accept/Reject hypothesis
Owner and EPCm Contractors	- 0.139286	- 0.50714	1.7710	0.5962	Accept null hypothesis
Owner and EPC Contractors	- 0.210714	- 0.77719	1.7710	0.4296	Accept null hypothesis
EPCm and EPC Contractors	0.432143	1.72777	1.7710	0.1052*	Accept null hypothesis
*Probability is 90%, which suggest a weaker agreement between the parties.					

Table 6. Spearman rank order correlation test of agreement on the ranking of 15 most significant factors causing time overruns in petrochemical projects as perceived by three different groups of respondents

Participants	Observed Spearman's rank correlation coefficient *rs*	Observed *t*- ratio	Critical *t* – value (0.05)	Probability *P*-value	Accept/Reject hypothesis
Owner and EPCm Contractors	0.721212	2.944787	1.8600	0.0300	Accept hypothesis
Owner and EPC Contractors	0.733333	3.050851	1.8600	0.0272	Accept hypothesis
EPCm and EPC Contractors	0.781818	3.546580	1.8600	0.0188	Accept hypothesis

Table 7. Spearman rank order correlation test of agreement on the ranking of 10 major factor categories causing time overruns in petrochemical projects as perceived by three different groups of respondents

DISCUSSION OF SURVEY RESULTS

Due to taxation issues, generally EPC contracts in Saudi petrochemical industry contain two parts namely "Out of Kingdom (OOK) contract" and "In Kingdom (IK) contract. Though both (OOK & IK) contracts are awarded to two different legal entities, however these are linked with a bridging guarantee letter that obliges the OOK contractor to complete the IK part of contract as well. All engineering and procurement activities take place outside the Kingdom of Saudi Arabia under OOK contract, whereas construction activities are carried out inside the Kingdom of Saudi Arabia under IK contract. Generally, IK contractors are the subsidiaries of OOK contractors registered in Saudi Arabia as separate legal entities. Most of construction works are sub-contracted to local companies by IK contractors. The performance of IK contractor and its sub-contractors partially depends on timely delivery of engineering and material, which is the responsibility of OOK contractor. This is an area of concern where circular causation takes place and effect the delivery of project. EPCm contracts have the same pattern, where in IK contracts; contractors only manage / supervise the construction works carried out by another contractor without any major liability of liquidated damages. Though there was no consensus among the participants on delay factors, however it is interesting to note that EPC contractors ranked "nonperformance of contractor or its sub-contractor" whereas EPCm contractors ranked "slow or late delivery of materials by manufacturers" as very high. Being an affected party, owners agreed with EPC contractors. The finding leads to the conclusion that contractual obligations played a vital role while selecting relative importance of delay factors by the participants. Overall, participants ranked them as first and second delay factors respectively. "Shortage of material in the local market" ranked as the fifth significant delay factor by the participants should also be seen in the same context.

The participants ranked "Poor quality of project management by owner's project management team (PMT)" and "design changes during construction" as third and fourth significant delay factors respectively. Despite the nature of contracts, owner's PMT is fully involved in a project's decision-making process from engineering to procurement and construction phases. PMT reviews the documents against duty specifications and in principal approve them for the next phase. Again, this is an area of circular causation, which seamlessly leads to time and cost overruns. Owner's involvement in construction process certainly improves the quality but often generates "design changes". Bromilow [33], Hibbered [34], Chan and Kumaraswamy [3] found that design changes by owners during execution caused excessive delays to projects. Furthermore, Kumaraswamy and Chan [35] identified design changes as prime source of time overruns. Relative importance of these two factors in the present study conform the previous findings, where design changes by owners were seen as by-product of poor project management of owners. Although, the participants ranked "frequent changes in scope of work during engineering by the owners", "slowness of owner's decision making process", "inaccurate estimation of project duration by the owners", "organization of owner's project team", "excessive bureaucracy (paper work and overlapping authority etc.) in owner's organization" and "ineffective decision making procedure by owners" on seventh, ninth, eleventh, twelfth, thirteenth and fifteenth place respectively, however on theoretical grounds these are the attributes of owner's poor project management. It is worth noting that seven out of fifteen top most significant factors causing time overruns are the attributes of owner's poor project management. The finding strengthens the emerging postulation that owner's poor project management leads to design changes and is a prime cause of time overruns on Saudi petrochemical projects.

The participants ranked "Lack of co-ordination between various parties working on the project" as fifth significant delay factor. Theoretically, it attributes to a deficiency in planning and organization on the part of the contractor who is responsible for construction operation. In fact, delivery of project on schedule realistically reflects the contractor's ability to; organize and control the construction operation, optimally allocate resources and manage the flow of information between various parties working on project [16]. Okpala and Aniekwe postulated that ineffective management of site operations can be due to lack of experience and training at both technical and managerial level, inadequate technical and managerial manpower, as well as low level of productivity [20]. The survey analysis interestingly shows that participants ranked "poor organization of contractors", "shortage of skilled manpower" and "poor project planning" as eighth, tenth and fourteenth most significant delay factors respectively. Hence, it is obvious that relative importance of these factors is in line with the previous findings and these are the attributes of contractor's poor organization. Being an affected party, owners ranked it the second most significant delay factor.

Overall, it is observed that the fifteen most significant delay factors as perceived by participants are ranked from the contractual responsibilities point of view and strongly suggest that current style of owner's project management and contractor's organizations are the prime causes of time overruns.

CONCLUSION

The study identified the principal causes of time overruns and their relative importance, according to the experience based judgement and perception of owners, EPCm and EPC contractors in Saudi petrochemical projects through a questionnaire survey. One hundred ten factors causing time overruns were grouped into ten major factor categories and ranked for their relative importance. Mean score and weighted average techniques along with Spearman's rank correlation coefficient and t-values were used to analyze the data collected from the survey.

The survey results suggest a strong consistency in perception between owners, EPCm and EPC contractors for ten major factor categories. However, substantial disagreement is found between owners, EPCm and EPC contractors in respect to the ranking of individual factors. This indicates difference in priorities that each participant group maintains.

The results of this survey identified the "nonperformance of contractors or its sub-contractors", "slow or late delivery of material by manufacturers", "poor quality of project management by owner", "design changes by owners" and "contractor's poor organizations" as the most five significant causes of time overruns for Saudi petrochemical projects. Bearing in mind the findings, the following guidelines are suggested which might help to reduce the extent of project time overruns.

- ***Contractor's performance*:** The techniques of "Pre-qualification" and continuous screening through "performance evaluation" would be helpful in improving the contractor's performance. Performance evaluation should be shared with contractors, encouraging them to cope with shortcomings by upgrading the expertise of their technical and managerial personnel through suitable training programs.

- ***Material procurement*:** In addition to "Pre-qualification" and "performance evaluation" techniques, placing orders well in advance without post order design changes and continuous monitoring the situation in manufacturers shops would be helpful in obtaining material on time.
- ***Project management by owners*:** An effective decision making procedure without excessive bureaucracy and overlapping authority, along with suitable training

programs for technical and managerial personal of owners PMT would enhance the project management on owner's part.

- ***Design changes*:** The most effective method for minimizing design changes during execution is a thorough, complete and clearly defined project requirements from the owners. Sufficient time for basic engineering and its review by an independent party for the "completeness" before moving to EPC phase would be helpful in reducing design changes.
- ***Contractor's organizations*:** Optimal allocation of resources and maintaining experienced and trained manpower at both technical and managerial level would enhance the contractor's organization. Better project planning and coordination with optimal resources would improve the low level of productivity that would help in reducing the extent of project time overruns.

AUTHOR'S BIOGRAPHY

Dr. Arshad A. Amjad is Chartered Civil Engineer. He completed his MSc and PhD in Construction from Heriot Watt University Edinburgh, UK in 1999 & 2004 respectively. He has published three papers. As a referee, he reviewed several papers for the *Journal of Construction Management and Economics*.

REFERENCES

[1,2] Achievements of the Development Plans (1970-1998), Ministry of Planning Riyadh, Saudi Arabia.

[3] Chan D.W.M, Kumaraswamy M.M., *"An evaluation of Construction Time Performance in the Building Industry"*, Journal of Building and Environment, Vol. 31, No.6, 569-578, 1996.

[4] Ashley, D. B., Lurie, S.C. and Jaselskis, J.E., *"Determinants of construction project success"*. Project Management Journal, 1987, 18(2), 69-79.

[5] Pinto, J.K. and Slevin, D. P., *"Critical Success factors across the project life cycle"*. Project Management Journal, 1988, 19, 67 – 76.

[6] Chan D.W.M, Kumaraswamy M.M., *"A survey of time-cost relationship in Hong Kong construction projects"*. Building Technology and Management Journal, 1994, 20, 54-72.

[7] Rwelamila, P. D. and Hall, K.A. *"Total system intervention: an integrated approach to time, cost and quality management"*, Construction Management and Economics, 13, 1995, 235-241.

[8] Southgate, T., *"Cost planning – a new approach"*. Chartered Quantity Surveyors, Journal of RICS, 1988, 9, 10.

[9] Mobbs, G.N., *"The influence of global investment or the decline of the British commercial imperialism*". Public lecture series in Estate Management, College of Estate Management, Reading, U.K., 1989.

[10] Flangan, R., Norman,G., Ireland,V., and Ormerod,R., *"A Fresh Look at the UK and US Construction Industry Building Employers Confederation"*, UK., 1986

[11] Bryant, D.T., NacKenzi, M.R. and Amos, W., *"The role of the client in building."* Document No. IOR/355/2, Tavistock institute of Human Relation, London, 1969

[12] Cherns, A.B., and Bryant, D.T., *"Studying the Client's role in construction management"*. Construction Management and Economics, 1984, 2, 177-184.

[13] Wood, K.B., *"The Public Client and the Construction Industry"* NEDO, UK, 1975.

[14] Mobbs, G.N., "*Industrial Investment – A Case Study in Factory Building Slough"* Estates Institute, UK, 1976.

[15] NEDO, *"Faster Building for Industry"*, HMSO, UK, 1983

[16] NEDO, *"Faster Building for Commerce"*, HMSO, UK, 1988

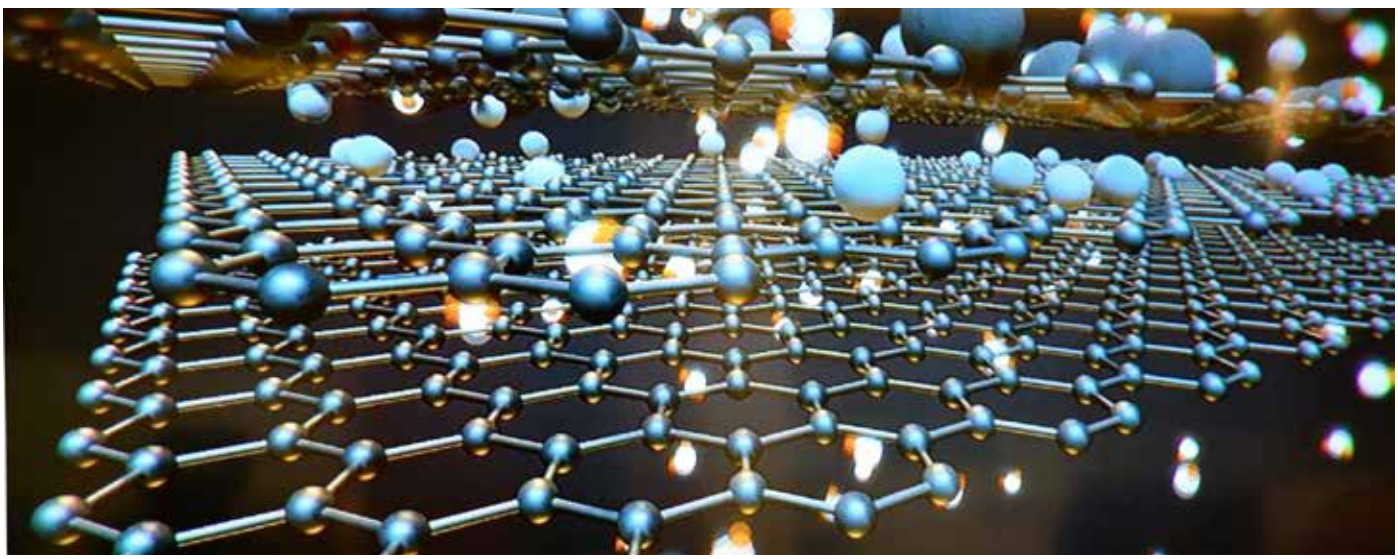
[17] Naoum, S.G., *"Procurement and Project Performance-A Comparison of Management Contracting and Traditional Contracting"* Occasional paper No. 45, The Chartered Institute of Building, Ascot, UK. 1991.

[18] Fereig, S., and Qaddumi, N., *"Arabian Gulf*

Experience" Managing and Organizing Construction, Vol.2, 1984, 753-765.
[19] Arditi, D., Akan, G.T., and Gurdamar, S., *"Reasons for delays in Public Projects in Turkey"* Construction Management and Economics, 3, 1985, 171-181.
[20] Okpala, D.C., and Aniekwu, A.N., *"Causes of high costs of construction in Nigeria"* Journal of Construction Engineering and Management, ASCE, 114, 1988, 233-244.
[21] Mansfield, N.R,. Ugwn, O.O., and Doran, T., *"Causes of delay and cost overruns in Nigerian Construction Projects"* International Journal of Project Management, 1994, Vol. 12(4), 254-260.
[22] Assaf, S.A., A-Khalil, M., and Al-Hazami, M., *"Causes of delay in large building construction projects"* Journal of Management in Engineering, ASCE, 11, 1995, 45-50
[23] Kaming,P.F., Olomolaiye, P.O., Holt, G.D., and Harris, F.C., *"Factors influencing construction time and cost overruns on high rise projects in Indonesia".* Journal of Construction Management and Economics, 1(1), 1997, 83-94.
[24] Chalabi. F.A., and Camp, D., *"Causes of delays and overruns of construction projects in developing countries"* proceedings of the CIB, W65, Vol.3, 1984, 723-734.
[25] Chan D.W.M, Kumaraswamy M.M., *"Differing perceptions as to general causes of construction time overruns in Hong Kong"*, Proceedings of the 11th Annual ARCOM Conference Association of Researchers in Construction Management, 18-20 September 1995, York, UK, 318-329.
[26] Chan D.W.M, Kumaraswamy M.M*., "A study of factors affecting construction durations in Hong Kong."* Construction Management and Economics , 1995, 13(4), 319-333.
[27] Chan D.W.M, Kumaraswamy M.M*., "Effects of technology and site productivity on construction times of building projects in Hong Kong "*. Proceeding of the 16th Annual ASEM Conference, American Society of Engineering Management, Washington, D.C., 20-23 September 1995, 309-316
[28] Russell, S. J., and Skibniewski, M. J., *"Decision criteria in contractor prequalification"* Journal of Management in Engineering, ASCE, 1988, 4(2), 148-164.
[29] Amjad. A.A., *"A causal path model to measure the effects of professional training upon time overruns in Saudi construction industry"* PhD. Thesis, Heriot Watt University, Edinburgh UK, 2003.
[30] Mendenhall, W., Reimuth, J., and Bearver, R., *"Statistics for Management and Economics"* 7th edition, Duxbury Press, Belmont, CA, 1993.
[31] Kometa, S.T., Olomolaiye, P.O. and Harris, F.C., *"A evaluation of clients needs and responsibilities in the construction process".* Engineering, Construction and Architectural Management, 1995, 2(1), 57-76.
[32] Wessa, P. (2009), Free Statistics Software, Office for Research Development and Education, version 1.1.23-r4, URL http:// www.wessa.net/
[33] Bromilow, F. J., *"Contract time performance – exceptions and the reality"*, Building Forum, 1969, 1(3), 70-80.
[34] Hibberd, P. R., *"Variations in construction contracts"* Collins, London, U.K., 1986.
[35] Kumaraswamy, M.M., and Chan, D.W.M., *"Determination of construction duration"* Construction Management and Economics, 1995, 13(3), 209-217.

Graphene—"A wonder material" that could change the World.

By Eng. Syed Mubashir H. Kirmani
Chief Engineeer& Technical advisor to Saudi Technical Ltd.Riyadh.



Abstract:

Graphene is an allotrope of Carbon, thinnest material known to man at one atom thick arranged in hexagonal lattice. Graphene is remarkable substance on it's own with a multitude of astonishing properties, incredibly strong—about 200 times stronger than steel and thinner than paper. It earned the title of " Wonder material" . This paper describes various properties of Graphene and it's potential use as engineering product the future of all technologies.

Introduction:

Technological advances drive the course of history. With the advent of "Electron microscope" Graphene was originally observed in 1962 ,but only studied while supported on metal surfaces(1). The material was later discovered isolated and characterized in 2004 by " Andre Gzim " and " Konstantin Novoselov" at the university of Manchester (2). High quality Graphene proved to be surprisingly easy to isolate ,making more research possible. This work resulted in the two wining of the Nobel prize in Physics in 2010 for ground breaking experiments regarding the two dimensional material the Graphene.

Graphene is the thinnest material known to man at one atom thick, and also incredibly strong about 200 times strong than Steel. On top of that Graphene is an excellent conductor of heat and electricity and has interesting light absorption abilities.

It is truly a material that could change the world with unlimited potential for integration in almost any industry.

History:

The theory of Graphene was first explored by P.R.Wallace in 1947 as a

Starting point for understanding the electronic

properties of 3D graphite. The emergent mass less Dirac equation (3) was first pointed out by Gordon Walter Semen off and David P. Divincenzo and Eugene. J. Mele (4).

Starting in 1970s single layer graphite were grown epitaxially on top of other material (5). This " epitaxial grapheme" consists of a single atom thick hexagonal lattice of carbon atoms as free standing Graphene.

In 2004 Andre Geim and Novoselov at university of Manchester extracted single atom thick crystallites from bulk graphite (2). They pulled Graphene layers from graphite and transferred them on to thin SiO2 on a Silicon wafer in a process called either micromechanical cleavage or the Scotch tape technique (6). The SiO2 electrically isolated the raphene and weakly interacted with it ,providing nearly charge neutral Graphene layers.

Geim and Novoselov received several awards for their pioneering research on Graphene, notably the 2010 Nobel prize in Physics.

In 2016 Brown university (Providence ,Rhode island united states) introduced a method for "crumpling " Graphene adding wrinkles to the material on a nanoscale. The crumpled Graphene became superhydrophobic, and when used as a battery electrode the material was shown to have as much as 400% increase in electro chemical current density (7).

Properties:

1) Specific surface area:

   Graphene has a theoretical specific surface area of 2630 squaremetes per gram. This is much larger than that reported to date for carbon black (Typically 900 square meters per gram) or for carbon nanotubes (CNTs), from 100 to 1000 square meters per gram and similar to activated carbon (8).

2) Mechanical & Physical :

   Graphene is the strongest material ever tested with an intrinsic tensile strength of 130 Gpa (19,000,000 Psi) and a Young's modulus (stiffness) of 1TPa (150.000.000Psi) (9)

   Graphene is very light . It weighs just 0.77 mg per square meter(About 0.001% of weight of 1 sq.meter of paper(10). Since it is a single 2D sheet, it has the highest surface area of all materials. When left to themselves Graphene sheet will stack and form graphite, which is the most stable 3D form of carbon under normal conditions.

   Graphene sheets are flexible and in fact Graphene is the most stretchable crystal. You can stretch it up to 20% of it's initial size without breaking it. Graphene is also highly impermeable and even helium atoms can not pass through it.

3) Chemical :

   Graphene is only form of Carbon (or solid material) in which every atom is avaialable for chemical reaction from two sides(Due to the 2D structure). Atoms at the edge of Graphene sheet have special chemical reactivity .Graphene has the highest ratio of edge atoms of any allotrope. The onset temperature of reaction between the basal plane of single layer graphene and oxygen is below 260 degree celcius. Graphene burns at very low temperature (e.g: 350 degree C). Graphene is commonly modified with oxygen and Nitrogen containing functional groups and analyzed by infra red spectroscopy and x-ray photo electron spectroscopy.

   In 2013, Stanford university physicists reported that single-layer graphene is a hundred times more chemically reactive than thicker sheets (11).

4) Electronic:

One of the most useful properties of Graphene is that it is

a zero-overlap semimetal (with both holes and electrons as charge carriers) with every high electrical conductivity. Carbon atoms have 6 electrons, 2 in the inner shell and 4 in the outer shell. Graphene is a zero gap semi conductor, because it's

conduction and valence met the Dirac points.

5) Permittivity:

Graphene's permittivity varies with frequency. At frequency near DC it is near 6.9 (12). Over a range from microwave to millimeter wave frequencies it is roughly 3.3 (13). This permittivity combined with the ability to form both conductors and insulators, means that theoretically compact capacitors made of graphene could store large amount of electrical energy.

6) Optical:

Graphene's unique optical properties produce an unexpectedly high opacity for an atomic mono layer in vacuum , absorbing about 2.3% of red light (14)

7) Thermal Conductivity:

Thermal conductivity of Graphene is an area of research

which has attracted attention of the scientists because of the potential for thermal management applications. Early measurement of thermal conductivity of suspended graphene reported an exceptionally large thermal conductivity of approx.. 5300 w/m/k (15) compared with thermal conductivity of Pyrolic graphite of approx..2000 w/m/k at room temperature. However it needs further investigation and confirmation.

Potential applications:

Having so remarkable properties, Graphene has inspired scientists to think of a wide range of uses for the material in wide range of field as consumer tech. and environmental science. A few potential applications are as following:

1) Solar cell/ Photovoltaics:

Graphene is both highly conductive and transparent. As such it has great potential as a material in solae cell. Typically , solar cells use silicon which produce a charge when a photon hits the materials, knocking loose a free electron. Silicon only releases one electron per photon that hits it. Research has indicated that graphene can release multiple electrons for each photon that hits it. As a result graphene could be better at converting solar energy. Before long , cheaper, more powerful graphene cells could produce a massive surge in renewable energy. Graphene's photovoltaic properties also mean that it could be used to develop better sensors for devices as a camera.

2) Semiconductors:

Due to it's high conductivity graphene could be used in semiconductors to greatly increase the speed at which information travels. Recently conducted tests demonstrated that semi-conductive polymers conduct electricity much faster when placed atop a layer of graphene than a layer of Silicon. This holds true even if polymer is thicker.

3) Water filtration:

Graphene's tight atomic bonds make it impermeable for nearly all gases and liquids. Strangely, water molecules are an exception. Because water can evaporate through graphene while most other gases and liquids can not. Graphene could be an exceptional tool for filtration. Researchers at the university of Manchester tested graphene's permeability with alcohol and were able distill very strong sample

of spirit, as only the water in the sample was able to pass through the graphene.

Graphene could also be immensely helpful in purifying water from toxins. In a study published by the Royal Society of chemistry, researchers showed that oxidized graphene could even pull radioactive materials such as Uranium and Plutonium present in water ,leaving liquid free from contaminations. The implication of this study are massive, some of the biggest environmental hazards in history, including nuclear waste and chemical run off, could be cleansed from water sources ---thanks to Graphene.

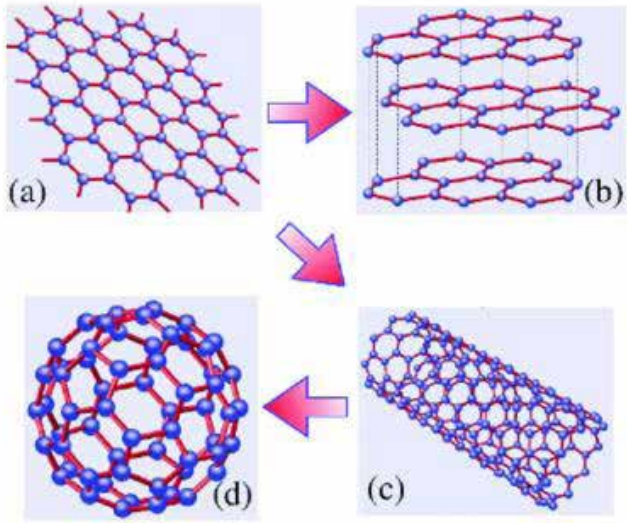
4) Super conductivity :

Scientists at Cambridge demonstrated that Graphene can act as a superconductor (A material with no electrical resistance)when paired with praseodymium cerium copper oxide. Researches at MIT discovered another astounding property that it can apparently function as a super conductor alone in the right configuration.

1) Other potential applications:

Since the 2010 Nobel prize in Physics went to Andre Geim and Konstantin Novoselo who first isolated Graphene in 2004, Graphene is getting lot of attention as it can be combined with other elements(including gases & metal) to produce different materials with various superior properties. It's possible application is already verified which include:

- Batteries
- Transister
- Computer chips
- Energy generation
- Super capacitor
- DNA sequencing
- Water Filter
- Antennas
- Touch Screens(For LCD or OLED displays)
- Solar cells



Graphene –CNTs Buckyballs-image

Conclusion:

Graphene is a new " super material ",one atom thick layer of Carbon (Carbon atom has a diameter of about 0.33 nanometer.there are about 3 million layers of graphene in 1 mm of graphite),Thinnner than paper, stronger than steel,harder than diamond yet more elactic than rubber, lighter than aluminium.

Graphene possesses amazing characteristics as following:

- It's high electron mobility is 10 times faster than Silicon.
- It's electrical conductivity is 13 times better than copper.
- It absorbs 2.3% of reflecting light.
- It is impervious so that even smallest atom(Helium) can not pass through a defect-free monolayer graphene sheet.
- It's high surface area of 2630 sq.meter

per gram means that with less than 3 gram, an entire Soccer field could be covered.

- It is 200 times stronger than steel.
- It is truly a material that could change the world with un limited potential for integration in almost any industry.
- Glossary :
- Dirac Points: Are the transition between the valence
- Band and conduction band. Dispersion relation of Graphene is calculated by using the tight binding model. Six Dirac points are observed which any two of them K ,K' are inequvalent.
- The Valence band is the band of electron orbitals that electron can jump out of moving into the conduction band when excited.
- Conduction Band: Is the band of elrctron orbitals that electron can jump into from the valence band when excited.
- Spintronics : Study of the intrinsic spin of the electron and it's associated magnetic moment, in addition to it's fundamental electronic charge in solid-state devices.

References:

1. Boehm,H.P Clauss, Fischer, G.O;Hofmann,U.(1July 1962) " Das Adsorptionsverhaltensehr dunnerKohlenstoff-Folien". 316(3-4):119-127 doi: 10.1002/ zaac.19623160303.ISSN 1521-3749
2. Novoselov, K.S,Geim, A.K.Morozov, S.V;Jiang,ZhangY,FirsovA.A(22Oct.2004) " Electric Effect in Atomically thin Carbon Films" Science.306(5696)666-669. ISSN0036-8075 PMID15499015
3. " This Month in Physics History: October 22,2004: Discover of Graphene" .APS NEWS. Series II 15499015
4. DiVincenzo, D.P;Mele E.J (1984)," Self –Consistent Effective Mass Theory for Interlayer Screening in Graphite Intercalation Compounds." Physical Review B.295(4): 1685-1694 . Bibcode: 1984PhRvB..29.1685 D
5. Oshima, C ;Nagashima, A(1007)." Ultra-thin epitaxial films of graphiteand hexagonalboronnitrideonsolidsurfaces." J.Phys: Condens.Matter.9(1):1-20. Bibcode: 1997JPCM.....9....10.
6. " The Story of Graphene". October 2014." Following discussion with colleagues, And reand Kostya adopted amethod that rechar gesinsur face science were using-using simple Sell tape to peel away layer so graphite to expose a clean surface for study under the micro scope."
7. Stacey, Kevin(21 March 2016)." Wrinkles and crumples graphene better, News from Brown." News. brown. edu. Brown University. Archived from the original on 8 April 2016. Retrived23 June 2016
8. Bonaccors oF; Colombo, L; Yu, G; Stoller, Tozzini V (2015). " Graphene, related two-dimensional crystals, and hybird system for energy conversion and storage." Science 347(6217):1246501. Bib code: 2015Sci...347...41B
9. Lee,C;Wei,Kysar,J.W;Hone,J(2008)." Measurement of the Elastic Properties and Intrinsic Strength of Monolayer Graphene." Science 321(5887): 385-8. Bibcode: 2008Sci...321...385L
10. " 2010 Nobel Physics Laureates" nobelprize.org.
11. "Thinnest graphene sheets react stongly with hydrogen atoms;thicker sheets are relatively unaffected" Phys.

org.1February2013.

12. Dash.Gana N. (6 june 2017). "Whatisdielectric constant or permittivity of graphene?" ResearchGate. Retrieved 10 November 2019

13. Cismaru, Alina; Dragoman, Mircea; Dinesuc, Adrian; Dragoman, Daniela; Stavrinidis, G;Konstantinidis, G (2013). "Microwave and Millimeterwave Electrical Permittivity ofGraphene Monolayer". arXiv:1309.0990 .Bibcode: 2013arXiv1309.0990C

14. Nair, R.R; Blake, P; Grigorenko, A.N; Novoselov, K.S;Booth, T.J; Stauber, T;Peres, N.M.R; Geim,a.K. (6 June 2008)." Fine Structure Constant Defines Visual Tranparency of Graphene". Science. 320(5881): 1308.arXiv: 0803. 3718.

15. Baladin, A. A;Ghosh, Suchismita; Bao, Wenzhong; ChunNing (20 February 2008) . " Superior Thermal Conductivity of Single Graphene". Nano Letters.8(3): 902-907. Bibcode: 2008NanoI...8..902B

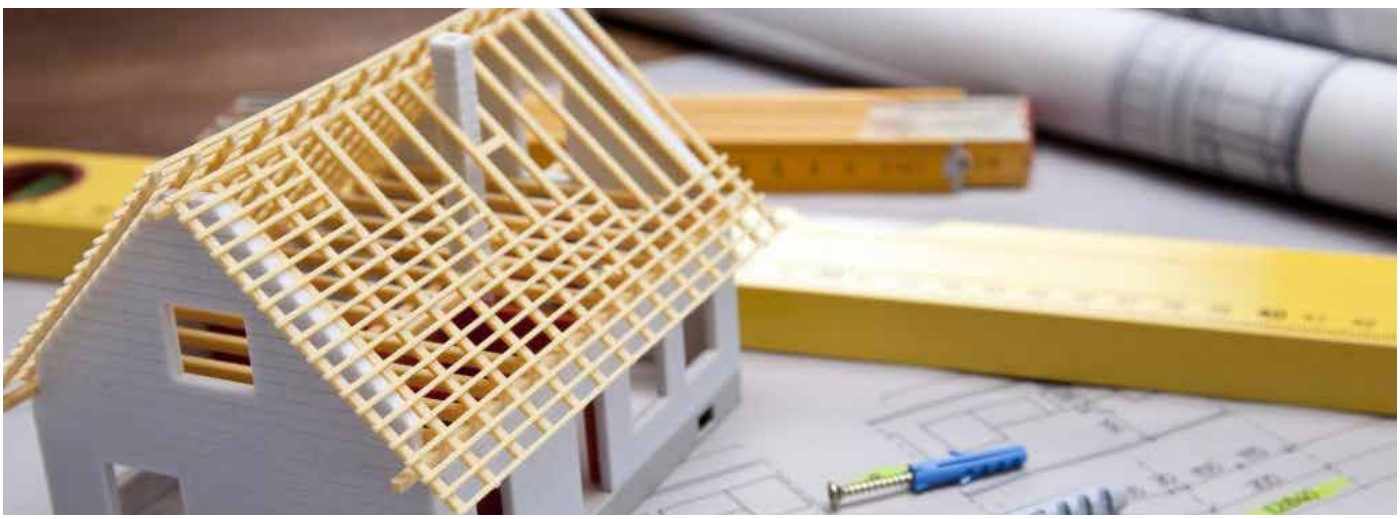
About Author:

Engineer Syed Mubashir Hussain Kirmani is a Civil engineer, having over 53 years of experience in diversified fields including Soil and foundation engineering ,structural engineering (Concrete and Steel) . motorways, public health engineering, water and waste water engineering and environmental engineering. Eng. Kirmani obtained B.Sc (Honors) degree with second position in applied mathematics , Astronomy and applied Physics in 1963 from University of Karachi, B.E (degree in Civil Eng.) in 1967 from N.E.D Eng. college Karachi, Post graduation in Engineering management in 1971 from IBA Karachi.

Eng. Kirmani has been serving in KSA since the last 43 years in a reputable Engineering organization as a chief engineer and Head of engineering management and achieved a high level of competence. He is fellow and active member of several Engineering Societies . Last year he received an award of excellence by the " Nature Conservancy USA" in recognition of his contribution to Land and Water conservation issues. Engr. Kirmani has been regularly contributing his articles to IEP-SAC Journal for the last 22 years. During the same period he made several presentation in Seminars on current engineering issues. He served IEP-SAC as general secretary for 8 years and subsequently as the chairman for four years. At present he has been assigned as the advisor to IEP-SCismaru, Alina; Dragoman, Mircea; Dinesuc, Adrian; Dragoman, Daniela; Stavrinidis,G; Konstantinidis, G(2013). "Microwave and Millimeterwave Electrical Permittivity of-Graphene Monolayer". arXiv: 1309.0990 .Bibcode: 2013arXiv1309. 0990C

Housing Sector Of Pakistan Issues & Solutions

By: Syed Abdul Majeed Shah



Abstract:

Housing is a big issue in Pakistan. This article discusses problems, solutions and all new development in pipeline in this sector.

Housing is fundamental & basic need after food & clothing. According to the 2017 census report, there are 19.2 million housing units in a country of which 38% one-room unit, 35% Kacha Units & 11% Semi Pakka. It is a shortage of 8.5 million houses and is growing 300,000 units every year.

It is the demand of 700,000 houses per year due to an increase in population & migration from rural to urban whereas supply is 400,000 units both in rural & urban areas. It is a big challenge to cover unmet demand.

The main ingredients of housing are land, infrastructure, finances, employment, available technology & materials and means of communications.

Real estate mafias exploited land matters and made it unreachable for common citizens, one has to spend lifesaving or end service gratuity on retirement to get a plot for building house same is the case for overseas Pakistanis they have to spare a big amount of their hard-earned money to buy a piece of land to live.

For an urban area, this is a matter of severe concern that mushroom of plots in the shape of housing societies & town is spread around all major cities. The dilemma is that these plots are de-marketed without the provision of basic infrastructure like water supply, drainage, electricity, gas & road works. In absence of these utilities, hundreds of thousand plots are lying empty on all sides of our cities. There is more than 200,000 plot lying vacant alone in Karachi for decades. This is a double edge loss on one hand money supposed to contribute in economic activities is getting blocked in nonproductive plots on other hand value able agriculture land is being swallowed by plots. Only in Multan 30% mango gardens are converted in housing societies and so on

the case of every city and big town. When no infrastructure is developed, people do not feel feasible to construct house so the plot remains vacant for years & years. The recent government has taken this issue to impose a ban on making new plans around cities for housing and announced to adopt the plan of vertical expansion not horizontal.

Lack of funds & non-availability of housing finance policy to support in house building is one major problem. A medium-range salary person cannot think of own house because there is neither a home mortgage plan nor loan facility from financial institutions. House building finance corporation (HBFC) established in 1984 so far disbursed 50 billion rupees. It is a small fraction compare to the huge need. Government spending on the housing sector has never been encouraging. Annual demand is for 300 billion rupees while budgetary allocation is merely one percent of demand.

The provision of sufficient funds is very important to develop infrastructure & basic services otherwise no major change will take place.

The current building technique is producing concrete jungles and impacting very adverse effects on the environment. This is one major cause of the rise in temperature. In the near past was a fatal heatwave in Karachi. Parks & open spaces are disappearing result is air pollution in all cities. Lahore, Karachi & Quetta rated very low in clean air among Asian cities.

Engineering institutions must start research in bringing environmentally friendly building materials. Our designers should seriously consider wall & roof insulation and to use double glazed windows for better temperature control & saving energy.

A correct land use plan is another important aspect of good housing. There has to be a strong regulatory framework that must protect all the sections of the population. Authorities should set a plot size ceiling of 500 square yards in cities.

The standard dwelling ratio is 400 persons per hectare while due to densification this ratio is in thousands for city centers because due to lack of transportation arrangements. Karachi is an only megacity of a region without a mass transit system. Generally, seven-member of habitants per house in urban areas and due to the joint family system in rural areas is over 12.

Floor area ratio (FAR) is an effective way to control the development of the residential area and non-residential lands, it is a decimal number and is derived by dividing the total area of a building by the total area of the parcel (building area/lot area). It is a comprehensive approach to achieve a standard population per hectare and to govern high and medium-rise buildings for a balanced plan.

Rural versus urban is a popular debate in this subject, both having pros & cons. Villages are totally ignored considering these are small populations which are not the correct approach, basic amenities should be in reach of all citizens both in rural & urban. Still, people will move from villages to towns and cities for better health, education & business opportunities. To cater to this shift new cities to be developed instead of swelling existing ones. A chain of medium-size cities easily can be developed on our coastal belts, in Chullistan, and in FATA by organizing industrial zones.

Another factor demanding attention is the high number of Kacha houses. In house count of 2017 census given in below table indicate that overall 35% of houses fall in this category. These are very risky because we are inactive seismic zone and hit by floods often. Authorities should facilitate safe house regulations and Engineers must bring a design to sustain disasters of earthquakes and floods.

Administrative Units		Total Housing Units	Housing Units by Number of Rooms				Housing Units by Type		
			One room	Two rooms	3 - 4 rooms	5 and more	Pacca	Semi Pacca	Kacha
Pakistan		**19211738**	**38.11**	**30.54**	**24.43**	**6.92**	**54.64**	**10.84**	**34.52**
	Rural	13180308	41.65	30.02	22.24	6.09	42.05	12.8	45.15
	Urban	6031430	30.38	31.68	29.23	8.72	82.14	6.56	11.30
Khyber Pakhtunkhwa		**2211236**	**27.71**	**34.5**	**29.11**	**8.68**	**56.15**	**5.58**	**38.26**
	Rural	1842488	28.60	34.73	28.48	8.19	53.01	5.87	41.11
	Urban	368748	23.28	33.35	32.27	11.1	71.85	4.13	24.02
F A T A		**341114**	**13.04**	**25.91**	**40.49**	**20.56**	**36.73**	**5.01**	**58.26**
	Rural	332506	12.89	25.76	40.69	20.66	36.81	5.03	58.16
	Urban	8608	18.89	31.81	32.59	16.72	33.75	3.97	62.28
Punjab		**10537127**	**31.97**	**33.54**	**27.12**	**7.36**	**62.00**	**8.03**	**29.96**
	Rural	7336193	33.78	34.00	25.71	6.51	52.21	8.62	39.16
	Urban	3200934	27.81	32.5	30.35	9.33	84.43	6.68	8.87
Sindh		**5022392**	**56.93**	**23.88**	**15.62**	**3.56**	**46.70**	**18.95**	**34.35**
	Rural	2850989	72.69	18.81	7.34	1.16	17.93	28.64	53.42
	Urban	2171403	36.25	30.54	26.5	6.71	84.46	6.21	9.32
Baluchistan		**971116**	**42.77**	**25.18**	**22.69**	**9.36**	**14.19**	**14.04**	**71.77**
	Rural	775954	46.66	24.24	20.48	8.62	8.41	14.16	77.44
	Urban	195162	27.32	28.9	31.47	12.29	37.18	13.58	49.23
Islamabad		**128753**	**16.01**	**29.47**	**38.38**	**16.14**	**87.97**	**5.64**	**6.39**
	Rural	42178	15.87	30.12	39.95	14.06	85.54	7.00	7.45
	Urban	86575	16.08	29.15	37.62	17.15	89.15	4.98	5.87

Solid waste management and sanitation are areas need more attention. Provision of clean water is also a big challenge it is irony that having rivers, good rainfall, the vast icy Himalayan range and long coastal belt with a potential of desalination still we have a shortage of water and risk is growing year by year.

Security concern has created gated communities, which is against free access and the principle of socialization. Security is a very basic right of humans towards authority this is why segregation of communities and happening of communal discomfort.

The current government announced the most ambitious plan to build 5 million houses at a rate of one million affordable houses per annum known as NPHP (Naya Pakistan Housing Program). This is a very attractive and wise scheme to improve the housing situation in Pakistan. The salient feature of this scheme is to give affordable houses to people. Unfortunately, no conclusive progress but a lot of legwork done in this regard. Due to political instability and worsening economic conditions are a big hurdle to materialize such an ambitious plan. A major step to utilized state-owned land lying vacant in major cities will ease the price of housing units. A fund of 25 billion Rupees allocated for this plan and another 35 billion rupees will generate from a new blue area in Islamabad F9 will add in this fund, with such steps expecting an investment

boom in the year 2020 towards housing.

The construction of houses will benefit forty different industries related to the construction business and will boost the country's economy. State land will be utilized to build 3-5 Marla houses preferably two-room apartments. The policy is in developing stage, initially announced for 7 districts in all provinces and eventually will spread across the whole country. The cost of a house will range from 1.5 million to 2.2 million & will be offered on installments to low-income families. Five percent discount for Overseas Pakistanis if applying their native district.

The government alone cannot solve the problem there are always private partners to contribute equally. Unfortunately, a major section from the private sector is behaving like mafia hiking prices, fill their banks, and snatch every penny from citizen seeking shelters.

In early 70's there were real state companies like Al-Azam, Hassan Associates, Maymar, Rukinuddin... in Karachi, Eden, Rafi builders.. in Lahore Khan builders in Multan & so in many cities later came DHA's, Bahria, LDA, CDA, MDA, QDA, PDA, FDA and many government departments like Fizaia, WAPDA, PHA & several cooperative societies entered in this field. Required to regularize such real estate players with an approach to carry the business in a healthy way, not with the strategy of manipulating price hike. They should make a reasonable profit and the government should help them in the provision of utilities and taking away legal hurdles in their way to perform better. This must be a win-win task.

Reduction in Cost of construction is a big challenge for engineers, we have all building material locally available and its production cost is not much only need to apply the latest techniques and by using competitive materials. Conventional construction costs range from Rs. 2200 to Rs. 3600 per square feet depending on the quality of material and finishes. The government can bring further ease in prices by adjusting huge taxes and by controlling the price-exploiting approach by owners of cement factory cartel.

It is need of the time to go for sustainable construction and adapt renewable energy schemes, rainwater harvesting, and environmentally friendly buildings. Let us hope and try with a joint public-private effort that every citizen should get suitable shelter in clean and green Pakistan.

About Author:

Engr. Syed Abdul Majeed Shah is in profession from last 44 years, graduated from NED Engineering College Karachi in 1974-75. He is working in corporate management team of El-Seif Engineering a leading construction company of Middle East. He worked as GM construction for Centaurus, a mix use project at Islamabad. Also, worked in reputed companies like CCC, Khateeb & Alami, Cansult of Middle East & Maymar and Hakkas in Pakistan. Ex general secretary of NED Student's Union, Member of Overseas advisory Council of OPF.

Architects and Town Planners

ABDUL SABOOR KHAN
Senior Architect
Saudi Consulting Services
P.O.Box 2341, 11451 Riyadh
Email: saboor1645@yahoo.com
B Arch, UETL 97

AHMED SHAKAIB BABER
Senior Architect
Saudconsult
P.O.Box 2341, Riyadh 11451
Email: ahmedshakaib@gmail.com
B.Arch UETL 93

ARSHAD M. CHOHAN
Project Manager
Zuhair Fayez Partnership
P.O. Box 5445, Jeddah 21422
M.Sc. (UP) PSU USA 87

ASHFAQ MOHAMMAD QURESHI
Chief Architect
Rashid Engineering
P.O. Box 4354, Riyadh 11491
Email: qashfaq39@yahoo.com
G.D. Arch 69, A.F.A.E Pak

BABAR MEHMOOD
Architect
ABV Rock Group
Riyadh
B.Arch. UET Lahore 2004

FAROOQ AHMED BHATTI
Project Manager
M/S Saud Consult
P.O. Box 1293, Dammam 31431
Email: farooqahmed@saudconsult.com.sa
B. Arch NCA 79

FAROOQ IQBAL
Principal Architect
Saudconsult
P.O.Box 2341, Riyadh 11451
Email: fiqbal@saudconsult.com
B.Arch UETL 89

KHALID IQBAL WARRAICH
Senior Construction Manager
Hamad Al-Lafi Contracting Est. (ALAFCO)
P.O.Box 2414 Riyadh 11451
Email: khd219@hotmail.com
B.Arch, UETL 73, AMIE IEP 77

MOHAMMAD RAFIQ
Senior Architect
Saudi Consulting Services
P.O.Box 2341, Riyadh 11451
Email: rfqahmad@yahoo.com
B.Arch NED 98

MOHAMMAD WASEEM
Architect
Dar Al Majd Consulting Office
P.O. Box 60212, Riyadh 11545
B.Arch DCET 85

MUHAMMAD ABDUR REHMAN
Architect
SATORP
Mutrafiya, Jubail
Email: marehman87@gmail.com
B.Arch. UETL 10

MUHAMMAD IMRAN ILYAS
Architect
Saudi Consulting Services - Saudconsult
P.O. Box 2341, Riyadh 11451
Email: mimran@saudconsult.com
BSc U of South Asia, LHR 14

NOOR ULLAH KHALID
Sr Project Manager
Elseif Engineering Contracting Est.
P.O. Box 2774, Riyadh 11461
Email: nukhalid@hotmail.com
B.Arch UETL 76

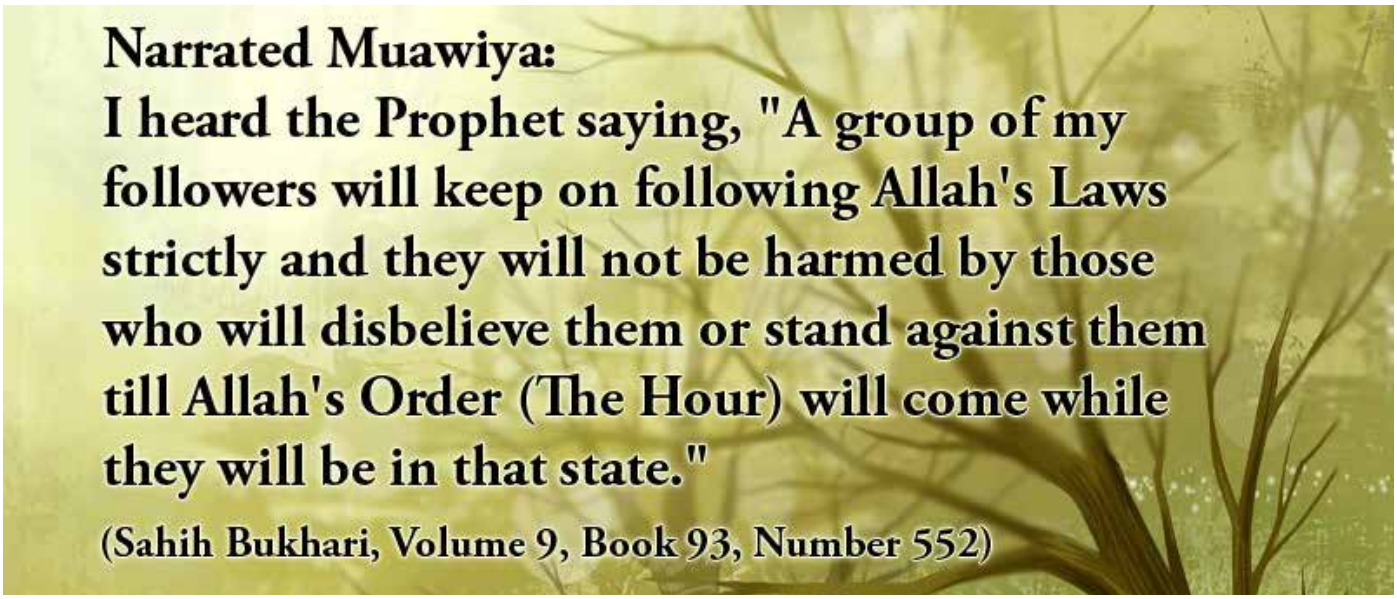
RUKHSUDDIN SHAIKH
Senior Architect
A.M. Al-Issa
P.O. Box 41984, Riyadh 11531
B. Arch UETL 80

SALMAN PERVEZ
Senior Architect
Dar Engineering, Riyadh
POBox 87236, STC Bldg Exit 5, Riyadh
Email: salmanparvez@gmail.com
B Arch, National Col of Arts 01, M Arch, Ger 04

SYED NAEEM ALI
Architect
Zuhair Fayez Partnership
P.O. Box 5445, Jeddah 21422
B. Arch. NCA 94

Architects and Town Planners

WASEEM AHMAD
Senior Architect
Saudi Consulting Services
Riyadh
Email: wahad@saudconsult.com
B.Arch UETL 97



Chemical Engineers

AAMIR AZIZ KHAN
Lifting Equipment & Training Manager
RICI
Alkhobar
Email: aakhan503@gmail.com
B.E U of Punjab 2005

ABDUL ALI SIDDIQUI
Process Engineer
Saudi Aramco
P.O. Box 50, Riyadh 11383
B.Sc. (Chem) MUET 79

ABDUL REHMAN RATHORE
Valves Products Manager
A. Abunayyan Trading Corp.
P.O. Box 321, Riyadh 11411
Email: abdulrahman-rathore@abunayyangroup.com
B.Sc. (Chem E) Punjab U 77, MBA Punjab U 80

ABDULLAH AIJAZ
HSE Engineer
Saudi Electricity Company
Beside Dallah Driving school, Al Khobar
Email: abdullahmemon1991@gmail.com
B.Sc UET Mehran 14

AHMAD USMAN TAHIR
Project Engineer
Suido Kiko Middle East
Riyadh
Email: engineerusman@hotmail.co.uk
BSc Chem UETL 06, MSc Environ Glasgow U 10

AHMED WAQAS
Sales & Application Engineer
Yusuf Bin Ahmed Kanoo Co. Ltd
Alkhobar
Email: ahmedwaqasmughal@hotmail.com
BSc NFC IET (BZU) Multan 2007

ALI IMTIAZ
Proposal Engineer
Olayan Descon Industries Co.
Jubail
Email: lukyali_4u@hotmail.com
S.Sc. (Chem) UETL 07

ASIM ATHAR
Sr. Design Engineer, Piping
Fluor Arabia Limited
Alkhobar
Email: asim.athar@fluor.com
B.E Punjab U. Lahore 2001

FAHEEM ELAHI ANSARI
Production Manager
Petro Rabigh (RPTP)
Rabigh, KSA
Email: feansari@hotmail.com
M.Sc. KU 75, M.S (Chem) UOB 77

HABIB UR REHMAN
Director Production
Riyadh Cememtn Company (SAWCEM)
Nissah Rd, Muzahmia, Riyadh
Email: habib_ur_rehman54@hotmail.com
B.E. Chemical, U of Punjab 77

HAFIZ ALI ALVI
Piping Material Engineer
JGC Gulf International
khobar
Email: alimalvi300@hotmail.com
B.Sc. (Chem) UP 06

HAFIZ ARSHAD SULTAN
INSTR. DESIGN ENGINEER
TECNICAS REUNIDAS SAUDI ARABIA
TR CAMP JAZAN
Email: HARSHAD@TRSA.ES
B.E Chemical Punjab U. 2006

HALIM HAMID REDHWI, DR.
VP, Valley, Professor
KFUPM
PO 1823, Dhahran 31261
Email: hhamid@kfupm.edu.sa
Ph.D. (Chem) CU UK 88

HASSAN TARIQ MIRZA
Engineering Manager
China Petroleum
Dammam
Email: hsntariq@hotmail.com
B.E. (Chem) PU 05, MSTQM PU 09

IFTIKHAR AHMAD QAZI
Sr. Planning Engineer
Saudi Aramco
P.O. Box 50 Riyadh 11383
Email: Qazi51_pk@yahoo.com
B.Sc. (Chem) PUL 73

IMTIAZ AHMAD
Projects Development & Engineering Director
Al Rajhi Ekhwan Group Company
P.O.Box 26660, Riyadh - 11496
Email: talhaimtiaz@gmail.com
B.Sc. (Chem) METU TK 84, M.E. McGill 87

Chemical Engineers

IQBAL AHMAD CHAUDHRY

Contact Consultant
Saudi Calcined Petroleum Coke Company
PO Box 35579, Jubail 31961
Email: ia.chaudhry@hotmail.com
B.Sc. (Chem) UETL 69, M.Sc. UETL 71, CE ICF 73

ISRAR UL HAQ

Senior Instrument & Control Engineer
JACOBS ZATE Engineering Consultant
AL-KHOBAR
Email: israrulhaq17@gmail.com
B.E Dawood U. of Eng. & Tech. Karachi 2005

KAMRAN MALIK

Sr. Design Engineer, Piping
Fluor Arabia Limited
Jubail
Email: kamran.malik@fluor.com
B.E Punjab Univ 2004

LAEEQ AHMAD RUMI

Process/Applications Engr.
SIEMENS
P.O.Box 719, Khobar 31952
B.Sc. (Chem) UOP 02

MAQSOOD HAMID

Process Engineer
PETROKEMYA
P.O. Box 10002, Jubail 31961
B.Sc. (Chem) UK 79, M.S (Chem) Leeds UK 81

MASOOD A KHAN

Project Engineer
SHARQ
PO Box 10110, Jubail 31961
Email: khanma99@hotmail.com
B.E. (Chem) NED 79

MAZHAR HUSSAIN

Director Operations
M. A. Al-Azzaz Inspection and Testing Services
P.O. Box 31172, Al-Khobar 31952
Email: mazhar@ricionline.com
B.Sc. (Chem) UETL 96, MS UA USA 05

MIAN RAHAT SAEED

Research Engineer
King Fahd University of Petroleum & Minerals
PO Box 929, Dhahran-31261
Email: mrsaeed@kfupm.edu.sa
B.Sc. (Chem) KFUPM 83, M.Sc. (ChE) KFUPM 86

MOHAMMAD JAVAID AGHA

Staff Planner
Petrokemya
P.O. Box 10002, Jubail 31961
Email: plnmja@petrokemya.sabic.com
B.E. (Chem) NED 81, MBA AIM 90

MOHAMMAD NASIR SHAHAB

Senior Petroleum Engineer
SADARA
P.O. Box 10661, Alkhobar
Email: nasir79@gmail.com
B.Sc. (Chem) NFC UET 02

MOHAMMAD SHAKIL HARIS

Process Engineer
Basic Chemical Industries Ltd.
P.O. Box 1053 Dammam 31431
Email: shakil_haris@hotmail.com
B.Sc. (Chem E) UP 95

MOHAMMAD YOUNAS

Process Engineer
Saudi Aramco (Riyadh Refinery)
OEU Bldg, P.O. Box 3946, Riyadh 11194
B.Sc (Chem) UETL 69, M.Sc (Chem) UOC 74

MOHAMMAD YOUNAS TAHIR

Plant Superintendent
Saudi Aramco Shell Refinery Co.
P.O. Box 10088, Jubail 31961
B.Sc. (Chem) UETL 78

MOHAMMAD ZAFAR

Sr. Project Engineer
S&A Abahsain Co. Ltd.
P.O. Box 209, Al-Khobar 31952
Email: Sagi_62@hotmail.com
B.Sc. (Chem) PU 85

MOHAMMAD ZAFAR HUSSAIN

Technical Manager
SAPTEX
P.O. Box 40042, Riyadh 11499
M.Sc. (Chem) Pun U 71, PGD (Chem E) Pun U 73

MUHAMMAD AZHAR ALI

Sr. Estimation Engineer
Olayan Descon Engg Co.
P.O. Box 10108,Jubail Industrial City 31961
Email: mazali@olayandescon.com
B.Sc. (Chem) UET 00

Chemical Engineers

MUHAMMAD BILAL

Marketing Manager
SENDAN International Company Ltd.
Jubail
Email: bilalshakoor@hotmail.com
B.Sc. (Chem) NEC 00, MBA KGSM 00

MUHAMMAD EJAZ

Incharge - Proposal and Marketing
MCE Gulf Contraction Co. Ltd
PO 3083, dammam 31471 jubail ind. City
Email: ejaz409@yahoo.com
B.Sc. (Chem) NFC IET 05

MUHAMMAD FAISAL MURAD

Senior Process Engineer
SNC Lavalin
Al-Khobar
Email: faisalmurad1@gmail.com
B.E. (Chem) NED 01

MUHAMMAD IRFAN IQBAL

Principal Project Engineer
SABIC
PO Box 10040, Jubail 31961
Email: iqbali@sabic.com
B.E. (Chem) PU 81

MUNAWAR A. SAUDAGAR, DR.

Researcher
SABIC R&D
Riyadh
B.E. (Chem) NED 76, M.S KFUPM 82, Ph.D Alberta 9

MUNZAR HUSSAIN KHAN

Manager Quality Control
SABIC
Al-Khobar
B.E. (Chem) PU 91

NABEEL PERVAIZ MALIK

Key Account Manager
Shell Lubricants
Dammam
Email: npmalik@hotmail.com
B.Sc. (Chem) UETL 04

OMAR SHUJA SIDDIQUI

Sr Safety Engineer
SABIC
Tower B, Flr 2, EHSS Global Ass, SABIC HQ, POBox
Email: omarshuja@gmail.com
BBA/MBA, IBA 02/03, B.E. Chemical, Dawood 07

OMER FAROOQ

Process Engineer
GCC
P.O.Box 895, Dammam 31421
B.Sc. (Chem) ICET 03, M.S. PIEAS 05

RANA MUHAMMAD ASIF JAMIL

Senior Production Engineer
Sadara Chemical
P.O. Box 10661, Aljubail 31961
Email: muhammad.asif214@gmail.com
B.Sc. (Chem) PU 02, MS (TQM) PU 05

SABA NAZ

Email: engr_53@yahoo.com
BS Mehran University Jamshoro 07

SARMAD RIZWAN AHMAD

Director of Digitisation for Hajjj & Umrah
Jeddah
Email: sarmad.aikri@gmail.com
M.E. (Chem) UON Uk 07, MBA IE Madrid

SYED AHSAN ABBAS

Senior Manager
SABIC
P.O.BOX 5101, RIYADH 11422
Email: aabbas569@hotmail.com
B.E. (Chem) NED 80

SYED ALI JODAT

Marketing & Bus. Dev. Mgr.
Gr
Al-Barrak Industrial Services
P.O Box# 36080, Jubail 31961
Email: alijodat@hotmail.com
B.Sc. (Chem) NFC 2000

SYED AZHAR MOIN

Safety Advisor
SABIC
P.O. Box 5101, Riyadh 11422
Email: moinsa@sabic.com
B.E. (Chem) NED 79

SYED FASEEH-UDIN

Commercial Manager
ESTE, Dammam
Email: fasih130@yahoo.com
B.E. (Chem) DCET 02

Chemical Engineers

SYED KAZIM HUSSAIN RIZVI
Senior Safety Engr.
SABIC
PO BOX# 11669 AL JUBAIL
Email: kazim707@yahoo.com
B.E. (Chem) NED 83

SYED KHAWAJA MAQSOOD
Director
Saleh & Abdul Aziz Abahasan
P.O.Box 209, Khobar 31952
Email: chemical@abahsain.com
B.E. (Chem) KU 76

SYED MOHAMMAD ASHFAQ
Environmental Engineer
Jubail Chemical Industries
P.O. Box 10661, Jubail 31961
Email: ashfaq@jana-ksa.com
B.E. (Chem) NED 86

SYED NADEEM ALI
Staff Process Engr.
Petrokemya
P.O. Box 10002, Jubail 31961
B.Sc. (Chem) PU 81, M.E Bradford 84

WAJAHAT SAEED TOOR
Operations Manager
Tamimi Industrial Services
PO Box 10952, Jubail 31961
Email: wstoor@al-tamimi.com
B.Sc. (Chem) UETL 69

WASIM ALI
HSE Engineer
Saudi Electricity company
Dammam
Email: WKALI@se.com.sa
BE NFC-IEFR Faisalabad 09

Civil Engineers

ABDUL AZIZ MUGHAL

Resident Engineer (SAR)
Implementation Supervsion Consult (ISC)
PO Box 3900, Riyadh 11481
B.Sc. (CE) UETL 76

ABDUL MAJID

Lead Civil/Structural Engineer
SNC Lavalin Fayez Engineering (SLFE)
AutoMoto Complex, Rakah, Al-Khobar
Email: engrmajid@hotmail.com
B.Sc UET 98, M.Sc UET Lahore 06

ABDUL WAHAB SHAIKH

Planning Engineer
Omrania & Associates
P.O.Box 2600, Riyadh
Email: kingz_life@yahoo.com
B.E. (Civil), NED 96, MS (Const Mgmt), UT Malaysia

ABDUR RASHID HAQ

Procurement Manager
El-Seif Engineering
Riyadh
Email: abdurrasheed_haq@yahoo.com
B.Sc. (CE) UETL 76

ABDUR RAUF AZIZ

Projects Manager
Alrabiah Consulting Engineers
PB#9967, Dammam 31423
Email: abdurraufa@hotmail.com
BS UET Lahore 89, MS Structure KFUPM 94

ABID WASEEM ASLAM

Project Manager
Manwa Est.
P.O. Box 52169, Riyadh 11563
B.E. (CE) NED 79

ADEEL RIAZ QURESHI

Senior Structural Engr.
DAR Engineering Riyadh
Tamkeen Tower 7252, Olaya St, AlYasmin Dist. Riyadl
Email: adeel.qureshi@dar_engineering.com
B.Sc UET Taxilla 02, MS (Structural) Korea Adv. Inst. Tech 06

AFAQ HUSSAIN SIDDIQI

Quality Control Chief Engr.
ABV ROCK Group KB
P.O. Box 89426, Riyadh 11682
B.E. (CE) NED 80

AFTAB AHMED

Construction Manager
Saudi Consulting Services (Saudconsult)
P.O. Box 7352, Jeddah 21462
B.Sc. (CE) UETL 84

AFTAB ALAM

Project Manager
Associated Consulting Engineer (ACE)
P.O. Box 543, Makkah
B.E. (CE) NED 68

AHMAD FAROOQ

Structural Engr.
Saudi Consulting Services
P.O.Box 2341, Riyadh 11451
B.Sc. (CE), UET Taxila 02

AHMAD SAEED

Project Engineer
Saudi Consulting Services
Riyadh
Email: leo.abstract@gmail.com
B.Sc. (CE) UETL 02

AHMAD WARAICH

Cost Control Engineer
Elseif Engineering Contracting Est.
P942, P.O. Box 2774, Riyadh 11461
B.Sc. (CE) NEU Turkey 96

AHSAN RASHID

General Manager
Saadullah Khan Brothers
Al-Rossais Commercial Center, Riyadh
Email: gm@skb-ksa.com
B.Sc. (CE) UETL 74

AHSAN SALEEM

Senior Planning Engineer
El-Seif Engineering Contracting
2681, Ad-Diyar St, Gharnatah, Riyadh
Email: ahsan_saleem18@hotmail.com
BE, UET Lahore 2013

AKHTAR JAWAID NIAZI

Executive Technical Manager
Qudrat AL-TAACAH Con Est.
P.O.Box: 31852 Al-Khobar 31952
Email: ajniazi_sa@yahoo.com
B.Sc. (CE) UETL. 66

Civil Engineers

ALTAF HUSSAIN
Resident Engineer
Hill International
Riyadh
Email: altafhussainzafar@gmail.com
BSc CE, UETT 00

AMMAR AHMAD
DIVISIONAL ENGINEER
AETCON
KHOBAR DHAHRAN HIGHWAY- AL KHOBAR
Email: ammarwzd@gmail.com
BSc, UETL, 2011

ANIS AL-HASAN
Project Engineer
Abdullah Tasan Consulting Bureau Jeddah
P.O. Box 5196, Jeddah 21422
B.E. (Civil) NED 66

ANSAR FARID
Lead Civil
Assystem Radicon
Email: drop_in7@hotmail.com
B.Sc UET Lhr 90

ANWAR IQBAL
Civil Engineer
Saudi Consulting Services (Saudconsult)
P.O. Box 2341, Riyadh 11451
B.Sc. (CE) UETL 73

ARSHAD ALI AMJAD, DR.
Sr. Specialist
SABIC
PO Box 11425, Jubail 31961
Email: amjadaa@sabic.com
B.Sc.(CE) Sussex 86, M.Sc. HWU 99, PhD. HWU 03

ASAD MAQSOOD KHAN
Civil Engineer
Saadullah Khan Brothers
Al-Rossais Commercial Center, Riyadh
Email: asad.3737@yahoo.com
B.Sc. (CE) UETT 06

ASAD SALEEM SIDDIQUI
Technical Office Manager
Unimac Co
P.O.Box 7429, Riyadh-11462
Email: muradabadi2004@yahoo.com
BSc CE Aligarh Muslim Uni India 70

ASRAR M AHMED
Resident Director ACE-DABBAGH
Associated Consulting Engineers (ACE)
P.O. Box 543, Makkah
B.E. (CE) NED 59

ATIF USMAN
Projects Engineer
Al-Hokair Group
P.O. Box 859, Riyadh 11421
Email: atifkh_48@yahoo.co.uk
B.Sc. (CE) NUST 03, MSc. (MP) UOMUK 05

AZHAR BASHIR
Contract Manager
Nesma & Partners Contracting Company
6th Cross, Prince Majid St, Alkhobar
Email: azharbashirhussain@gmail.com
BE NUST 07

BABAR SULTAN
Deputy General Manager
AETCON
P.O. Box 172, Dammam 31411
Email: bsultan@batelco.com.bh
B.Sc. (CE) UETL 81, M.Sc (Const Mgmt) EMU USA 8

CHAUDHARY GULRAIZ SAEED
Lead Engineer
Elseif Engineering Contracting Est.
P.O. Box 2774, Riyadh 11461
B.Sc. (CE) UETL 78

DR. MUHAMMAD FARHAN BUTT
Saudi Aramco Chair Professor-Director, Smart Mobility Research
Imam Abdulrahman bin Faisal University, Dammam
Villa 60, Imam Abdulrahman bin FaisalUniversity Hous
Compound No. 3
Email: fmbutt@iau.edu.sa
BS UET Lhr 98, MS Brigham Young U. USA 02, PhD
USA 10, PostDoc MIT USA 12

EBRAR AHMED SHAMS
Site Manager
ABB Contracting Co. Ltd
P.O. Box 2873 Al Khobar 31952
B.E. (CE) NED 81

FAHEEM AHMAD ABDUL MAJEED
Procurement and Project Engineer
International Hospital Contruction Co
Jeddah
Email: faheem.dsa@gmail.com
B.Sc UET Taxilla 12

Civil Engineers

FAISAL AHMED SHAIKH

Highway Design Engr
Faisal AlBlehed Comp, Riyadh
POBox 301285, Riyadh-11372
Email: engrfaisal786@hotmail.com
BE Civil, Quaid-e-Awam U, Nawabshah 08

FAISAL JARRAL

Project Manager
El-Seif Engineering
Riyadh
Email: jarralfaisal@gmail.com
B.Sc, Eastern Med U. Turkey, 1998

FAZL-E-MABOOD AFRIDI

Senior Infrastructure Engineer
Saudi Arabian Parsons Ltd. (SAPL)
Hai Abdulaziz, Riyadh - KSA
Email: Fazl.Mabood@saudiparsons.com
B.Sc. (CE) NWFP UET 02

FAZLULLAH SOLANGI

Bridge Design Engineer
Saudi Consulting Services
P.O.Box 2341, Riyadh 11451
Email: fazlullahsolangi@yahoo.com
B.E. (CE), MUET Jamshoro 00

GHAYAS AHMED

Senior Civil Engineer
Jacobs Zate
Al Jubail
Email: gahmed08@gmail.com
B.Sc NUST 05

GHULAM SAFDAR

General Manager
Paradigm Contruction Company LTD.
Riyadh
Email: gsafdar@yahoo.com
B.Sc. (CE) UETL 80

HAFIZ KHADIM HUSSAIN

Sr. Structural Engineer
Saudi Consolidated Engg
P.O. Box 3928, Riyadh 11481
B.Sc. (CE) UETL 89

HAFIZ TALAT MAHMOOD

Project Engineer
Paradigm Construction Company
Hai Alkhaleej, Riyadh
Email: talatmahmood31@gmail.com
B.Sc Civil UETL 14

IJAZ AHMAD KHAN

VP Site Dev
Saudi Consulting Services (Saudconsult)
P.O. Box 2341, Riyadh 11451
B.Sc (CE) UETL 79

IMRAN NASIR

Technical Manager
Muhammad Abdullah Al Azzaz
Adjacent to Askan, Dammam
Email: imran.engr786@gmail.com
BE UET Taxilla 04

IMTIAZ AHMED

Construction Manager
Asfar Al-Jazirah Est.
P.O. Box 220569, Riyadh 11311
Email: imtiazpindwala@hotmail.com
B.Sc (CE) UETL 73

IMTIAZ AHMED DURRANI

Highway Engineer
Rashid Geotech & Materials Engineers (RGME)
P.O. Box 9182, Jeddah 21413
Email: imtiazdurrani@yahoo.com
B.Sc. (CE) NWFPUET 92, M.S KFUPM 97

IQBAL HUSSAIN

Project Manager
Al-Mas'ad Contracting Co.
Riyadh
B.E. (CE) PU 68

IRFAN ALI

Structural Engineer
SYSTRA KSA Branch
Riyadh
Email: engrirfan@yahoo.com
B.E. (CE) QAUET Nawabshah 02

IRSHAD NABI

Sr. Project Manager
AETCON
P.O. Box 250974, Riyadh 11391
B.E. (CE) UET Kabul 88

ISMET AMIN KHAWAJA

General Manager
Foundations Building Contracting Company LTD
P.O. Box 31269, Al-Khobar 31952
Email: iakhawaja@gmail.com
B.Sc. (CE) UETL 66

Civil Engineers

JAVAID IQBAL
Chief Engineer
Abal Khail Consulting Engineers
P.O. Box 4074, Riyadh 11491
Email: javaid7860@hotmail.com
B.Sc. (CE) UETL 75

JAVED IQBAL
General Manager
Sasal Mashriq Contg. Co
5th floor, Babtain Tower, Dhahran39134
Email: javed@saudisas.com
B.Sc. (CE) UETL 83

JAWED IQBAL
Sr. Outside Plant Engineer
Bayanat Al-Oula for Network Services
P.O. Box 16431, Riyadh 11464
Email: jimoda@hotmail.com
B.E. (CE) NED 82

JUNAID ABDUL WAHID SIDDIQUI
Assistant Professor
King Fahd University of Petroleum & Minerals
PO Box 453, Dhahran 31261
Email: junaids@kfupm.edu.sa
BE NED 95, MS KFUPM 20, PhD Purdue 2014

KAFFAYATULLAH KHAN
LECTURER
KING FAISAL UNIVERSITY
Email: kifayat.2000@gmail.com
BSc UET Peshawar 07, MSc UET Taxilla 11

KAMAL MUSTAFA
Project Engineer
Saudi Arabian Parsons Ltd. (SAPL)
P.O.Box 2341
B.Sc. (CE) UET Taxila 05, M.Sc. (CE) UET 08

KAMRAN KHALID JAVED
Project Engineer
Dar Al-Riyadh
Jubail
Email: javedkk@ibnsina.sabic.com
B.E. (CE) UTEL 03

KHALID HUSSAIN
General Manager
International Contracting Resources Est.
P.O. Box 16, Al-Khobar 31952
Email: khalidmdqest@yahoo.com
B.E. (CE) NED 94

KHALID MAHMOOD DR.
Professor of Civil Engg
King Abdul Aziz University
P.O. Box 9027, Jeddah 21413
B.Sc. (CE) UETL 65, Ph.D UNSW 73

KHALID MAHMOOD MALIK
Project Manager
Zuhair Fayez Parternership Consultants
P.O. Box 9486, Riyadh 11413
Email: khalidmmalik@hotmail.com
B.Sc. (CE) UETL 76, M.Sc. (CE) CTU USA 05, PMP F

KHURRAM ABBAS
Senior Structural Engineer
JACOBS Zate
Al Khobar
Email: kabbas78@yahoo.com
B.Sc UET Taxilla 02, M.Sc Structural U of Surrey 05

KHURRAM KARAMAT
Executive Vice President / Manager Engg
Saudi Consulting Services (Saudconsult)
P.O. Box 2341, Riyadh 11451
Email: bd@saudconsult.com
B.Sc. (CE) UETL 72

KIRMANI SYED MUBASHIR HUSSAIN
Chief Engineer & Technical Advisor
Saudi Technical Limited (STL)
P.O. Box 571, Riyadh 11391
Email: smhkirmani@hotmail.com
B.Sc. (Honours) KU, B.E (C) NED 67, P.G.D IBA 71

LAIQUE HAIDER
Civil / Str. Engineer
Al-Hoty Establishment
P.O. Box 31729, Al-Khobar 31952
B.E. (CE) NED 83, MSCE LSU USA 87

M. NASEEM KHAN RAZA
Resident Engineer
SYSTRA
RIYADH
Email: engr_naseemraza@yahoo.com
BSC UET Lahore 2003, MSC NUST ISB 2013

M. WAHEED CHUGHTAI
Regional Manager
W NORCONSULT
P.O. Box 2026, Riyadh 11451
B.Sc. (CE) UETL 66, MBA OSU 77

Civil Engineers

M.P. AFTAB

Projects Manager
Saudi Consulting Services
P.O.Box 2341, Riyadh 11451
Email: mpaftab@saudconsult.com
B.Sc. (CE) UETL 68, M.Sc. (ENV) AIT 75

M.TARIQ AMIN CHAUDHARY, DR.

Assistant Professor
Al-Imam Univesity
PO Box 84937, Riyadh 11681
Email: mtariqch@hotmail.com
B.Sc. (CE) UETL 90, MS SUNY 92, Ph.D. UOT JP 99

MAJOR WAHID AHMED BHUTTA

Managing Director
P.O. Box 42763, Riyadh 11551
Email: wabwammz@yahoo.com
B.Sc. (CE) MCE 92

MALIK HUMAYOON IQBAL

Civil / Strt. Engineer
Military Works Dept., MODA
P.O. Box 8633, Riyadh 11492
B.Sc. (CE) WPUETL 69

MANSOOR AHMED

Principal Civil Engineer
JACOBS Zate
Al Khobar
BE NED 02, ME NED 07

MARIYA ANWAR

Email: mariyamalik3@gmail.com
BE Civil Engg UET Taxila 05, MS UET Lhr 09

MIR SARFARAZ ALI KHAN

Senior Project Manager
INAT
Al khobar
Email: msak41@yahoo.com
B.E. (CE) OU 65

MIRZA AHTESHAM UD DIN

Civil Engineer
Saudi Consulting Services (Saudconsult)
P.O. Box 3313, Jeddah 21471
B.E. (CE) NED 67, B.Sc KU 63

MOHAMMAD ABDUL KHALID

Project Engineer
Saudi Electric Company (ERB)
EDSD/CMED 1-200W, P.O. Box 5190, Dammam
B.E. (CE) NED 76

MOHAMMAD ABDUL RAUF

Project Engineer
Saudi Consulting Services
P.O. Box 2341, Riyadh 11451
Email: mrauf@saudconsult.com
B.Sc. (CE) UETL 92

MOHAMMAD ADIL

Manager Industrial Projects
Saudi Arabian Amiantit Co.
P.O. Box 589, Dammam 31421
Email: madil@amiantit.com
B.E. (CE) NED 74

MOHAMMAD ALIUDDIN

Project Director
Takamul Project Management
P.O. Box 31202, Al-Khobar 31952
Email: aliuddin61@yahoo.com
B.E. (CE) NED 83, M.E © RUH 84

MOHAMMAD ANWAR CHAUDHARY

Cost Engineer SBG-ABCD
Saudi Binladin Group
Binladin Plaza, P.O. Box 41007, Jeddah 21521
B.Sc.(CE) UETL 76

MOHAMMAD FAHIM UDDIN

Deputy Project Engineer
Abalkhail Consulting Engineers
P.O. Box 4074, Riyadh 11491
Email: fhm_uddin@yahoo.com
B.E. (CE) NED 88, M.Sc (Nucleor E) QAU 90

MOHAMMAD FAWAD KARBARI

Project manager
Hashem Contracting & Trading Co. Ltd.
P.O. Box 10005, Riyadh 11433
B.E. (CE) NED 83, M.Sc (C) NED 91

MOHAMMAD IFTEKHAR-UD-DIN

Civil Engineer
Dar-Al-Majd Consulting Engineers
P.O. Box 60212, Riyadh 71545
Email: ifsara@hotmail.com
B.Sc. (CE) MLQU- 90, MCM, UE- 91

Civil Engineers

MOHAMMAD JAFAR KHAN

Projects Manager
Nesma & AlFadl Cont. Co Ltd.
P.O. Box 1498, Al-Khober 31952
Email: mjkhan@nesma.com.sa
B.E. (CE) NED 77

MOHAMMAD JASIM AKHTAR

Civil Engineer
Darul Majd Consulting Engineers
P.O. Box 60212, Riyadh 11545
Email: jasimakhtar@hotmail.com
B.E. (CE) NED 79, M.S UPM 87

MOHAMMAD JAWAAD

Senior Structural Engineer
Assystem Radicon Gulf Consult - Kentz
Khobar
Email: jawaadhere@hotmail.com
B.Sc UETL 04, M.Sc UETL 09

MOHAMMAD KALIMUR REHMAN, DR.

Research Engr. (Assoc. Prof)
King Fahd Unveristy of Petroleum
P.O. Box 151, Dhahran 31261
Email: mkrahman@kfupm.edu.sa
B.E. (CE) NED 80, MS UCB 84, Ph.D KFUPM 99

MOHAMMAD KHALIQUE

Road Engr. in Infrastructure
Saud Consult
P.O.Box 2341, Riyadh 11451
Email: mkhalique@saudconsult.com
B.Sc. (CE) UETL 92

MOHAMMAD KHURSHID

Civil Engineer
Dar Al- majd Engineering Consultants
P.O. Box 60212, Riyadh 11545
B.Sc. (CE) NWFPUET 91

MOHAMMAD MASOOD ANJUM

Procurement & Material Manager
Elseif Engineering & Contracting Est.
P.O. Box 2774, Riyadh 11461
B.Sc. (CE) UETL 75

MOHAMMAD MOAZAM KHAL

Resident Engineer
Dar-Al-Riyadh Consultant
P.O. Box 5364, Riyadh 11422
B.Sc. (CE) UETL 78

MOHAMMAD MUDDASSER

Road Engineer
Saud Consult
P.O.Box 2341, Riyadh 11451
B.Sc. (CE) BZUM 05

MOHAMMAD NAEEM CHAUDHRY

Civil / Structural Engr.
Al-Haka
Jubail
Email: mohammadnaeemaminchaudhry@gmail.com
B.Sc. (CE) UETL 78

MOHAMMAD PERWEZ ALAM

Operations Manager
KT Arabia LTD
Alkhobar
Email: alamperwez@hotmail.com
B.E. (CE) NED 79

MOHAMMAD RASHID

Civil Engineer
Saudi Oger Ltd.
P.O. Box 30435, Al-Hassa 31982
B.E. (CE) NED 87

MOHAMMAD SAJJAD HUSSAIN

Project Manager
SOFCON-Stanley
P.O. Box 3998, Khobar 31952
Email: msajjadh58@hotmail.com
B.E. (CE) NED 83, M.Sc (Nuclear) QAU 84

MOHAMMAD SALEEM UL ISLAM

Construction Manager
GEC
Email: saleemfarooqui98@gmail.com
BE (Civil), NED 06

MOHAMMAD SHAFIQ MAITLA

General Manager
Salman Saad Al-Akeel Est
P.O. Box 220969, Riyadh 11311
Email: mmaitla@yahoo.com
B.Sc (CE) UETL 75

MOHAMMAD TAHIR JAMEEL

HOD-Structures
Al-Rabiah Consulting Engineering
Dammam
Email: tahirjamil2005@yahoo.com
B.Sc. (CE) UETL 92

Civil Engineers

MOHAMMAD TAHIR SALEEM

Project Manager
M & M Company Ltd.
P.O. Box 10514, Riyadh 11443
B.E. (CE), NED 1977

MOHAMMAD TAYYIB WARAICH

Senior Structural Engineer
Elseif Engineering Contracting Co. Ltd
P.O. Box 2774, Riyadh 11461
B.Sc. (CE) UETL 68

MOHAMMAD USMAN

Project Manager
Saadullah Khan Brothers
Al-Rossais Commercial Center, Riyadh
Email: pm@skb-ksa.com
B.Sc. (CE) UETT 02

MOHAMMAD YAHYA KHAN

Adminstrator III Contract
Elseif Engineering Contracting Co.
P.O. Box 2774, Riyadh 11461
B.Sc. (CE) NWFPUET 84

MOHAMMAD YOUSUF

Section Engineer
Elseif Engineering Contracting Est.
P.O. Box 2774, Riyadh 11461
B.E. (CE) NED 83

MOHAMMED PERWEZ ALAM

Manager Operation
KT Arabia LLC
P.O Box 30924, Khobar 31952
Email: alamperwez@gmail.com
B.E Civil, NED 79

MUBEEN AHMAD SHEIKH

Project Manager Infrastructure
Saudi Consulting Services
Sulemaniyah Riyadh
Email: MUBEEN@SAUDCONSULT.COM
B.E. (CE) UETL 02

MUBEEN UDDIN AHMED

Subcontract Engineer
JGC ARABIA LTD.
P.O. Box 2414, AL-KHOBAR 31952
Email: mubeenz99@hotmail.com
M. Inst. CES ICES 84

MUHAMMAD AHSAN

Engineer
Gulf Consolidated Contractors GCC
GCC Half Moon camp, Dammam
Email: mahsan@gccksa.com
BSc UET, BZU, Multan 2015

MUHAMMAD AMIR SIDDIQUE BHUTTO

Senior Engineer
AETCON
P.O. Box 172, Dammam 31411
Email: Bhutto_amir@yahoo.com
BS Civil, Questian 04

MUHAMMAD ANWAR

Lead Bridge Engineer
Assystem Radicon - Kentz
P.O.Box 684, Alkhobar
Email: anwar_mce@hotmail.com
B Sc NUST 06, M.Sc UETL 09

MUHAMMAD ARIF

Project Coordinator
Dar Al Handasah (Shair & Partners)
P.O.Box 612, Almas Center, Olaya, Riyadh
Email: asmultan70@gmail.com
BSc UET Lahore 96

MUHAMMAD ASAD IQBAL

Senior Structural Engineer
Saudi Consulting & Design Office (SCADO)
Golden Belt area, Alkhobar
Email: civilengrasad@hotmail.com
MSc UET Taxila 2011

MUHAMMAD ASIM

Project Engineer
Saudi Consulting Services, SAUDCONSULT
Riyadh
Email: MASIM@SAUDCONSULT.COM
B.E UET Lahore 2003

MUHAMMAD ATHER MALIK KHAN

Structure Engineer
Omrania & Associates
Sulaimania, Riyadh
Email: engr_atherkhan@hotmail.com
B.E. (Civil) NED 03, M.E. (Civil) NED 10

MUHAMMAD FAHAM SHAKEEL

Project Manager
Al-Yamama Company
Business Gate Bldg, Dammam
Email: faham.shakeel@gmail.com
BE Civil 09, MS in Structural Engg NED Kar 12

Civil Engineers

MUHAMMAD FAIZAN

Project Engineer
Paradigm Construction Company
Email: mfaizan.mcc@gmail.com
BE NUST 14

MUHAMMAD FAYYAZ

Senior Engineer-II
JGC-Gulf Engineering (Pvt.) Ltd
Alkhobar
Email: f_aslam2000@yahoo.com
BSc UET Lahore 2004

MUHAMMAD IFTIKHAR QASIM

Project Engineer
Al-Tuwairqi Group
PO Box 7922, Dammam 31742
B.Sc. (CE) UETKPK 03

MUHAMMAD IRFAN MOHI UDDIN

Traffic Engineer
Ala Abdulhadi & Khalifa Al Hawas Consulting Enginee
(AHCEC)
Patchi Building, Prince Sultan Rd, P.O.Box 3594, Al K
Email: mimud.iffi@gmail.com
B.E Transport Engg UET Lahore 2009

MUHAMMAD NAEEM AKHTAR

Project Engineer
DAR Engineering
Al Tawun, Exit 6, Riyadh
Email: mnaeemakhtar01@gmail.com
B.Sc Civil UET Lahore 04, M.Sc Eng. Mgmt UET Taxi

MUHAMMAD TANVEER

Senior Engineer
JACOBS Zate
Al Khobar
Email: muhammad.tanveer@hotmail.com
B.Sc BZU Multan 03

MUKARRAM RAZZAQ AHMAD

Utility Engineer
Saudi Consulting Services
P.O.Box 2341, Riyadh 1145
Email: mrazzaq@saudconsult.com
B.Sc. (CE) UETL 02

MUNEER AHMED RANA

Planning & Project Engineer
Int. Center of Commerce & Contracting
P.O. Box 9778, Riyadh 11423
Email: icriyadh@shabakah.com
B.E. (CE) NED 89

MUHAMMAD FARRUKH ZAKI

Project Manager
NESPAK
PO Box 50344, Riyadh 11523
Email: mfzaki57@yahoo.com
B.E. (CE) NED 81

MUHAMMAD HARIS SHAIKH

PROJECT ENGINEER
SAUD CONSULT
ALI AR RUMMANI, ALWAZARATH,RIYADH
Email: haris.nedian@gmail.com
B.E., NED KARACHI 10

MUHAMMAD IMRAN

Sr. Design Engineer (C & S)
Olayan Descon Engineering Co.
PO 10108, 31961Al-Jubail Industrial City
Email: mibaloch@olayandescon.com
B.Sc. (CE) UETL 01

MUHAMMAD MUNAWAR UZ ZAMAN

Dy. General Manager, KSA
Keller Turki Co. Ltd
P.O.Box 718, Dammam 31421
Email: m.zaman@kellerme.com
B.Sc UETL 00

MUHAMMAD NASIR AMIN

MSc 06, PhD 10 Korea Advanced Institute of Science a
Technology (KAIST), Daejeon, South Korea

MUHAMMAD WAQAS JAVED

Project Engineer
Al-Masar Al-Hadeeth Co. Ltd.
Al-Jouf Saudi Arabia
Email: gotowaqas@yahoo.com
B.Sc. (CE) UETL 09

MUNEEB ASLAM KHAN

PMT Manager
Ground Engineering Contractors
P.O. Box 1053, Al-Khobar 31952
Email: gec@zajil.net
B.E. (CE) NED 93

MUNIR AHMED

Plant & Operations Manager
Saif Noman Said & Partnership Co.
P.O. Box 40843, Riyadh 11511
B.Sc. (CE) UETL 79

Civil Engineers

MUNIR AHMED JAVID

Project Manager
AETCON
P.O. Box 172, Dammam 31411
B.Sc. (CE) UETL 92

MUSHTAQ AHMED WASSAN

PM&Head of Specification Dept.
Zuhair Fayez Partnership
P.O. Box. 5445, Jeddah 21422
Email: mushtaqa1@hotmail.com
B.E. (Cel) US 73

MUSTAFA IQBAL NASIM

Procurement Manager
Al-Rashid Trading & Contracting (RTCC)
P.O. Box 307, Riyadh 11411
B.Sc.(CE) AMU 75

NADEEM AHMED

Works Manager
Keller Turki Co. Ltd
P.O.Box 718, Dammam 31421
Email: n.ahmed@kellerme.com
BSc (Geo) Urdu Science Univ. 1983

NADEEM ARSHAD SHEIKH

Structural Engineer
Saudi Consulting Services (Saudconsult)
P.O. Box 2341, Riyadh 11451
B.Sc (CE) UETL 90, M.S UTA 91

NAJIB HASSAN

Lead Technical Professional
Wood Al-Hejailan
Alkhobar
Email: najibhas@gmail.com
B.E NED Univ Karachi 1994

NASIR IFTIKHAR

SENIOR CIVIL ENGINEER
Jacobs Zate
AQRABIYA, AL KHOBAR,KSA
Email: Nasiriftikhar1@gmail.com
B.Sc UET Taxila 02

NAVEED ULLAH

Operations manager
Saudi Archtrodon Ltd.
P.O. Box 2242, Dammam 31451
B.Sc. (CE) UETL 89

NOUMAN RAFIQ

Project Engineer
Al-Masar Al Hadkkat (Pvt) Ltd.
Al-Jouf
Email: nouman318@yahoo.com
B.E. (Civil) NED 09

OMER HAMID TAREEN

Senior Infrastructure Eng
Aachen Engg Consultant
Riyadh
Email: contactomer@gmail.com
BSc CE, UETL 02

PARVEZ A. NAUSHAHI

General Manager
Ground Engineering Contractors
P.O. Box 1053, Al-Khobar 31952
Email: gec-kho@gecsaudi.com
B.Sc. (CE) UETL 81, M.E © AIT 92

PERVAIZ IQBAL QURESHI

Field Engineer
M/S Sharif KEC
P.O. Box 549, Riyadh 11391
B.Sc. (CE) 93

QAIYYUM HASHMI

Senior Civil Engineer
Saudi Oger Ltd.
P.O. Box 1449, Riyadh 11431
B.E. (CE), NED 1980

QURBAN ALI BHATTI

Construction Manager
El-Seif Engineering & Contracting
Khalid Bin Waleed Rd, Royadh
Email: qab_1414@yahoo.com
B.Sc Mining 1991, B.Sc Civil UET Lahore 1994

RAFIQ MUHAMMAD CHOUDHRY

Professor
Al Imam Mohammad Ibn Saud Islamic University
Dept of Civil Engg, Bldg #308, Office# SR40, Al Imam (IMSIU), Riyadh 11432
Email: choudhry03@gmail.com
B.Sc UCET Lahore 90, MS AIT Thailand 95, PhD Tsin University China 07

RAHEEL WAKEEL

Civil Engineer
Saadullah Khan Brothers
Al-Rossais Commercial Center, Riyadh
Email: rahil_wakil@hotmail.com
B.Sc. (CE) UET NWFP 06

Civil Engineers

REHAN JAMIL
Lecturer
Imam Abdulrahman Bin Faisal Univ, Dammam
College of Arch & Planning
Email: cvengr_rehan@hotmail.com
BE NUST 05, MS UET Taxila 10

REHAN UL HAQ SAIF UL HAQ
Project Manager
AlKhorayef Water & Power Technology Co.
P.O.Box 62637, Riyadh-11595
Email: rehan3015@hotmail.com
B.Sc Al-Khair Univ. 2001

REHAN-UL-HAQ
Construction Manager
Al-Khorayef Group of Co.
Riyadh
Email: rehan3015@hotmail.com
B.Sc. (CE) AKU 01

ROZIA REHAN
Email: rozia_riaz11@hotmail.com
BE UET Peshawar 06

SADAR DIN MUBARIK ALI
Principal Engineer
Saud Consult
P.O.Box 2341, Riyadh 11451
Email: sdari@saudconsult.com
B.Sc. (CE) UETL 90

SAJEEL DURRANI
Resident Engineer
Hill International
Riyadh
Email: sajeel7@hotmail.com
BSc CE, UETP 96

SAJID HUSSAIN
Infrastructure Engineer
Saudi Arabian Parsons Limited
P.O. Box 1174, Riyadh 11431
Email: sajidgondal@gmail.com
BSc Civil UETL 2004

SARFRAZ AHMED
Project Engineer
Saudi Consulting Services
P.O.Box 2341, Riyadh 11451
Email: enviroengr@hotmail.com
B.Sc. (Civil) UETL 03, M.Sc. (Environ. Eng) UETL 06

SHABBIR A. KHOKHAR
Senior Technical Consultant
Saudi Industrial Development Fund
P.O. Box 4143, Riyadh 11149
Email: shabbir248@hotmail.com
B.Sc. (CE) UETL 70

SHAFIQ AHMED
Resident Engineer
RPMC (Railway Project Management Co.)
PO Box 3900, Riyadh 11481
Email: samt892@yahoo.com
B.Sc. (CE) UETL 73

SHAHID ANWAR
General Manager
Wilber Smith Associates
P.O. Box. 301285, Riyadh 11372
Email: sanwar@wilbursmith.com
BE HFU 84, M.E. ICUL 87, MBA City U 91

SHAIKH MOHAMMAD ASHRAF
Sr. Engineer
Military Works Dept. (MODA)
P.O. Box 20379, Riyadh 11455
B.E. (CE) NED 71, MEA GWU 79

SHEHZAD KHAN
Project Manager
Paradigm Construction Company
Hai Alkhaleej, Riyadh
B.Tech Preston Uni 13

SHEIKH AKHTAR HUSAIN
Chief Engineer/Quality Manager
Saudi Consulting Services (Saudconsult)
P.O. Box 2341, Riyadh 11451
Email: shaikh@saudconsult.com
B.E. (CE) NED 65, M.E UW 70

SHEIKH MUHAMMAD SABIR
Steel Structure Design Engineer
SYSTRA
Alwazarat, Riyadh
Email: zikash@ymail.com
B.E, NED 00

SYED ABDUL MAJEED SHAH
Project Manager
Elseif Engineering Contracting
P.O.Box 2774, Riyadh 11461
Email: s.majeed@el-seif.com.sa
BE (Civil), NED 74

Civil Engineers

SYED ABID ALI ABID

Project Manager
Abdulla H. Al-Mutawa Sons' Holding Co
P.O Box#10, Saihat 31972
Email: syedabid932@gmail.com
B.Sc (Civil), UETL 02

SYED ARIF HUSSAIN

Projects Engineer
Arab Technology for General Contracting Est.
4th St Al Khobar
Email: enrgarifhussain512@gmail.com
B.Sc UET Taxila 13

SYED EHSAN HIKMAT

Structural Engineer
Omrania and Associates
Email: hikmat.ehsan@gmail.com
B.E. (Civil) NED 06, M.E. (Civil) NED 10

SYED FAIZ AHMAD

Chief Structural Engineer
Saudi Oger Ltd.
GPCD-8413, P.O. Box 1449, Riyadh 11431
Email: syedfaiz23@hotmail.com
B.E. (CE) NED 79, M.E (Str.) AIT 82

SYED HAIDER BUKHARI

Structural Site Engr.
Dar Al-Riyadh
Riyadh
B.Sc. (CE) UETL 04, M.Sc. (Const) HWU 11

SYED MOHAMMAD ALI

General Manager
Keller - Turki Co. Ltd.
P.O. Box 718, Dammam 31421
Email: syed_mohd_ali@yahoo.com
M.Sc.(CE) KFUPM

SYED SAAD AJMAL

Construction Manager
Olayan Descon
Dammam
Email: saad_engr@hotmail.com
B.Sc Bahauddin Zakariya U. Multan 08, M.Sc PM Univ
Sunderland 12

SYED SAMIUDDIN AHMED

Civil Engineer
Saudi Consulting Services (Saudconsult)
P.O. Box 1293, Dammam 31431
B.E. (CE) NED 79

SYED WASI IMAM

Sr. Project Manager (Civil)
Saudi Consulting Services (Saudconsult)
P.O. Box 1293, Dammam 31431
Email: imam_wasi@hotmail.com
B.E. (CE) NED 77

TARIQ JAMAL KHAN

CIVIL ENGR
RASHID ENGG
P.O.Box 4354, RIYADH 11491
Email: tariqjamal@yahoo.com
DACE 68, W Pak TE, BSc 73, PU, MICE 75, IE PAK

TAUQIR AHMED

Assitant Professor
Imam Univeristy
Civil Engineering Dept, Imam university Ryd
Email: tauqirahmeduet@gmail.com
B.Sc UETL 04, M.Sc and PhD U of Tokyo 12

UMAIR ASHRAF

Civil Engineer
Saadullah Khan Brothers
Al-Rossais Commercial Center, Riyadh
B.Sc. (CE) UETT 07

USMAN ARIF

Project Enginer
Saudi Consulting Services
Al-Sulemainia Riyadh
Email: USMANCIVIL@YAHOO.COM
B.E UET Lahore 1999

USMAN ILYAS

Civil Engineer
Saudi Consulting Services - Saudconsult
P.O. Box 2341, Riyadh 11451
Email: uilyas@saudconsult.com
BSc U of South Asia, LHR 14

WAQAR UL HAQ

Senior Civil Inspector
Louis Berger Group
Riyadh
Email: waqarul_haq@hotmail.com
Btech CE, Preston U ISB 09, MSc UoP 06

WAQAS AHMAD KHAN

Project Engineer (Civil)
Saudi Consulting Services
P.O.Box 2341, Riyadh
Email: khan_sam34@yahoo.com
B.E. (Civil), UET Taxila 06

Civil Engineers

WAQAS SARWAR
Senior Infrastructure Engineer
Saudi Arabian Parsons Limited
P.O. Box 1174, Riyadh 11431
Email: waqas.sarwar@saudiparsons.com
BSc Civil UETL 02, MSc Civil UETT 08

WAQUAS BIN TARIQ
Planning Engr.
Sinsina Corner Co. for Contracting
PO Box 1050, Jubail 31951
Email: waqas.bin.tariq@hotmail.com
B.Sc. (CE) UET Tax 03

WASEEM SHOUKAT
Quality Control Engineer
Nesma & Partners
Makkah
Email: engr.waseem62@yahoo.com
B.Sc UET Taxila 2011, M.Sc UET Taxila 2015

WASIF ALI
Project Engineer
Saudconsult
P.O.Box 2341, 11451 Riyadh
Email: wasif92ali@gmail.com
BSc Civil, UET Taxilla 14

YASIR FARID KHAN
Senior Structural Engineer
JACOBS Zate
Prince Homoud St, Haramain Hwy, Al Khobar
Email: contact.yasirfarid@gmail.com
B.Sc Mehran Univ 05, M.Sc Structural UET Taxilla 08

ZAFAR HAYAT
Project Controls Manager
EllisDon Project and Construction Management
PO Box 93228, Riyadh 11481
Email: zafarhayat@live.com
BSc Civil, UETP 96

ZAHEER ABBAS SARDAR KHAN
Geotechnical & Proposals Eng
Ground Engineering Contractors (GEC)
P.O.Box 1053, Al-Khobar 31952
Email: gec-kho@gecsaudi.com
B.Sc(Civil) UETL 11

ZAINULABDIN PATHAN
Senior Civil Engineer
Saudi Electric Company
P.O. Box 63221, Riyadh 11516
Email: pathanzain@hotmail.com
B.E. (CE) NED 71

ZAKA-UD-DIN
Senior Civil Engineer
JACOBS Zate
Al Khobar
BE UET Peshawar 04

Computer Engineers

ABDUL MAJID

MW Transmission Engineer
LCC Saudi Arabia
STC HQ Mursalat Riyadh
Email: majidakhtar87@yahoo.com
B. Sc NWFP UET Peshawar 2012

ALLAUDDIN MAHABAT KHAN

Technical Support Engineer
STC Solutions
Hay Nuzla Al-Yamniya, Jeddah
Email: subaktagin@gmail.com
B.Sc.Hon, UET Peshawar 2007

AWAIS MAHMOOD

Assistant Professor
King Saud University, Riyadh
Ummul Hammam (West), Riyadh
Email: mawais@ksu.edu.sa
MS EMU Turkey 03, PhD KSU Riyadh 14

DR. HAFIZ MUHAMMAD IMRAN

CEO
TeleNoc
Olaya, Riyadh
Email: imran@telenoc.org
MS UET Lahore 2010, PhD Malaysia U of Science &Te
2015

FAROOQ MOHIUDDIN

Cost Engineer
Saudi Electricity Company
Dammam
Email: farooq.mohi@gmail.com
BSc Usman Inst of Tech 2008

HAMZA JAWAID NIAZI

Senior Technical Consultant
SSBS
Email: hamzajawaid@gmail.com
B.Sc. (CmpE) UMTL 03

HAMZA KHALID

Software Development
M. A. Al-Azzaz Inspection and Testing Services
Email: hamza@maaz.com.sa
B.E. (Comp) SSUET 05

IMRAN RASUL

Solution Architect
Nokia Solutions & Networks
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: imran.rasul@gmail.com
B.S. (CS), UETL 04

IMRAN ZAHEER

Executive Manager
Mobily
Riyadh
Email: imzaheer@gmail.com
BS State U NY 03, PGD Harvard 14

IRTAZA GHAFOOR

Managed Services Delivery Lead
Huawei Technology Ltd
C-Center Riyadh
Email: irtazag@hotmail.com
B.S. (CS) MAJU 02

KHURRAM SHAHID QURESHI

Sales Engineer
Apral International Group
P.O. Box 27045, Riyadh 11417
Email: ksq_2000@yahoo.com
B.Sc. (Comp E) AUM 96

MIAN ABDUL HAMID

IS & Governance Consultant
Saudi Electricity Co.
Riyadh
Email: hamid1947@hotmail.com
B.E. (CS) NED 96

MOHAMMAD ADNAN AZAM

Communication Engineer
SIEMENS
Al-Raja Tower, Khobar
Email: addiazam@gmail.com
B.Sc. (CmpE) SSUET 06

MOHAMMAD AHSAN KHAN

Product Manager
Mishaal Al Sudairy Office
P.O. Box 87881 Riyadh 11652
Email: ahsan@mso.com.sa
B.S. (CS) SSUET 06

MOHAMMAD ANEEQ KASHAN

Network Engineer
SIEMENS Ltd.
P.O. Box 27503, Riyadh 11427
B.S. (CS) SSUET 06

MOHAMMAD HASEEB NAZ

Computer Engineer
LM Ericsson
P.O. Box 6121, Riyadh 11442
Email: naz_haseeb@hotmail.com
B.S. (Comp E) EMU Cyprus 2000

Computer Engineers

MUHAMMAD FARAZ KHAN

Director
Ather Telecom
Olaya
Email: faraz@ather-telecomsolutions.com
B.Sc. (CS) UOSA 98

MUHAMMAD WAHEED ASLAM

Lecturer
KFUPM
P.O.Box 557 Dhahran 31261
Email: mwaslam@kfupm.edu.sa
MSc Comp Scs Quaid I Azam U. Isb 85, MBA KFUPM

MUHAMMAD YOUSAF ISMAIL

Project Manager-GIS Consultant
Geo Tech Consulting Group
Riyadh
Email: engmyousaf@gmail.com
B.Sc. (Comp) NEU CYP 02

NAUFAL BIN SAAD AL-HUSSAINI

Manager Operations
M. A. Al-Azzaz Inspection and Testing Services
P.O. Box 31172, Al-Khobar 31952
Email: naufal@maaz.com.sa
BE (Comp) SSUET 10

OMAR AKBAR

QA /QC Manager
Al Falak Electronic Equipment & Supplies
PO Box 31172, Khobar
Email: omar_akbar@alfalak.com
B.E. (CE) SSUET 06

RAJA MUHAMMAD ADBULLAH ASLAN

System Engineer
Ather Telecom
Olaya
Email: raja593@yahoo.com
B.E. (IT) UETT 06, M.Sc. (IT) BIT 10

RIZWAN MEHMOOD

System Analyst & Designer
Visual Sof
PO Box 11669, Al-Jubail 31961
Email: nicriz@gmail.com
B.S. (CS) Infomate Lah 00

SYED MUDASSIR HUSSAIN KIRMANI

Business Application Lead - SAP
Saudi Paper Group
P.O.Box 2598, Unit 2, Dammam Industrial Area
Email: mudassirkirmani@saudipaper.com
BSc Bahria University Karachi 2006

SYED SALMAN SHAFIQ

Senior Advisor
Saudi Telecomm. Company
P.O. Box 84681, Riyadh 11681
Email: sshafiq2000@hotmail.com
MBA IBA 79, M.S (Comp E) USC 84

TAIMOOR WAHEED ASLAM

Consultant, Management Systems
RICI AL AZZAZ
KFUPM, Dhahran
Email: taimoor.w@ricionline.com
BSc KFUPM 2012

TAQDEES AHMED SIDDIQI

LEAD SERVICES BUSINESS MANAGER
Nokia Solutions & Networks (NSN)
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: taqdees@gmail.com
M.Sc. (CS), Punjab Univ 93

WAQAS ASAD KHAN

Sr. Product Specialist Engr.
ABB Power Generation & Water
5th Floor Legend Tower
Email: waasad@gmail.com
B.E. (Comp) SSUET 03

ZAHOOR ALI KHAN

Lecturer
College of Applied Medical Sciences, KSU
P.O. Box 13128, Riyadh 11493
Email: zahoorali2@yahoo.com
M.S. (CmpE) UET Taxila 06, MS (Elect.) QAU 2000,

Electrical Engineers

AAMER SAEED

Country Mgr. Sales & Marketing
TIEPCO
P.O. Box 2705, Dammam 31461
Email: aamar.saeed@tiepco.com
B.Sc. (EE) UETL 95

ABBAS RAZA

Engineer
Apral nternation
Riyadh
Email: abbasraza2002@hotmail.com
B.Sc. (EE) UETL 73

ABDUL BAQI KHAN

Lecturer / Tech Trainer
Royal Commission Yanbu & Jubail
Email: jic.abdulbaqi@gmail.com
BE UETL 88, MS SBU UK 94

ABDUL GHAFOOR

Superintendent, Electrical
SRACO
Email: abdulghafoor01@hotmail.com
B.Sc. (EE) CET 83

ABDUL HAFEEZ ANJUM

Senior Design Engineer
China GEO Engineering
P.O. Box 85, Jubail 31951
Email: ahasiddah@gmail.com
B.Sc.(EE) UETL 1990

ABDUL HAFEEZ MUGHAL

Electrical Engineer
Min. of Defence & Aviation (Air)
P.O. Box 16431, Riyadh 11464
B.E. (EE) MUET 83

ABDUL HANNAN

Estimation Engineer
Adwan Marketing Co. Ltd.
P.O. Box 64273, Riyadh 11536
B.Sc. (EE) AUM 94

ABDUL HASEEB SHAFIQ

Technical Consultant - E&I
Eram International
Street 5, Al Tobaishi, Dammam -32233
Email: abdulhaseebb@gmail.com
BE NED Karachi 08

ABDUL JALAL

Technical Manager
Saudi Services for E/M Works Co. Ltd.
P.O. Box 6341, Riyadh 11442
Email: jalal_roshan@hotmail.com
B.Sc (EE) UOP 73

ABDUL MAJEED KALAIR

Electrical Engineer
Saudi Consulting Services (Saudconsult)
P.O. Box 1293, Dammam 31431
Email: Kalair.a.m@saudconsult.com
B.Sc. (EE) UETL 71

ABDUL MATEEN AZMI

Sales&Marketing Manager
Saudi Scaffolding Factory
Roll Form Division, P.O. Box 2194, Khobar 31952
B.Sc. (ME) DIT 75

ABDUL QAYOOM MEMON

Distribution Engr.
Saudi Electricity Company
Email: jani_memon1@yahoo.com
B.E. NUET 98, M.E. AIT 05

ABDUL QAYYUM

Sr. Electrical Engineer
Ansaldo
P.O. Box 4430, Riyadh 11491
Email: ansaldo@nesma.net.sa
B.Sc. (EE) UETL 70

ABDUL RAHMAN LALDIN

Consultant
Saudi Electricity Company
SEC HQ, Granada Tower A1 F-10, P.O.Box 22955, Riy
Email: arlaldin@hotmail.com
B.Sc. (EE) EPUET 70, M.S (EE) KFUPM 83, M.Eng (I

ABDUL REHMAN KHURRAM

Senior Electrical Engineer
Gulf Consolidated Contractors GCC
Ain AlNakheel, Abqaiq
Email: arkhurram@gccksa.com
B.Sc UET BZU Multan 2006

ABID ALI KAYANI

EWSD Technical Support Manager
STC
Building 35, STC HQ, Riyadh
Email: abidkayani@hotmail.com
B.Sc, UCET, Mirpur AK 94

Electrical Engineers

ABSAR KAREEM
Project Manager NPO
Nokia Solutions & Networks (NSN)
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: absarkareem@yahoo.com
BE (EE), UETL 00

ADNAN ZAHEER KHAWAJA
General Manager
Electrical Power Contracting Co
Al Khobar
Email: engr.adz@gmail.com
B.E. (EE) AUI 07

AFTAB AHMED
Engineer (OHTL/UG Cable)
SEC - NG
Dammam Al Khobar
Email: engr.aftab72@yahoo.com
BE Mehran UET Jamshoro 00

AFTAB AHMED MUGHAL
Electrical Engineer
SEC Consultant (Al-Othman)
Riyadh
Email: aftabamughal@gmail.com
B.E. (EE) MUET 00

AFTAB UL ISLAM
SLM Engineer Transmission (BO)
Nokia Al-Saudi
Tatweer Tower, Block-2, King Fahd Road, Riyadh
Email: aftab.673@gmail.com
BSc Khulna U. of Engg & Tech BD 2000

AHMAD ABRAR SHAMI
Management Systems Consultant
RICI MAAZ
22nd cross, Sultan St, Alkhobar
Email: ashami97@gmail.com
B.E NUST 2018

AHMAD FARRAKH MANZOOR
Head of Bldg. Auto.
Siemens Ltd
P.O. Box - 9510, Riyadh - 11423
Email: farrakh@hotmail.com
B.Sc. (EE) NUST 00

AHMAD NADEEM KHAWAJA
Area Sales Manager
Saudi Transformers Co.
1st Industrial City,P.O. Box 5785, Dammam 31432
Email: Khawaja@sauditransformers.com
B.E. (EE) NED 91, MBA IBA 97

AHMAD ZAHEER TAHIR
Supply Chain Manager
ABB Electrical Industries
P.O. Box 2873, Al-Khobar 31952
Email: ahmad.tahir@sa.abb.com
B.Sc. (EE) UET Mirpur 93

AHSAN AZIZ
Key Account Manager
GE Int Inc
PO Box 20498, Khobar 31952
Email: ahsan.aziz@ge.com
B.Sc. (EE) NED 01

AHSAN ISLAM
Electrical Engineer
Al-Qahtani Pipe Coating Industries
St 15 Prince Mishal St Al-Adama
Email: ahsan893@hotmail.com
BE NED Karachi 06

AJAZ ALI AWAN
Performance Manager
Nokia Al Saudia
Ground floor, Tatweer Tower Block 2, King Fahd Rd, R
Email: awanajaz200374@gmail.com
B.S UET Peshawar 1999

AJAZ AHMAD QUDDUSI
Business Manager Robotics
ABB Saudi Arabia
P.O. Box 2873, Al-Khobar
Email: ajaz.quddusi@sa.abb.com
B.Sc. (EE) UETL 82

AKIF ALI
Manager - QC Section
Mitsubishi Electric Saudi Limited
P.O. Box 2391, Riyadh 11451
B.Sc. (EE) UETL 92

AKHLAQ AHMAD BUTT
Independent Consultant
Saudi Electric Company
COA HQ, Granada Office Riyadh
Email: akhlaq05061960@yahoo.com
B.E (Electrical) UET Lahore

Electrical Engineers

ASRAR HUSSAIN

Managing Engineer
SIEMENS Ltd.
P.O. Box 9510, Riyadh
B.Sc. (EE) UETL 76

ATHER JAMIL DAR

Planning Engineer
Saudi Telecomm. Company (STC)
Rm 208, STC HQ, P.O. Box 87912, Riyadh 11652
Email: ather62@hotmail.com
B.Sc.(EE) UETL 87, M.Sc (EE) UETL 98

AZHAR AHMAD SIDDIQUI

Project Manager
SIEMENS
P.O.Box 719, Khobar
Email: azhar.siddiqui@siemens.com
B.E. (EE) UOP 02

AZIMUDDIN QURESHI

Senior Electrical Engineer
Saudi Biad Co. Ltd.
P.O. Box 6121, Jeddah 21442
B.E. (EE) NED 75

AZIZ UR-REHMAN MALIK, DR.

Protection Engineer
Saudi Electric Company (SEC-COA)
P.O. Box 57, Riyadh 11411
Email: azizmalik750@yahoo.com
B.Sc. (EE) UETL 86, M.S.& Ph.D. (ECE) UMF USA

BASHIR AHMAD MALIK

Data Network Expert
Saudi Telecomm. Company
Riyadh
B.Sc. (EE) UETL 75

BILAL AKHTAR

Sales Manager
Saudi Electric Supply Company (SESCO)
P.O. Box 3298, Al-khobar 31952
Email: bilalmakhtar@gmail.com
B.Sc. (EE) UETL 02

BILAL ASIF

Regional Manager Radio Optimization
Huawei
P.O.Box 15489, Dammam 31444
Email: bilal.asif@gmail.com
BSc UET Lahore 2000

BILAL NAZIR

Construction Engineer Onshore
Saipem Saudi Arabia
Al-Khobar
Email: bilal.nazir30@gmail.com
BSc UET Mirpur, Azad Kashmir 2013

BURHAN AHMAD

Testing & Commissioning Engr
ABB
2nd Industrial Estate Riyadh
Email: burhan.ahmad@sa.abb.com
B.E. EE, U of Central Punjab 10

CHAUDHARY MOHAMMAD ASHRAF

Projects Manager
A. Abunayyan Trading Corp.
P.O. Box 321, Riyadh 11411
B.Sc. (EE) UETL 88

CHAUDHARY SARFARAZ AHMED BAJWA

Senior Engineer
CNT Technology Computer Network
KFUPM Box 781, Dammam
B.E. (E) UOM 97

EHSAN-UL-HAQUE KHOKHAR

Chief Engineer
Nespak
P.O.Box 50344, Riyadh 11523
Email: ehsank_sa@hotmail.com
B.Sc. (EE), UET Taxila 81

FAREED AHMED MEMON

Telecom Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
Email: fahaji@se.com.sa
B.E. (EE) NED 90

FARHAN SOHAIL YEZDANI

Regional Marketing Specialist
ABB Electrical Industries Ltd.
Email: fsohail42@gmail.com
B.Sc. (EE) UETL 00, MBA BU UK 05

FARHAN UL HASSAN ANSARI

Planning engr
Tasnee
Jubail
Email: fromitsmoment@yahoo.com
B.E. (EE) 99

Electrical Engineers

FATEH KHAN
Section Engineer
Saudi Electric Company
P.O. Box 57, Riyadh 11411
Email: fatehkhan692@hotmail.com
B.Sc. (EE) UETL 74

FAZLE RAFEY
Design SCADA Engineer
ABB Automation Co.
P.O. Box 330109, Riyadh 11373
Email: frafey@yahoo.com
B.Sc. (EE) USA 96

GHAZANFAR ALI
Electrical Field Engr.
GE Energy KSA
P.O.Box 2321, Dammam 31451
Email: ghazanfar.ali@ge.com
B-Tech. (EE) IIK 07

GHULAM NABI
Senior Project Engineer
ABB Contracting Company Limited
Jeddah
Email: gh.madni@gmail.com
BE, Quaid Awam U, Nawabshah

GHULAM RASUL MERCHANT
Project Manager
Zamel & Turbag Consulting Engineers
Jeddah
Email: grasulm@hotmail.com
B.E. (EE) SUEngg Jamshoru 68

HAFIZ MUHAMMAD USMAN JURH
Director Technical
Hamdan Consult
Jubail
Email: hafiz.usman@hamdanconsult.com
B.E, UETL 97

HAMID MOHSIN
Medical & Sci. Div. Manager
Abdul Rehman AlGosaibi Gtb
P.O. Box 215, Riyadh 11411
B.Sc. (EE) UETL 71

HAMIDUR RAHMAN ADNAN
Marketing Manager
Danger Management System
Energy House, P.O. Box 92102, Riyadh 11653
Email: hr_adnan@hotmail.com
B.E. (E) NED 97

HAMMAD RAFIQ
Lead Electrical Engineer
DAR Consulting Engineers
Al-Jubail
Email: hammad.rafiq@gmail.com
B.E UET Lahore 2002, MBA Pak-Aims 2007

HAMZA JAVAID
Sr. Automation Engineer
TIEPCO
PO Box 2705, Dammam 31461
Email: hamza.javaid@altuwairqi.com
B.Sc. (EE) UETL 01

HASEEB SHAH MEHRAB
Sr. Engineer (Power)
Saudi Electric Company
COA HQ, Granada Office Riyadh
Email: Haseebshahmehrab86@gmail.com
PhD (Energy Studies) UBD Brunei Darussalam, UoC C

HASSAN SIDDIQUI
Marketing Activity Manager
Schneider Electric
Riyadh
B.E. (EE) NED 92, MBA IBA 97

HUMAYUN AKHTAR
Management Information System
Saudi Telecom Company (STC)
P.O. Box 59726, Riyadh 11535
B.Sc. (EE) UETL 79, PMP

HUSAIN AHMED
Engineer
Saudi Electric Company
Jubail
Email: husain_ahmed8@yahoo.com
B.E. (EE) NED 73

IFTIKHAR AHMED CHEEMA
Manager Projects
Newland Est.
P.O. Box 21626, Riyadh
B.Sc. (EE) CUC 81

IFTIKHAR AHMED LONE
POWER SOLUTION ARCHITECT
Nokia Solutions & Networks
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: iftikharisb@hotmail.com
B.E. (EE), AJK Univ 95

Electrical Engineers

IMRAN MAHMOOD
CEO
Arabian Etimaad Industrial Co.
P.O.Box 35037, Plot 3007 Jubail 31961
Email: imran.mahmood@etimaad.com
B.Sc. (EE) UETL 81

INAM KHAN
President
Saudik Co Ltd
P.O. Box 6609, Dammam 31452
Email: mail@saudik.com
B.Sc (EE) UETL 64

IQBAL AHMED
Sr. Engineer SCADA & Telcom
VA TECH Schneider, T&D Ltd. Co.
P.O. Box. 91357, Riyadh 11633
B.Sc.(EE) UETL 98

IQBAL ISMAIL KHURRAM
Business Manager
Lucent Technolog
P.O. Box 4945, Riyadh
Email: kismail@lucent.com
B.Sc. (EE) UETL 91

IRFAN ALI SHAH
Inspection Engineer
General Electric (GEMTEC)
21th Cross Mishaal Bin Abdul Aziz St, Al Khobar
Email: alee.xhah@hotmail.com
B.Eng Hons (EE), 12

IRHSAD MEHMOOD
Technical Project Manager
STC Solutions
Muraba Riyadh KSA
Email: armehmood@hotmail.com
BE Telecom, NUST ISB 2000

ISHTIAQUE AHMAD FAHMEED
Transmission Engineer
Saudi Electricity Company- EOA
PO Box: 5190 Dammam 31422 KSA
Email: safahmeed@se.com.sa
B.Sc. (EE) UETL 95, MS (EE) UETL 04

ISLAM AHMAD ASIF
General manager
Arabian Electrical Transmission Line Co. (AETCON)
P.O. Box 172, Dammam 31411
Email: aetcon@aetcon.com
B.Sc. (EE) AMU 64

ISRAR UL HAQ
Maintenance Engineer
Riyadh Water Works
P.O. Box 12622, Riyadh 11483
B.Sc (EE) UOP 73

JALEEL HASAN
Chief Executive Officer
AB Contracting
P.O. BOX 235804, RIYADH 11393
Email: jaleel.hasan@gmail.com
B.E.(E) SGW 70, M.Phil UOB 72

JAMIL NOOR MEMON
Resident Manager
Sincina
Khobar
Email: jamilnoor_68@yahoo.com
B.E. (EE) 91, MBA IBAJ 03

JAMSHED AHMED CHAUDHRY
Sr. Project Manager
ABB Contracting Co.
PO Box. 251, Riyadh 11381
B.Sc. (EE) UETL 78

JAVAID HAMEED
Dispatch Engineer
Saudi Electric Company (ERB)
SOD/PDD, P.O. Box 5190, Dammam 31422
Email: javaids2000@hotmail.com
B.Sc. (EE) UETL 81

JAVAID IQBAL ZAHID
Manager
TIEPCO
PO Box 2705, Dammam 31461
Email: javaid.iqbal@altuwairqi.com
B.Sc. (EE) 86

JAVED AHMED SIDDIQUI
Electrical Engineer
SEC Consultant (Al-Othman)
Riyadh
Email: jasiddiqui21@hotmail.com
B.E. (EE) MUET 01, P.G.D (EE) MUET 08

JAVED SAFDAR
Performance Engineer
Saudi Electric Company (ERB)
Rm. 2-21-W SCECO HQ, P.O. Box 5190, Dammam 31
Email: javedsc@hotmail.com
B.Sc. (EE) UETL 78

Electrical Engineers

JAVED SHAMIM
Technical Advisor
Saudi Telecomm. Company (STC)
P.O. Box 86004, Riyadh 11622
Email: jshamim@stc.com.sa
B.S. (EE) NU 76

JUNAID AHMAD HASHMI
EDP Manager
National Gas & Industrialization
P.O. Box 564, Riyadh 11421
B.Sc. (EE) Madras 67, M.E UOL 69

KAMAL MAJID
Project Director
SIEMENS
PO Box 9510,
Email: kamal.majid@siemens.com
B.E. (EE) NED 96, MBA IBA 99

KAMRAN KHAN
Instrument Engineer
GCC Gulf consolidated contracters
Abkaik office
Email: kkhan@gccksa.com
DAE Swedish Inst of Tech 2006, BSc U. of Wah 2010

KAMRAN MASOOD KHAN
Distribution Engineer
SEC
Granada, Riyadh
Email: kamran293@gmail.com
BE, UETL 02

KAMRAN MUHAMMAD ZAFAR
Sales Engineer
SESCO
Alkhobar
Email: kamran.zafar20@gmail.com
BSSc UET Lahore 2012, MSc KFUPM 2016

KAUSER MAHMOOD BUTT
Consultant Engineer
Saudi Electric Company (CRB)
P.O. Box 57, Riyadh 11411
Email: kmbutt43@hotmail.com
B.Sc. (EE) UETL 69

KHALID NIAZ SHEIKH
NOKIA Al Saudi
Email: khalidniazsheikh@yahoo.com
Implementation Manager

KHAWAJA HASSAN TAHIR
LEAD ENGINEER (I&C DESIGN)
DESCON ENGINEERING
Email: TAHIR.HASAN0@GMAIL.COM
BSc CECOS U. of IT & Emerging Sciences 2009

KHAWAR RASHEED
Transmission Line Design Engineer (National Grid SA)
Dar Engineering
Building#91 Flat#15 Sheikh Mukhdoob Road Al Fallah
Email: kapirkhan@se.com.sa
BSc Elec, Mirpur Univ, AJK 07

KHIZAR JUNAID USMANI
Group Quality Manager
Management Consultant Al Khobar
Al Khobar
Email: kjusmani@gmail.com
B.Sc. (EE) UP 73

KUNWAR MUHAMMAD IDRIS
Project Manager
Faisal Hamid Al Sehli Est.
P.O. Box 50014, Jeddah 21533
B.Sc. (EE) UETL 72

LIAQAT ALI KHAN
Transmission Engineer
Saudi Electric Company (ERB)
P.O. Box 1233, Hofuf, Al-Hassa 31982
Email: khanlakhan12@gmail.com
B.Sc. (EE) UETL 75

M. ASHRAF KHAN
Manager Training
Schneider Electric
P.O. Box 89249, Riyadh 11682
Email: ashraf99ca@yahoo.com
B.Sc. (EE) UETL 76, M.A.Sc (EE) UW 98

M. JAVED AKHTAR
Electrical Engineer
SaudConsult
P.O. Box 1293, Dammam 31431
B.Sc.(EE) UETL 89

MAHMOOD SARWAR MALIK
Elec. Engr. (Projects-SEC COA)
Dar Al-Riyadh
P.O. Box Box 57, Riyadh
Email: MSKMalik@se.com.sa
B.Sc. (EE) UETL 73

Electrical Engineers

MALIK HUSSNAIN ABBAS CHUN

Electrical Engineer
Systra
M Al Sabeck Office Prince Faisal Bin Turki Rd Riyadh
Email: engr.ham@gmail.com
BSc UCE&T, Bahauddin Zakariya U, Multan 08

MAQSOOD ALAM

Factory Manager
Middle East Electric Meter Factory
P.O. Box 61891, Riyadh 11575
B.Sc. (EE) UETL 87

MAQSOOD HUSSAIN TARIQ

Project Manager
Saudi Consulting Services (Saudconsult)
P.O. Box 7352, Jeddah 21462
Email: maqsoodtariq@saudconsult.com
B.Sc (EE) UETL 70

MASOOD HAMID

Chief Project Manager
National Power Construction Corporation
P.O. Box 31220, Jeddah 21497
Email: masoodhamid@yahoo.com
B.Sc. (EE) UETL 74

MASOOR AHSAN SIDDIQUI

Communication Specialist
Saudi Arabian Airlines
P.O. Box 167, Jeddah 21231
B.Sc. (EE) WSC 70

MASROOR AKBAR RAMZI

Electrical Engineer
Saudi Electric Company (CRB)
Al-Marooj Area
B.Sc (EE) UETL 90

MASUD KHAN

Project Engineer
Al-Fanar
P.O. Box 301, Riyadh 11411
B.Sc. (EE) NWFP UET 74

MASUD UL HASAN

Lecturer
KFUPM
KFUPM P.O. Box 947, Dhahran 31261
Email: masud@kfupm.edu.sa
B.E. (EE) NED 88, MS KFUPM 93

MAZHAR NOOR

Customer Support Engineer
Nokia Solutions & Networks (NSN)
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: mazhar.noor@nokia.com
B.Sc (EE), UETL 85

MIAN MUHAMMAD ISRAIL

Transmission Engineer I
Saudi Electric Company
Tower A2 Floor 14 Ghernatah, P. O. Box 22955, Riyadl
KSA
Email: 87632@ngrid.sa
B.E. (EE) NWFP UET 02, B.Tech (Honrs.)

MIR MAJID TAUSEEF

Sr. Engineer (Planning)
Saudi Electric Company
P.O. Box 57, Riyadh 11411
Email: mirmajidtauseef@hotmail.com
B.Sc. (EE) UETL 75

MOAZZAM AHMED CHANNA

Electrical Engineer
SSEM
PO Box 6341, Riyadh 11442
Email: engineer.moazzam@gmail.com
BE (EE) MUET Jam 07

MOBASHIR AHMED SHEIKH, DR

Technical Advisor
Al-Afandi Est.
P.O. Box 452, Jeddah 21411
B.E. (EE) NED 72, M.S (EE) USC 74, Ph.D (EE) USC

MOHAMMAD ABDUL HALIM BUKHARI

Electrical Engineer Power & Co
Abdulla Fouad Co. Ltd
P.O. Box 257, Dammam
B.E. (EE) NED 70

MOHAMMAD ABDULLAH

Project Manager
Saudi Consulting Services
P.O. Box 1293, Dammam 31431
Email: mabch_pk@yahoo.com
B.Sc. (EE) UETL 87

MOHAMMAD ABRAR SHAMI

Project Manager - Telecomm
Saudi Electricity Co. (EOA)
P.O. Box 5190, Dammam 31481
Email: mshami65@gmail.com
B.Sc. (EE) UETL 90, M.Sc. (EE) UETL 94

Electrical Engineers

MOHAMMAD ADNAN KHAN

Sales Supervisor
S&A Abahsain Co. Ltd.
P.O.Box 38994, Dammam Ind. City II
Email: adnank@abahsain.net
B.E. (EE) NED 01

MOHAMMAD AFTAB ALAM KHAN

Power Plant Manager
Yamama Saudi Cement Co.
P.O. Box 293, Riyadh 11411
Email: maak65@hotmail.com
B.Sc. (EE) NWFP UET 89

MOHAMMAD AFZAL

Transmission Engineer
SAUDI ELECTRICITY CO. (COA)
P.BOX 22955, RYD 11416, GHERNADA BUSINESS
FL.14, KSA
B.Sc. (EE) UETL 67

MOHAMMAD AFZAL

Project Manager
Satech
Al-Khobar
Email: abusoban93@gmail.com
B.Sc. (EE) UETT 91

MOHAMMAD AJMAL KHAN

Naval Engineer (R&D)
Royal Saudi Naval Forces
P.O. Box 61721, Riyadh 11575
B.Sc. (Eng) London U UK 66

MOHAMMAD AMIN UDDIN AHMED

Country Manager
Hubbell Elect. Systems
P.O. Box 845, Dammam 31411
Email: aminuddin512@gmail.com
B.E. (EE) NED 91

MOHAMMAD ARSHED CHAUDHRY

Specialist, Power Trans. Engg.
Saudi Electric Company
P.O. Box 57, Riyadh 11411
B.Sc. (EE) UETL 76

MOHAMMAD ASHFAQ

Asstt Vice President
MEMF Iradya Intl.
P.O. Box 61891, Riyadh 11575
B.Sc. (EE) UETL 91

MOHAMMAD ASHRAF

Project Manager
Mitsubishi Elevators Saudi Arabia (MELSA)
P.O. Box 14166, Jeddah 21424
B.Sc. (EE) UETL 92

MOHAMMAD ASIF

Service Engineer
Al-Khazindar Co. For Medical Maintenance
P.O. Box 457, Riyadh 11411
Email: muhammadasif_99@yahoo.com
B.Sc. (EE) NEU 03

MOHAMMAD ASIF SHAFIQUE

Electrical Engineer
SEC Consultant (Al-Othman Consultant)
Riyadh
B.Sc. (EE) UETL 04, M.Sc. (EE) UETP 08

MOHAMMAD ASIM SIDDIQUI

Technical Architect
Nokia Networks
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: siddiquiyusuf@yahoo.com
M.Sc. (Phy) QAU 95, MS (EE) USA 99

MOHAMMAD ASLAM

Electrical Engineer
M.H. AITAH - NESPAK
P.O. Box. 50344, Riyadh 11523
MIE Pak (IEP LHR) 2000

MOHAMMAD ASLAM

Project Manager
STESA
P.O. Box 5463, Riyadh 11422
Email: aslam@stessa.com
B.Sc (EE) UETL 69, PGD PII 71

MOHAMMAD AWAIS

Senior Engineer Planning
Saudi Electric Company (ERB)
P.O. Box 85, Jubail 31951
Email: mohammadawais@hotmail.com
B.Sc. (EE) UETL 75

MOHAMMAD AYAZ QUTUB

Sr. Unit Engineer Operations
Saudi Electric Company (COA)
P.O. Box 18335, Riyadh 11415
Email: ayazqutub@hotmail.com
B.Sc. (EE) UETL 72

Electrical Engineers

MOHAMMAD AZAM
Elect Engr (Maintenance)
Saudi Electric Company SEC-SOA
P.O. Box 149, Najran
Email: mazamsaleem@hotmail.com
B.E. (EE) NED 90

MOHAMMAD HAFEEZ-UR-RAHMAN
Power Section Head
Royal Commission Jubail
P.O. Box 10001, P&T Dept., Jubail 31961
B.Sc. (EE) UETL 76

MOHAMMAD HASSAN SHEIKH
Electrical Engineer
Zuhair Fayez Consultants
P.O. Box 5445, Jeddah 21422
Email: shaikhhassan48@hotmail.com
B.E. (EE) SU 72

MOHAMMAD IDREES FAROOQI
Unit Engineer
Saudi Electric Company
P.O. Box 7604, Al-Khobar 11472
B.E. (EE) SU 76

MOHAMMAD IDREES QURESHI
Power Transmission Specialist
Saudi Electric Company (SEC-COA)
P.O. Box 57, Riyadh 11411
Email: midrees@se.com.sa
B.Sc (E) MUET 71

MOHAMMAD ILYAS
Electronic Engineer
Jeddah Water Works
P.O. Box 8504, Jeddah 21492
Email: milyasabd@yahoo.com
B.Sc. (EE) UETL 71

MOHAMMAD IMTAR
Lecturer
University of Dammam
Dammam
Email: imtaar@hotmail.com
B.Sc. (EE) UETL 76, M.S KFUPM 81

MOHAMMAD IQBAL
Electrical Engineer
National Engineering Services of Pakistan
Power Group Saud Consult Riyadh
Email: powergroup@saudconsult.com
B.Sc. (EE), Peshawar Engg. College 80

MOHAMMAD IQBAL GHADAI
Sr. Director - Technical
Aero Tech
CC905, Box 620, Jeddah 21231
Email: iqbalg1@yahoo.com
B.S. (EE) CSU 72

MOHAMMAD JAVAID SIDDIQUI
Electrical Engineer
Al-Rashid Trading & Contracting Co.
P.O. Box 307 Riyadh 11411
B.E. (EE) MUET 76

MOHAMMAD KHALID AHMAD KHAN
Manager - Western Province
Centronic Int.
P.O. Box 10441, Jeddah 21331
B.E. (EE) NED 88

MOHAMMAD MAHMUD
Projects Manager
Al-Shaharani Group for Contracting
P.O. Box 86820, Riyadh 11632
Email: gct_lhr@yahoo.com
B.Sc (EE) UETL 75, M.Sc UETL 91

MOHAMMAD MAHTAB ALAM KHAN
Senior Specialist Aircraft Eng
Saudi Arabian Airlines
P.O. Box 167, Jeddah 21231
B.E. (EE) NED 69

MOHAMMAD MANSHA VIRK
Unit Engineer
Saudi Electric Company
P.O. Box 7604 , SCECO-C, Riyadh 11472
B.Sc. (EE) UETL 74

MOHAMMAD MAROOF-UZ-ZAMAN
Sr. Sales Manager
Schneider Electric
P.O. Box 118132, Jeddah 21312
B.Sc. (EE) Zakazik U Egypt 80

MOHAMMAD NADEEM IQBAL WARAICH
APCS Div. Manager
Husain Ali Husain (HAH) Trading &Contracting Est.
Al Hamra, P.O. Box 1221301, Riyadh-11311
B.Sc. (EE) UETL 95

Electrical Engineers

MOHAMMAD NAVEED ARSHAD

Relay & Prot. Design Engineer
Dar Al Riyadh Consultants
P.O. Box 1832, Jubail 31951
B.Sc. (EE) UETL 91

MOHAMMAD NOOR ALAM

Electrical Engineer
Consulting Engineering Group (MOH)
P.O. Box 1604, Riyadh 11311
Email: mohammadnooralam@gmail.com
B.Sc. (EE) BCE 67

MOHAMMAD RASHAD BHATTI

Electrical Design Engineer
MODA - GDMW
P.O. Box 59105, Riyadh 11525
Email: bmr243@hotmail.com
B.Sc. (EE) AUM 90, M.Sc (Mgt.E) AUM 92

MOHAMMAD RASHID QAZI

Senior Electrical Engineer
Al-Jubail
B.Sc. (EE) UETL 82

MOHAMMAD RASHID SARWAR

General Manager
Mohammed Rashid Sarwar Est. (EUROTECH)
P.O. Box 8906, Jeddah 21492
Email: mr_albarq@hotmail.com
B.Sc.(EE) UOP 79

MOHAMMAD RIAZ

Field Opertaion Manager
Telefonaktiebolaget LM Ericsson
P.O. Box 6121, Riyadh 11442
B.Sc. (EE) UETL 71

MOHAMMAD SADIQ KHAN

Section Head
Saudi Electric Company (CRB)
P.O. Box 57, Riyadh 11411
B.Sc. (EE) UETL 70

MOHAMMAD SHAUKAT ALI

Electrical Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
B.Sc. (EE) UET 90

MOHAMMAD SHUJAAT CHOUDHRY

Electrical Engineer
Al Fanar Co.
P.O.Box 301, Nafal, Exit 6, Riyadh 11411
Email: shuja_ee@hotmail.com
B.E. (EE) NED 05

MOHAMMAD TARIQ SHAFI

Project Engineer (Aut & Cont)
Al-Tuwairqi
P.O. Box 2705, Dammam 31461
B.Sc. (EE) UET 01, MSc (Cont) UET 01

MOHAMMAD TAUSIF

Consultant
Saudi Electric Company
P.O. Box 40393, Riyadh 11499
Email: mtausifm@hotmail.com
B.E. (EE) NED 68

MOHAMMAD ZAFAR ULLAH

Electrical Engineer
Min. of Finance & National Economy
Nasseriah P. Station, P.O. Box 5789, Riyadh 11432
B.Sc. (EE) UETL 74

MOHAMMED TAHIR USMANI

RSO NPO Stream Manager
Nokia Solutions & Networks (NSN)
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: tahir_usmani@yahoo.com
B.E(Telecom), LBSU, California, USA 95

MOHSIN RASHID KHAN

Transmission Engineer
Saudi Electricity Company, Aramco Projects
P.O.Box 5190, Dammam 31422
Email: mrkhan4@se.com.sa
B.Sc (EE), AJKU 94

MUBASHAR HASSAN

Sales Director
Schneider Electric
PO Box 3789, Al-Khobar 31952
B.Sc. (EE) UETL 99

MUBASHIR ZAWAR HUSSAIN

Electrical / Cathodic Protection Engineer
ILF Consulting Engg.
Riyadh
Email: mubashir.zawar@ilf.com
BSc EE, UETL 10

Electrical Engineers

MUDASSIR MASOOD
Assistant Professor
KFUPM
Electrical Engineering, Building 59, KFUPM, Dhahran
Email: mudassir.masood@gmail.com
MS KFUPM 05, PhD King Abdullah U. of Science and

MUHAMMAD ABDUL WASAY
Telecom Engineer
Manaret Shahbaa Contruction Group
Riyadh
Email: wasay15@gmail.com
B.E NW PolyTech U. Zian, China 2017

MUHAMMAD ADNAN
Telecom Engineer
Saudconsult
P.O.Box 2341, Riyadh 11451
Email: m.adnanilyas@yahoo.com
BE Hamdard U ISB 15

MUHAMMAD AKHTAR CHAUDHRY
Transmission Engineering Specialist
Saudi Electric Company (EOA)
Tower A2 Floor 14 Ghernatah, P. O. Box 22955, Riyadl
KSA
Email: akhtarc@hotmail.com
B.Sc.(EE) UETL 84, M.E KFUPM 88

MUHAMMAD ALI RAFI
Assistan Engineer
AETCON
Bldg 6803/14, Dist Shuhada Garnata, Riyadh
Email: alirafiawan@gmail.com
B.Sc (EE), Cecos U Peshawar

MUHAMMAD ATIF BAIG
Engineering Manager
MEMF Electrical Industries Co.
Hay Alwazarat
Email: atif.baig@memf.com.sa
BE UETL 02

MUHAMMAD ATIQULLAH
Senior Electrical Engineer
Saudi Consolidated Engineering Company
Alkhobar
Email: matiq54@hotmail.com
BE NED 79

MUHAMMAD FAROOK KHAN
Department Manager
SIEMENS
Raja tower P.o.BOX 719, Khobar 31952
Email: farook.khan@siemens.com
B.E. (EE) NED 97

MUHAMMAD HAMID
Director, Fire and Safety Training Center
Jubail Industrial College, RC
PO BOX 10099, Jubail Industrial College, Jubail 31961
Email: sadekmh@gmail.com
BE NED Kar 99, MS KFUPM 01

MUHAMMAD IMRAN SAIR
Site Manager UGTL
M/S Siemens Arabia LTd.
Riyadh
Email: sair45@gmail.com
B.Sc. Mechatronics & Control Engg, UETL 04

MUHAMMAD KASHIF FAHIM
Project Manager MEP
V3 International Engineering Consultants
P.O. Box 3207 Central Post, Riyadh
Email: kashif_fahim@yahoo.com
B.Tech. (EE) NICE 07

MUHAMMAD QIASH
Protection Engineer
Aljazirah Engg & Consultant
Riyadh
Email: qiashyaqub@gmail.com
B.Sc. (EE) UETPK 75

MUHAMMAD RIZWAN
Electrical Engineer
Saudconsult
P.O.Box 2341, Riyadh 11451
Email: mrizwan@sauconsult.com
BE Uni of South Asia, LHR 12

MUHAMMAD SALAHUDDIN KHAN
Project Engineer
SEC, EHV Projects Riyadh
Email: salahuddin268@gmail.com
B.E. (EE) NED 03

MUHAMMAD SALEEM SABIR
System Information Specialist
SEC
PO Box 606, Abha
Email: ssabir74@hotmail.com
B.E. (EE) NED 86

MUHAMMAD SAUD SARWAR
Chief Sales Officer
National Advanced Systems Co. Ltd
Alkhobar
Email: m.saudsarwar@gmail.com
BE NUST 05

Electrical Engineers

MUHAMMAD SHAHID
Protection & Automation Engineer
SIEMENS
P.O.Box 4521, Jeddah
Email: engr.shahid26@gmail.com
B.Tech Hons (EE), Preston U 12

MUHAMMAD SUHAIL
Sr Electrical Engineer
Naizak Global Engineering Systems
Makkah St Thuqbah Alkhobar
Email: msuhail_k@yahoo.com
B-Tech (Hon) Preston Inst 10

MUHAMMAD TAHIR
Electrical Engineer
Al-Qahtani Pipe Coating Industries
P.O.Box 1980, Dammam 31441
Email: engineertahirawan@gmail.com
BE NED Karachi 05

MUHAMMAD TAHIR ANSARI
Design Engineer
Al-Tuwairqi Group
Dammam
Email: tahirjee_76@yahoo.com
B.E. (EE) MUET JAM 00

MUHAMMAD USMAN RAFI
Divisional ENGINEER
AETCON
P.B.NO 172, DAMMAM - 31411
Email: Usman_15608@yahoo.com
B.E EE, UETL 12

MUHAMMED KARIM
Project Manager
NORCONSULT
Saudi Electricity Company Headquarter Dammam
Email: karimsec@hotmail.com
B.Sc UETL 81, PMP USA 10

MUJAHID AHMAD
Senior Electrical Engineer
Mobiley
P.O. Box 69179, Riyadh 11423
Email: m.mumtazahmad@mobily.com.sa
B.Sc. (EE) UETL 76

MUKESH KUMAR
Senior Electrical Engineer
Al-Bassam Contracting & Commerce
P.O. Box 24, Al-Khobar 31952
B.E. (EE) NED 83

MUMTAZ ALI SHAIKH
Project Engineer (Elect)
Radicon Gulf Consultant
Khobar
Email: mumtaz01_pk@yahoo.com
BE (EE) MUET JAM 98

MUNEEB AHMAD DAR
Project Engineer
Dar Al-Riyadh Engineering Consultants
P.O. Box. 616, Abha, KSA
B.Sc.(EE) UETL 89

MUNIR AHMAD HASRAT
Electrical Engineer
Raghadan Company
Projects Dept., Room 248, Riyadh 11146
B.Sc. (EE) UETL 74

MUNIR AHMED
Sr. Technical Manager
ABB Automation Co. Ltd.
P.O. Box 414, Riyadh 11383
Email: munir.ahmed@sa.abb.com
B.Sc (EE) UETL 86

MUSHARRAF ALI KHAN
Director
PLASCOM
P.O. Box 18595, Riyadh 11425
B.E. CEI 76, MIQA IQA 81

MUSHIR AHMED SIDDIQUI
Head of Electrical Department
SHARACO
P.O. Box 5500, Riyadh 11422
Email: mushirsiddiqui@hotmail.com
B.E. (EE) NED 76

MUSHTAQ AHMED AZAD
Senior Transmission Engineer
Saudi Electricity Company (SEC)
Transmission Building No. C, Al-Marooj, Riyadh
Email: mushtaqazad@hotmail.com
M.Sc.(EE) UETL 90, B.Sc (EE) UETL 76

MUSHTAQ AHMED M. BHUTTO
Telecom Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
Email: bhuttomushtaq@hotmail.com
B.E. (EE) MUET 90

Electrical Engineers

MUSHTAQ AHMED SOOMRO
Unit Engineer "A" Prot. Sec.
Saudi Electric Company (CRB)
PP3, Prot. Sec. P.O. Box 57, Riyadh 11411
B.E. (EE) MUET 85

MUZAFFAR UL HASSAN
Distribution Engg. Specialist
Saudi Electric Company
P.O. Box 57, Riyadh 11411
Email: muzaffar_ul_hassan@hotmail.com
B.E (EE) NED 75

NAEEM AZIZ BHATTI
Engineering Manager
SCADO
Alkhobar
Email: naeembhatti11@gmail.com
BSc UET Lahore 1976

NAEEM UD DIN
Electrical Maintenance Eng.
Saudi Electric Company
P.O. Box 57, Riyadh 11411
B.Sc. (EE) UETL 73

NAEEM ULLAH SHEIKH
Operations Manager
B.P Solar Arabia Ltd
P.O. Box 191, Riyadh 11383
Email: naeem@bpsarabia.com.sa
B.Sc. (EE) UETL 88

NASIR SHARIF
Manager Engg & Development
TIEPCO
PO Box 2705, Dammam 31461
Email: nasir@altuwairqi.com
B.E. (EE) NED 88

NAVEED AHMAD, PMP
Sr. Operations Manager
ABB Power Generation & Water
P.O. Box 414, Riyadh 11383
Email: engr.naveedahmad@yahoo.com
B.Sc.(EE) UETL92, MS(EE) ICUL95, PMP, MCPM G'

NEELAM ABDUL HASEEB
Street 5, Al Tobaishi, Dammam -32233
Email: neelam.arshad86@gmail.com
BE NED Kar 08, MS NED 11

NISAR AHMAD PIRACHA
Design Engineer
TIEPCO
P.O. Box 2705, Dammam 31461
B.Sc. (EE) UCET AJK 00, M.Sc. (EE) UETL 06

NISAR AHMED
Project Engineer
Al-Othman Consultant (SEC)
Substation 9019 at PP# 9, Riyadh
B.E. (EE) MUET 91

NISAR BALOCH
Riyadh Branch manager
Schneider Electric
P.O. Box 89249, Riyadh 11682
B.E. (EE) UETL 89

NOOR MOHAMMAD KHAN
Electrical Engineer
Saud Consult
SEC-COA, P.O. Box 57, Riyadh
Email: inkhan3@se.com.sa
B.Sc. (EE) NWFP UET 68

OMAR MUHAMMAD AKHTAR
Services Supervisor
Gulf Power Distribution Systems Co.
PO Box 3298, Dammam 31952
Email: omar.akhtar@gpds-gex.com
B.Sc. (EE) UETL 05

OMER QASIM
Near East Univ, TRNC 08
ELECTRICAL DESIGN ENGINEER
AL-JAZIRAH ENGINEERS AND CONSULTANTS
Email: omerqasim@hotmail.com
B.Sc. (EE) UETL 08

OSAMA MOHAMMAD KHAN
Electrical Engineer
Al Fanar Electrical Systems
P.O.BOX 867, AL-KHOBAR - 31952
Email: osamahkhan91@gmail.com
B.Sc KFUPM 16

QAIM MAHDI
Project Manager
Schneider Electric
P.O. Box 89249, Riyadh 11682
B.E. (EE) NED 88, M.Sc QAU 91, PGD CTC 93

Electrical Engineers

ALI AKBAR
Field Engineer
Al Sharif KEC
P.O. Box 549, Al-Riyadh 11391
B.E. (EE) MUET 90

ALI JAMSHAID
Lead Electrical Engineer
Gulf Consult
Al Khobar
Email: eng.ali26@gmail.com
B.Sc UET Lahore 10

ALTAF HUSSAIN KHAN
Senior Electrical Engineer
Saudi Consulting Services
P.O. Box 2341, Riyadh 11451
Email: scc@saudconsult.com
B.Sc (EE) UOP 72

ALTAF UR REHMAN
Transmission Engr.
SEC EOA
P.O.Box 5190 Dammam 31422
Email: 83170@se.com.sa
B.Sc. (EE) UETL 99, M.Sc. UETL 07

AMEER ABBAS
Network Engineer
Seder
Mursalat, Riyadh
Email: deameer@gmail.com
MS EE, UET Peshawar 01

AMJAD RASHEED
Design / Tender Engineer
Al Fanar Co.
P.O. Box 301, Riyadh 11411
B.Sc. (EE) UETL 81

ANIS-UR-REHMAN
Site Engineer
Services & Solution LTD. KSA
Riyadh
Email: anis.rrrehman@ssc-arabia.com
B.Sc. (EE) UETL 08

ANWAR AHMED MALIK
Sr. Electrical Engineer
SABIC
P.O Box 10002 Jubail 31961
P.O Box 10002 Jubail 31961
Email: malika@sabic.com
B-Tech UETL 81

ANWAR NAZAR ALI JIWANI
Sr. Electrical Engineer
Abdullah Abal Khail Consulting Engrs.
P.O. Box 4074, Riyadh 11491
B.E. (EE) NED 77

ANWARUL HAQ PASHA
QA/QC Coordinator
Radicon Gulf Consultants
PO Box 684, Al-Khobar 31952
Email: ahp311@gmail.com
B.Sc. (EE) UETL 73

AQIL NASIR MIRZA
Control Systems Engineer
PETROKEMYA
P.O. Box 10002, Jubail 31961
B.Sc. (EE) HP 83

ARSALAN MANSOOR
Project Manager
ABB Automation Ltd.
PO Box 414, Riyadh 11383
Email: arsalan.mansoor@sa.abb.com
B.Sc. (EE) OHU USA 08

ARSHAD ALI
Protection Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
B.Sc. (EE) UETL 78

ASAD ALI HASSAN
Sales Manager
EATON Khobar
Al Khobar
Email: asadhassan@eaton.com
B.E. (EE) NED 03

ASHIQ HARAL
Project Manager
ABB Contracting Company
Aziziyah, near Masjid Toawan, Jeddah
Email: ashiq.haral@sa.abb.com
M.Sc, UETL, 2003

ASIF MAJEED
Lead Engineer, I&C, PP-9
NESPAK
P.O. Box 2341, Riyadh 11451
B.Sc. (EE) UETL 80

Electrical Engineers

QAMARUL HAQUE SIDDIQUI
Sr. Electrical Engineer
BEMCO
P.O. Box 3143, Jeddah 21471
Email: qamarul@sbg-ipp.com
B.Sc. (EE)

RAFIQ AHMED
Senior Engineer
AETCON
P.O. Box 250974, Riyadh 11391
B.E. (EE) MUET 89

RANA SARFRAZ AHMED
Program Manager
Hayat Al Qassim
Mathar North Riyadh
Email: ror13502@gmail.com
B.E UCET TAXILA 1986, MBA Virtual Univ 2008

RASHEED A. BHUTTO
TRANSMISSION Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
Email: engr_rasheed@hotmail.com
B.E. (EE) MUET 93

RAO ABDUL RAQEEB KHAN
Engineer (Switching)
Saudi Telecomm. Company (STC)
STC Headquarters, Mursalat, Riyadh
B.Sc. (EE) UETL 87

RAZAUR RAHMAN
Business Development Manager
Schneider Electric
P.O. Box 89249, Riyadh 11682
B.Sc. (EE) UETL 83

RASHID AYUB QURESHI
Field Engineer
GE Meelsa
Email: engrrash@yahoo.com
B.E. (EE) UET KPK 04

RIZWAN AHMED ANSARI
Quality Assurance Manager
WESCOSA
P.O Box 2389, Dammam - 31451
Email: rizwan@wescosa.com
B.E. (EE) MUET 91

RIZWAN AHMAD
General Manager
Naba International Enterprises
P.O. Box 31163, Al-Khobar 31952
Email: rizwan_asr@yahoo.com
B.E. (EE) NED 74

SAEED A. KHAN
Principal Electrical Engineer
SABIC (E & PM)
P.O.Box 11425, Jubail Industrial. City 31861
Email: khansa59@hotmail.com
B.Sc. (EE) UETNWFP 84 & MS USA 87

S. AFZAL HASAN KAZMI
Electrical Engineer
Meezan Technical Services
P.O. Box 84391, Riyadh 11691
B.E. (EE) SU 71

SAGHIR AHMED
E & I Manager
Water and Power System Technology
P.O. Box 8064, Jubail 36136
Email: saghir55@hotmail.com
B.Sc. (EE) UOP 79

SAFDAR IQBAL AWAN
Unit Engineer
Saudi Electric Company
P.O. Box 57, Riyadh 11411
Email: safdar777@hotmail.com
B.Sc. (EE) UETL 76

SAJJAD AHMAD SAJID
Senior Project Manager
Arabia Electric Ltd (Siemens)
P.O. Box 4621, Jeddah 21412
B.Sc. (EE) UETL 76

SAIFULLAH KHAN
Project Engineer
Marafic
Yanbu
Email: engineer.saifkhan@gmail.com
B.Sc. (EE) UETP 06

Electrical Engineers

SALEEM AHMAD
Senior Engineer
Saudi Electric Company (ERB)
Jubail
Email: 48731@se.com.sa
B.Sc. (EE) UETL 88

SALMAN FAISAL

SALMAN MAHMOOD

SALMAN YOUNAS
Project Engineer
AETCON
Jeddah
Email: salmanyounas72@yahoo.com
B.Sc(EE), U of Central Punjab 10

SAQIB SHAH
Sr. Electrical Engineer
Rashid Engineering
P.O. Box 4354, Riyadh 11491
Email: shah28083@gmail.com
B.Sc.(EE) UOP 72

SARA FURQAN
Email: sarafurqanabid@gmail.com
B.Sc (EE), UET Lahore 09

SARFRAZ MAHMOOD
Network Planning Engineer
Saudi Telecomm. Company (STC)
STC Headquarter, Mursalat, Riyadh
Email: sarfraz47@hotmail.com
B.Sc. (EE) UETL 74

SHAFIQUE AHMED
Electrical Consultant
NOR Consult Telematics
King Fahd Rd, NG SEC HQ, Dammam
Email: engr.shafiqahmed@gmail.com
BE UET Mehran Jamshoro 91

SHAFQAT ZIA
Project Engineer
Al Fanar Co.
Nothern Ring Road b/w Exit 5 & 6, Al-Nafl, Al Fanar E
Email: shafaqat.zia@alfanar.com
B.E. (E), QAUEST 05

SHAH NAWAZ KHAN
Sr. Engr (Maintenance)
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
Email: abu_saadnawaz@hotmail.com
B.Sc. (EE) UOP 76

SHAH ZAMAN PANHWAR
Projects Manager
Al-Sharif Group (ASG)
DAMMAM
Email: shah_szp@yahoo.com
B.E. (EE) MUET 86, MIS CQU 94

SHAHID MEHBOOB
Electrical Engineer
SESCO
P.O.Box: 11941, Al-Jubail 31961
Email: shahid.mehboob@sesco-gex.com
B.E. (EE) NED 98

SHAHID MHMOOD ALVI
Electrical Engineer
Sadara Chemicals
Jubail
Email: shahid.118@gmail.com
B.Sc. (EE) UETL 95, MBA PIMSAT 04

SHAHZAD ALI BAIG
Commissioning Engineer
ABB Service Co. Ltd.
P.O. Box 2873, Al-Khobar 31952
B.E. (EE) NED 94

SHAHZAD HABIB GILL
Transmission Eng
SRACO (SEC)
TSD/OED, R # 2-306W
B.Sc. (EE) UETTax 00, MSc(EE) UETL 04

SHAKEEL AHMAD
Project Manager
Cogelex - Alsthom
P.O. Box 87200, Riyadh 11642
B.Sc. (EE) EPUET 71

Electrical Engineers

SHAKEEL AHMAD AWAN

Transmission Engineer
Saudi Electricity Company
P.O Box# 36678, Dammam 31429,
Email: awanshak@live.com
B.E. (EE) MUET Jam 89

SHAMIM ALAM KHAN

Electrical Engineer
Saudi Telecomm. Company (STC)
Eng. Plng., STC HQ, P.O. Box 87912, Riyadh 11652
Email: sakhan@stc.com.sa
B.Sc. (EE) EPUET 65

SHAQIF AZAM

Sr Electrical Engineer
ABV Rock Group Ltd
Riyadh
Email: shaqif_azam@yahoo.com
BE NED Kar 08

SHARIQ AHMED KHAN

Assistant Electrical Engineer
Gulf Consolidated Contractors Co.
Al Rakah Ash Shamaliyah
Email: Shariqahmedkhan94@outlook.com
B.E Comsats Univ. Wah 2018

SHAUKAT ALI

Engineer - I
KFUPM
KFUPM Box 1882, Dhahran 31261
Email: ashaukat@kfupm.edu.sa
B.Sc (EE) UOP 75

SHEIKH MAHMOOD AHMED

Electrical Engineer
Saudi Electric Company
Jubail
B.Sc. (EE) UETL 91

SHEIKH QAISAR ABBAS

Senior Engineer
Al-Suwaidi Co
Jubail
Email: qaisar1472@gmail.com
B-Tech UET Lhr 04, C Eng IET (Engg council UK) 18

SHOAIB AHMAD

C.E.O.
M.A.Al-Azzaz Contracting
P.O. Box 31234, Al-Khobar-31952
B.E. (E) NED 74

SIKANDER H. BHATTI

CEO
Energy & Infrastructure
P.O. Box 91357, Jeddah
Email: si@wj-co.com
B.Sc. (EE)

SIRAJ UR REHMAN

Business Development Manager
Energy Shield
DAMMAM HOUSING (ASKAN)
Email: SIRAJSHAHID@GMAIL.COM
BS Hamdard U 10

SYED ADNAN MOID

Electrical Engineer
General Electric Company
Riyadh
B.E. (EE) NED 96

SYED AFZAL HUSAIN

Sr. Electrical Engineer
Consulting Engineering Group
P.O. Box 1604, Riyadh 11311
B.E. (E) NED 74

SYED ANEEQ ALI BOKHARI

Estimation Engineer
Electrical & Electronics Industries Corp.
PO Box 1684, AL-Khobar 31952
Email: aneeq85@gmail.com
B.S. (EE) USA 07, MS (EE) USA 08

SYED FAHEEM AHMAD

Electrical Engineer
AMAC
Jubail
Email: shaheem64@yahoo.com
B.E. (EE) NED 87

SYED FARASAT ABBAS

Senior Design Engineer
TIEPCO
P.O. Box 2705, Dammam 31461
Email: farasat_70@hotmail.com
B.Sc. (EE) UETL 02

SYED FARAZ AHMED

Research Assistant
KFUPM
PO Box 8611, Dhaharan 31261
Email: faraz107@gmail.com
B.E. (EE) NED 08, MS KFUPM 10

Electrical Engineers

SYED MOHAMMAD NASEEM NAVAID
Electrical Engineer
Dar Al-Handasa Consulting Engineers
P.O. Box 60212, Riyadh 11545
B.E. (EE) NED 80

SYED MOHAMMED MURTAZA
Electrical Engineer
GULF CONSULT ARCHITEC & ENGINEERS
AQRABIYA, AL KHOBAR
Email: murtazarizvi93@gmail.com
BSc Multimedia Univ Malaysia 2016

SYED MUBASHIR UL HAQUE
Network Engineer
Getronics / AGCN
P.O. Box 2645, Riyadh 11461
B.E. (EE) NED 99

SYED MUHAMMAD IQBAL AHMED
Chief Electrical Engineer
Omrania & Associates
PO Box 2600, Riyadh 11461
Email: smiqbal01@yahoo.com
B.E. (EE) NED80, MS (EE) NED90

SYED MURSHID PERVEZ
Area Sales Manager
Saudi Transformer Co.
P.O. Box 968, Riyadh 11421
B.E. (EE) NED 82

SYED NAVED HAIDER
Director Sales & Bus Dev.
Construction Material Valley (CMV)
PO Box # 5129, Dammam-31422
Email: snhj1@yahoo.com
B.E. (EE) NED 91

SYED SARFRAZ ALI
Project Manager
AJEC
PO Box 17918, Riyadh 11494
Email: samedni@hotmail.com
B.E. (EE) UOS 67, MS PW USA 92

SYED SHABBIR AHMED
Sector Head
SEC-CRB Saudi Electric Company
PP8, P.O. Box 57, Riyadh 11411
B.Sc. (EE) UETL 80

SYED SHAHERYAR A SHAH
Head of Electro Mech. Dept.
Al-Rashid Trading & Contracting (RTCC)
P.O. Box 307, Riyadh 11411
B.E. (EE) POU 74

SYED SHAHID HUSSAIN
Engineering Specialist
SAUDI ELECTRICITY COMPANY
Building A-2, Floor-14; Garnada, Riyadh
Email: meetshahidhussain@yahoo.com
B.E EE 82, MS EE 93, UETL

SYED SHUJAAT KHURSHED
OHTL Tendering Manager
SSEM Co. Ltd
Al-Rashid Center, Maater Street, Riyadh
Email: shujaatpk@yahoo.com
B.Sc. (EE) NWFP UET 90

SYED TALHA NADEEM
Sales Engineer
Green Solutions Trad. & Cont. Co.
Khobar Iskan
Email: syedtalhanadeem@gmail.com
BSc U. of Central Punjab 2016

SYED TARIQ MUHAMMAD
Sales Manager
S&A Abahsain Co. Ltd.
P.O. Box 209, Al-Khobar 31952
Email: syedtar@hotmail.com
B.E. (EE) NED 03

SYED TASNEEM HUSAIN
Senior Design Engineer
ABB Electric Industries Ltd.
P.O. Box 8796, Riyadh 11492
B.Tech. (Hons) NED 86

SYED TOUSEEF AHMAD RIZVI
Sr Electrical Engineer
Dar-Alhandasah Shair and Partners
P.O. Box: 6310, Makkah 21955
Email: touseefrizvi@yahoo.com
B.Sc. (EE) UETL 98

SYED UMER MOIZ
Electrical Engineer
King Saud University
P.O. Box 2454, Riyadh 11451
B.E. (EE) SU 72

Electrical Engineers

SYED WAJID HUSSAIN
Electrical Engineer
Al-Noble Est. & Contracting
P.O. Box 1237, Al-Khobar 31952
Email: engwajid@yahoo.com
B.E. (EE) NED 92

SYED ZAFAR WAHAB
Planning Engineer
Saudi Electric Company (ERB)
Dammam
B.Sc. (EE) KU 70

SYED ZAHID HASSAN RIZVI
Protection Engineer - PP4
Saudi Electric Company (COA)
P.O. Box 57, Riyadh 11411
Email: srizvi@se.com.sa
B.Sc. (EE) UETL 86

TAHIR BARLAS
Manager
ATG
Email: tbarlas5sa@gmail.com
B.E. (EE) UWO CAN 05, ME (EE) UWO CAN 07

TAHIR SAEED MIRZA
IMC Systems Specialist
Kafou technical Services
Dammam
Email: tahirsmirza@hotmail.com
B.Sc. (EE) UETL 78, M.Sc. (EE) KFUPM 82

TAOUS AZMAT
Electrical Design Engineer
Saud Consulting Services
Email: taous.azmat@hotmail.com
B.E. Hamdard University 2013

TARIQ MUSHTAQ QURESHI
Senior Engineer
RGCK
Khobar
Email: tmq20@yahoo.com
B.E. (EE) UETL 73

TASADDUQ TAHIR
Procurement Engineer
AES Arabia LTD
PO Box 105689, Riyadh 11656
Email: tasaytahir@hotmail.com
B.Sc. (EE) UAJK 07

USMAN AHMED
Specification Manager
Saint Gobain
Office # 204, Rolaco Bldg, Makkah Rd, Riyadh
Email: usman.ahmed@saint-gobain.com
B.E UET Lahore 2009, MBA Lahore School of Econom

UZAIR MIRZA
Electrical Engineer
ASSYSTEM RADICON
Alkhobar
Email: m.uzairr94@gmail.com
Beng.EEE U. of Derby UK 2015, MSc U. OF NOTTIN
2016

WAJAHAT HUSSAIN SIDDIQUI
Senior Electrical Engineer
Noor MOHD Jukdar
P.O. Box 9887, Jeddah 21423
Email: wajahat1946@gmail.com
B.E. (EE) NED 74

WAQAS AHMAD
Care Program Management Head
Nokia Solutions & Networks (NSN)
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: waqasahmad@hotmail.com
BE NUST 98

YASIN KHAN, DR.
Professor
King Saud University, Riyadh
Deptt. Of Elect Engg. KSU, Riyadh
Email: yasink@ksu.edu.sa
B.Sc. (EE) NWFP UET 93, M.Sc. (EE) 97, Ph.D. KU Ja

ZAFAR IQBAL, PMP
General Manager
Hussain Ali Hussain Co.
Riyadh
Email: zafar@hahest-ksa.com
B.Sc. (EE) UETL 89

ZAHID NAVEED
Electrical Design Engineer
Saudi Consulting Services Company
Email: engr.zahidn@gmail.com
B.E., UET 2010

ZAKAULLAH
Electrical Engineer
Saadullah Khan Brothers
Al-Rossais Commercial Center, Riyadh
B.E. (EE) MUET 95

Electrical Engineers

ZAKIR RAZA
Sales Engineer
Al-Nassar Co.
P.O. Box 1246, Riyadh 11431
B.E. (EE) UOT 85

ZAMIR MANZOOR
Vice President
Habib Rafiq (Pvt) Ltd
PO Box 220135, Riyadh 11311
Email: zamirmanzoor@habibrafiq.com
B.Sc. (EE) UETL 84

ZEESHAN SAMI
Electrical Design Engineer
Saud Consulting Services
Riyadh
Email: zss84@hotmail.com
B.E., NED Karachi 2006

ZUBAIR AHMED
Senior Engineer
AETCON
P.O. Box 250974, Riyadh 11391
Email: zubairahm@hotmail.com
B.E. (EE) NED 92

ZULFIQAR AHMED BHATTY
Manager S. Centre/Logistics
Digital Natcom Co.
P.O. Box 7190, Riyadh 11462
B.Sc (EE) UETL 83

Electronics Engineers

ABDUL BASIT
Telecom Engineer
Nokia AlSaudia
Riyadh
Email: abasit_pk@yahoo.com
B.E NED Univ. Karachi 1990

ABDUL MUQEET
Communication Engineer
Saudi Electric Company (CRB)
P.O. Box 57, ECC Building, 3rd Fl, Riyadh 11411
B.E. (Ecs) DCET 90

AHSAN AHMED RANA
iSeries Tech. Support Engineer
SBM / IBM
P.O. Box 818, Riyadh 11421
Email: arana@stc.com.sa
B.E. (Ecs) NED 78

AMIR HUSSAIN QURESHI
Manager IPBB/ISP/Security
Nokia Solutions & Networks
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: amirhq@gmail.com
B.E. (Electronics Eng), GIK 99

AMJAD IQBAL
I & C Sys Engr.
Petrokemya
P.O. Box 10002, Jubail
B.Sc. (EE) EMU 93

ARIF ISLAM BUTT
Section Manager
Mitsubishi Electric Saudi Ltd.
P.O. Box 14166, Jeddah 21424
B.E.(Ecs) NED 94

ARSHAD HUSSAIN
Instrument Engineer
Riyadh Water Works
P.O. Box 2464, Riyadh 11451
B.E. (Ecs) DCET 69

ARSHAD MOHSEN BHOPALI
Manager Eastern Region
Basic Electronics Co. Ltd.
P.O.Box 1402, KHOBAR 31952
Email: arshadbhopali1@gmail.com
B.E. (EE) NED 92

ATIF ALI KHAN
Area Manager
STESA-THALES Co.
P.O. Box 10502, Jubail 31961
Email: khanatifali@yahoo.com
B.E. (EE) NED 96

DEEDAR ALI
Telecom Engineer
Saudi Telecomm. Company (STC)
STC Headquarters, Room 107, Mursalat, Riyadh
Email: dshah@stc.com.sa
B.E. (Ecs) NED 87

FAISAL NASRULLAH
Solutions Consultant
Nokia Solutions & Networks (NSN)
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: nasrullah.faisal@nokia.com
BE (Electronics), UETL 00

FAREED HUSSAIN KHAN
Sr. NW & Comm Engr.
Al-Bassam International Co.
Email: fareedhk@yahoo.com
B.E. (EE) DCET 87

FURQAN ALI SIDDIQUI
Sr. Telecommunication Engr.
Saudi Electricity Co.
P.O. Box - 5190, Dammam
Email: furqan_as@yahoo.com
B.E. (EE) NED 99, M.S (Tel) NED 05

HAFEEZ-UR-REHMAN
Sales Manager
Siemens
P.O. Box 9510, Riyadh 11423
M.Sc. (Ecs) QAU 86

HAMZAH ASHRAF
Business Support Manager
PCS Instruments and Controls
Riyadh
Email: Hamzah.Ashraf@yahoo.com
B.Sc. Engr, SSUET, 99

IFTIKHAR AHMED HAJI
District Engineer
Saudi Telecom Co. (STC)
P.O. Box 220169, Riyadh 11311
Email: ihaji.c@stc.com.sa
B.E. (Ecs) Osmania 93

Electronics Engineers

IJAZ AKHTAR
Project Manager II
STC Solutions
STC HQ, Mursalat, Riyadh
Email: ijazak@hotmail.com
BE (EE) NED 96

Engr. Imran Ahsraf
Director Strategy and Business Development at Dawiyat Integrated Telecommunications and IT
Mobile: 056-560-0667
Email: imranrhl@yahoo.com

IMRAN SHAIKH
System Engineer
AMPS
Al-Khobar
Email: smimran@gmx.com
B.E. (EE) SSUET 09

IQBAL AHMED SIDDIQUI
Telecommunication Engineer
Royal Saudi Air Defence Forces
P.O. Box 16431, Riyadh 11464
B.E. (Ecs) NED 79

IRFAN ALI SIDDIQUI
Service Manager
Saleh & Abdul Aziz Abahasan Co. Ltd.
P.O.Box 209, Khobar
Email: irfan_alisiddiqui@yahoo.com
B.E. (EE) NED 02, MBA Abacus 11

IRFANUDDIN AHMED
Sales & Marketing Engineer
Model Time Technical Systems
P.O. Box 9270, Jeddah 21413
Email: irfanuddinahmed@gmail.com
B.S. (EE) EMU Turkey 01, MBA PAF-KAIET 04

ISHTIAQUE AHMAD KHAN
Managing Engineer
Siemens
Siemens Office Riyadh
Email: ishtiaqueak@gmail.com
B.E(Electronics)

JAVED M. AHSANI
General Manager
Four Corners International
P.O. Box 62877, Riyadh 11595
B.E. (Ecs) KU 77

KAMRAN ASIF ASLAM
Mrktg & Tech Support Manager
Beit Al-Etisalat
P.O. Box 90209, Riyadh 11613
Email: kaaslam@hotmail.com
B.E. (Ecs) SSUET 99

KHALID NADEEM
Support Engineer
Al-Faisaliah Group
P.O. Box 122209, Jeddah 21332
B.E. (Ecs) DCET 87

M. FARAZ UDDIN QURESHI
Senior Network & Security Engineer
DETECON Al-saudia Co. Ltd
P.O. Box 1038, DQ, Riyadh 11431
Email: qureshim@ARABSAT.com
B.Sc. (EE) SSUET 01

MAJID LATIF
Group Genera Managar
Arabic Computer Systems Ltd.
P.O. Box 2645, Riyadh 11461
B.E. (Ecs) DCET 75

MANSOOR JAMIL
Instrument Engineer
JANA Chemical Industries
P.O. Box 10661, Jubail 31961
Email: mansoor_10609@yahoo.com
B.E. (Electronics) DCET 96

MANZOOR AHMAD
Project Engr.
SIEMENS
Khobar
Email: manzuur.ahmad@gmail.com
B.Sc. (EE) GIKI 03

MILHAN TARIQ AZIZ
Sr. Business Planning Engineer
Al-Jubail Petro Chemical Co. (KEMYA)
PO Box 10084, Jubail 31961
Email: milhantariq@hotmail.com
B.Sc. (EE) UETL 93

MOHAMMAD HANIF
Quality Control Manager
A.B.B Electrical Industries Co. Ltd.
P.O. Box 251, Riyadh 11383
B.E. (Ecs) NED 83

Electronics Engineers

MOHAMMAD ILYAS MUGHAL
Instrument & Control Sys Engr.
Petrokemya
P.O. Box 10002, Jubail
Email: mughalmi@yahoo.com
B.E. (E) UET AJK 89

MOHAMMAD IMRAN
Communication Engineer
SIEMENS
Al-Raja Tower, Khobar
Email: aleyimran@yahoo.com
B.E. (EE) NED 02, MBA PIMSAT 05

MOHAMMAD IQBAL TAREEN
Computer Network Engineer
King Saud University Computer Center
P.O. Box 2454, Riyadh 11451
Email: mitareen@ksu.edu.sa
B.E. (Ecs) NED 86

MOHAMMAD IRFAN
Project Engineer
Al-Jazirah Engineers & Consultants (AJEC)
P.O. Box 616, SEC-SOA Project Deptt Abha
Email: irfan1963@hotmail.com
B.Sc. (EE) DCET 89, MBA (Finan) IBA PU

MOHAMMAD IRFAN AHMAD
Projects Engr Transmission
MOBILY
P.O. Box:5663, Jeddah :21432,KSA
Email: i.ahmed@mobily.com.sa
B.E. (EE), MS (Comm) UK

MOHAMMAD KHALID SYED
Testing Engineer
Al-Tuwairqi Group
Al-Khobar
Email: khalid.syed@altuwairqi.com
B.E. (EE) NED 93

MOHAMMAD NISAR ASAAD
Senior Instrument Engineer
S.W.C.C.
P.O. Box 8264, Jubail 31951
Email: nisarasaad@hotmail.com
B.E. (Ecs) DCET75, M.Sc. (Avn) CIT UK 79

MOHAMMAD ZEESHAN GHOURI
Security Project Systems
Maaden Aluminium
Ras Al Khair
Email: ghourim@maaden.com.sa
B.E. (EE) NED 96

MOSHTAQ AHMED CHEEMA
Unit Engineer Scada System
Saudi Electric Company
P.O. Box 57 ECC Building, Riyadh 11411
B.E. (Ecs) NED 79

MUHAMMAD AHMED
Head of Vertical Sales
Siemens
P.O.Box 719, Alkhobar
Email: ahmed77@gmail.com
BE GIKI 00

MUHAMMAD BILAL SHAHID
Electronics Engineer
WASHMI GROUP
Khobar
Email: mbilalshahid@gmail.com
B.S. (EE) IIUI 08

MUHAMMAD IMMAD ANSARI
Sales Accounts Manager
AA Turki Corporation
Dammam
Email: engr.iansari@gmail.com
B.Sc. (EE) SSUET 08

MUHAMMAD IMRAN
Chief Engineer
Saudi Ministry of Defence
1st Floor, 45-Saud Alkabeer Bin Abdul Aziz Rd, Riyadl
BE, NED 93

MUHAMMAD KHALID
Production & Testing Engineer
International Electrical Products Company
Dammam Industrial Area
Email: khalid.syed@tiepco.com
BE NED 93

MUHAMMAD NAOMAN SABIR
Core Manager
Saudi Inteltec
PO Box 66121, Riyadh 11576
Email: nsabir@saudi-inteltec.com
B.E. (EE) DCET 86

MUHAMMAD SHAKIB MALIK
AMO FO Engineer
MobiCom
Al Maifa , Alyarmouk
Email: shakib.malik@engineer.com
B.E. Usman Institute of Technology 2007

Electronics Engineers

MUHAMMAD SHEHZAD

Operations Manager
Quality Core Contracting Services
Industrial Services Division, Khobar
Email: ind.services@qccs-sa.com
B.E. (EE) SSUET 02

MURAD ALI SHAH

LAN Administrator
Tecnicas Reunidas
Email: Mashah@trsa.es
B-Tech (Hon) Sarhad U. of sScience & Info Tech Pesha

MUZAFFAR AHMED

Project Engineer
SIEMENS
P.O.Box 719 Al-Khobar 31952
Email: muzaffar.ahmed@siemens.com
B.E. (EE) NED 01

NAYER AZAM

Senior Project Manager
Ebttikar Technology
P.O. Box 52908 , Riyadh 11 573
Email: nayer.azam@gmail.com
B.E. (ECS) NED 78

NIDA ADIL

Email: rqnida1@hotmail.com
BS Sir Syed University 10

OBAID HABIB

PMO Manager
Zain Saudi Arabia
Riyadh
Email: obaidhabib@gmail.com
BE (EE) GIKI 00, MBA UTNETH 05

OMER SAEED

Tech Sales Engr.
SESCO
PO Box 3298, Khobar 31952
Email: omer.saeed@sesco-gex.com
B.E. (EE) SSUET 01, MS (Telcom) UB UK 05

RIAZ HUSSAIN

Transmission Specialist
Saudi Telecomm. Company (STC)
P.O. Box 87912, Riyadh 11652
Email: riaz_47@yahoo.com
B.Sc. (Ecs) LU 73

MUHAMMAD YASIR ANJUM

Automation Solutions Engineer
The Integrated Control Mitsubishi Electric
Riyadh
Email: myan786@gmail.com
BE Hamdard Uni 09

MUSAB NAEEM

Electronics & Instrumentation Engineer
Sinsina Corner Company
Makkah St, Jubail
Email: engr.musab63@gmail.com
BE Dawood U. of Engg & Tech 13

NABEEL AHMAD SIDDIQUE

Access Network Instal. Engr.
Ericsson AB
P.O. Box 6121, Riyadh 11442
Email: nasonline@gmail.com
B.Sc. (EE) NEU 03

NAZIR AHMAD UJAN

Distribution Engr.
Suadi Electricity Co. (SEC)
PO Box 221671, Riyadh 11311
Email: nazeerujjan@hotmail.com
B.E. (EE) NED 82

NUSRAT PERVEZ

General Manager Medical Div.
Modern Scientific & Electronics Corp.
P.O. Box 1938, Riyadh 11441
B.E. (Ecs) DCET 80

OMER AKHTAR

Engineer
SIEMENS
PO Box 719, Khobar 31952
Email: omer.akhtar1@gmail.com
B.E. (EE) SSUET 07

RIAZ AHMED

Field Service Engineer
Philips Healthcare Saudi Arabia Ltd
P.O. Box. 9844,Riyadh 11423
Email: riazahmed111@gmail.com
B.E. (EE) DECT 93

SALMAN MEHMOOD

Support Engineer
YOKOGAWA
P.O. Box 3422, Dammam 31471
Email: s_mehmood@yahoo.com
B.E. (Ecs) GIK 98

Electronics Engineers

SHAHID WAQAS CHAUDHRY
General Manager
Yokogawa Saudi Arabia Company
P. O. Box 3368, Dhahran TechnoValley, Al-Khobar 31
Email: shahid.waqas@sa.yokogawa.com
B.S. (EE) GIKI 99

SHAIKH ASRAR AHMED
CEO
Ather Technology Pvt LTD.
P.O. Box 87021, Riyadh 11642
Email: shaikh@ather-telecomsolutions.com
B.E. (Ecs) NED 80

SYED ADNAN ALI
Lead Aix System Administrator
Riyad Bank
Olaya Oprs. Centre, P.O. Box 22622, Riyadh 11416
B.Sc. (Ecs) UOS 81

SYED AFFAN ALI HASHMI
Senior Technical Officer
Arabian Elect Transmission Line Const Co.
PO Box 172, Damma 31411
Email: affan@hotmail.com
BE SSUET 99, MS Energy GER 05, MS Comp SSUET

SYED AMMAR IQBAL AHMED
Wireless Engineer
Huawei Technologies
Riyadh
Email: syedammari@yahoo.com
BE, NED Karachi 2010, M.Sc IT, U of Stuttgart, Germa

SYED ASHFAQUE MAZHAR
Executive Manager
Computer & Engineering Specialists Co.
P.O. Box 14918, Jeddah 21434
B.E. (Ecs) MUET 79

SYED KHURSIED ABBAS
Instrument & Control Engin
Royal Commission For Yanbu Project
P.O. Box 30144, Yenbu
B.E. (Ecs) NED 80

SYED MESUM RAZA
Sales Engineer
SIEMENS
Al-Khobar
Email: syed.raza@sa.abb.com
B.E. (EE) DECT 05

SYED NAZEEF AKHTER
Elect. Estimator Engr.
Elseif Engineering Contracting Est.
P.O. Box 2774, Riyadh 11461
B.E. (Ecs) NED 92

SYED SHAKEEL AHMED
Electrical Site Engineer
Saud Consultant
Riyadh
Email: shakeelahmed2000pk@yahoo.com
B.E. (EE) SSUET 01

TASADDUQ HUSSAIN GILANI
Senior Engineer
SIEMENS
P.O. Box 27503, Riyadh 11423
B.Sc. (EE) UCET 93, M.Sc (Ecs) UET 97

TASNEEM AHMED
Area Manager - Eastern Region
Salem Agencies & Servoces Co. (SAS) - System Engg
P.O. Box 3033, Khobar 31952
B.E. (Ecs) DCET 87

WAHEED AKHTER
Project Manager
Saudi Technical Engineering System Ass.
PP9, P.O. Box 5463, Riyadh 11422
B.E. (Ecs) NED 89

ZAHID KHAN
Electrical Shift Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
B.E. (EE) NED 88

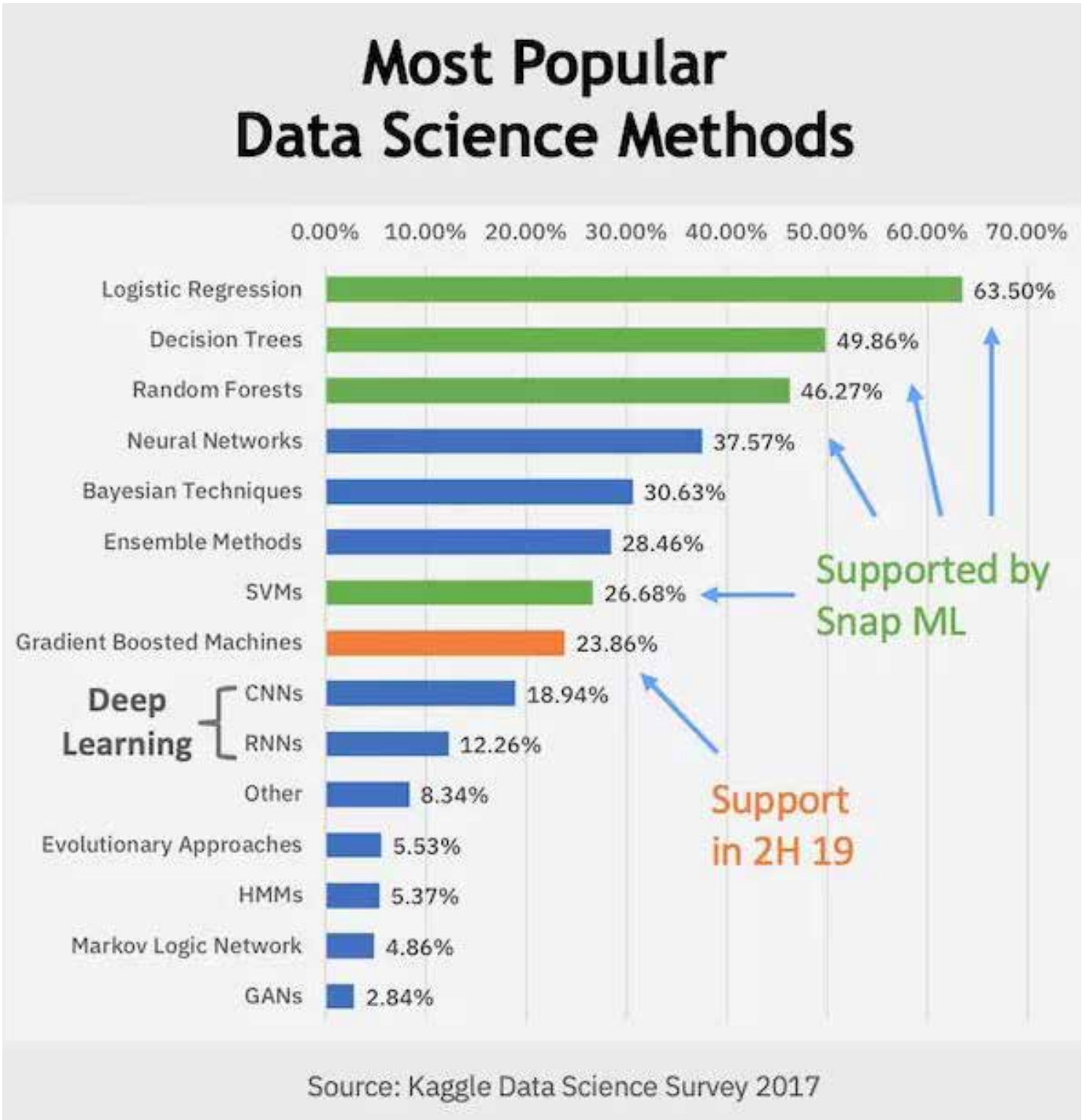
ZAHIR SAEED SHEIKH
Radio Technical Expert
Nokia Solutions & Networks (NSN)
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: zahir.sheikh@nokia.com
BE (Electronics), GIK 04

ZEESHAN YAQOOB
Electronics Engineer
Al - Qahtani Pipe Coating Industries
Al Khalidian Al shamaliah, Dammam
Email: Zeeshany88@gmail.com
B.E Iqra University 2011

Electronics Engineers

ZIA UREHMAN
Electronics Engineer
AETCON
Khobar
Email: Zia_6188@yahoo.com
B.Sc. (EE) NWFP UET 08

ZOHAIB SHAHZAD
Instrumentation & Control Engineer
JACOBS Zate
Jubail
Email: engr.zohaibshahzad786@gmail.com
B.Sc COMSATS 11



Mechanical Engineers

ABDUL GHAFUR RIZVI
Principal Engineer
Olayan Descon Industrial Co.
PO Box 10108, Jubail 31961
Email: agrizvi@olayandescon.com
B.Sc. (ME) UETL 04

ABDUL QADIR AKBANI
Engg.& Facility Develp. Mgr.
Al-Qahtani Pipe Coating Industries
P.O. Box 1980, Dammam 31441
Email: abdul.qadir@aqpci.net
B.E. (ME) NED 71

ABDUL WAHEED
Project Engineer
Saudi Electric Company (ERB)
2-210 W, SEC-HQ, P.O. Box 5190, Dammam 31422
Email: waheedsa55@yahoo.com
B.Sc. (ME) UETL 74

ADEEL ALI KHAN
Sales Engineer
Byrne Equipment Rental
POBox 30770 Al Khobar 3195
Email: adeela@byrnerental.com
BE NUST - PNEC 2016

ADNAN SHAHEEN ABBASI
Mechanical Engineer
Al-Qahtani Pipe Coating Industries
P.O.Box 1980, Dammam 31441
Email: adnan.shaheenn@gmail.com
BS HI-TEC U. Taxilla 14

AHAD AHMAD
Planning Engineer
Sadara
B.E UET Lahore 2007

AHMAD RAZA KHAN RANA
Execution Engineer
Olayan Descon Industrial Company
Yanbu
Email: ahmad.raza141@gmail.com
B.Sc. (ME) UETL 09

AHTSHAM AHMED
Engineering Section Manager
Mitsubishi Electric Saudi Ltd.
P.O. Box 3682, Makkah
B.E. (ME) NED 93

ABDUL MAJID
Project Manager
Mustang-HDP
King Abdulla St., Khobar
Email: engr.majid@gmail.com
B.Sc. (ME) UETL 03

ABDUL SATTAR

ABDULSATTAR SAGHIR AHMAD
Engineer Sr. Planning
Gulf Consolidated Contractors Co.
Automoto Building (B) Al-Rakah, P.O.Box. 895, Damn
Email: asattar0514@gmail.com
B-Tech. (Hons), Preston U Kohat 2017

ADIL BIN RAUF
Staff Process Engineer
Petrokemya
P.O. Box 10002, Jubail
Email: mt1ar@petrokemya.sabic.com
B.E. (ME) NED 87

AGHA ZIA-UL-HASSAH
Principal Laison Engineer
NESPAK
P.O. Box 50344, Riyadh 11523
B.Sc. (ME) UOP 80

AHMAD JAMAL
Assistant Professor
Royal Commission for Jubail and Yanbu
109 Lulu 18, Apt 10, Jubail
Email: jamalah@ucj.edu.sa
B.Sc UET Lahore 98, PhD McGill University, Canada

AHSAN ALI LOONA
Head of Mech. Engg. Dept.
Al Fouzan Trading Co.
P.O. Box 8300, Riyadh
B.Sc. (ME) UETL 80

ALI KHURSHEED SIDDIQUI
Lecturer
Al Imam Mohammad Ibn Saud Islamic University
Sheikh Abdullah Al Makhdub Street, Al Falah,Exit 7
Email: aksiddiqui@imamu.edu.sa
BE NED 03, ME NED 06

Mechanical Engineers

ALI ZIA
Project Engineer
Sinsina Corner Company
Makkah St, P.O.Box 2674, Jubail 31951
Email: ali.zia@outlook.com
B.Sc UET Lahore 13

ALLAH BAKHSH NIZAMI
Repair Manager
General Electric
Rabigh
Email: engrnizami@gmail.com
B.Sc. (ME) UETL 08

AMIR IRSHAD
Quality Engineer
Dar Al-Riyadh
PO Box 20753, Al-Khobar 31952
B.Sc. (ME) NECIET 03

AMJAD ALI SHAH
Site Engineer
Olayan Descon Industries Co.
Jubail
Email: amjad_ali_shah@hotmail.com
B.Sc. (ME) UET KPK 96

ANWAR KHALIL SHEIKH DR.
Professor of Mechanical Eng.
King Fahd Univ. of Petroleum & Minerals
KFUPM# 284, Dhahran 31261
Email: anwarks@kfupm.edu.sa
B.Sc.(ME) UETL 70, M.E WSU 75, Ph.D MTU 78

ANWAR SAAED KHAN
General Manager(Projects)
FAB Consulting Engineers
Mohammad Ali Jinnah Rd, Riyadh
Email: ask52@yahoo.com
B.E. (ME) NED 75

ANWAR SHAUKAT ANSARI
General Manager
GSTIC-Gulf Sahar Trad. & Ind. Co
PO Box 5266. 31422-Dammam
Email: anwar.ansari@gsticgroup.com
B.S.(ME) MTIH GER 71, PhD Greenlake USA 13

ASAD DANISH SIDDIQUI
STATIC EQUIPMENT ENGINEER
ALBAYRONI FERTILIZER SABIC
DAKHIL MEHDOOD, ALJUBAIL, KSA
Email: engr.asad364@gmail.com
BE NED Karachi 02

ASAD UR REHMAN
Construction Engineer
Sinsina Corner Company
Makkah St, P.O.Box 2674, Jubail 31951
Email: asad.ur.rehman17@gmail.com
BS Inst of Space Tech Isb 17

ASIF MAQSOOD SHEIKH
Maintenance & Service Manager
Agricultural Development Co.
P.O. Box 5244, Riyadh 11411
Email: asifmaqsood@hotmail.com
B.Sc. (ME) UETL 91

ASIF ZAFAR
Sales & Marketing Engineer
ISCOSA (Siemens - Westinghouse)
P.O. Box 752, Abha
B.E. (ME) NED 94, MBA IBA 97

ATIQ WALIULLAH SIDDIQUI
Assistant Professor
Imam Abdulrahman Bin Faisal University
Email: awsiddiqui@iau.edu.sa
MS KFUPM 01, PhD Memorial U of Newfoundland, Ca

AUSAF AHMAD
Field service Engineer
Industrial Suppllies Development Co.Ltd
Al-Khobar
Email: ausaf1993@hotmail.com
B.E (ME) Nanjing U of Aeronautics and Astro 2015

AYAZ MEHMOOD ANJUM
Procurement Officer
Al Fanar Technical Services
Riyadh
Email: ayaz.sardarali@alfanar.com
B.Tech 06 (ME)

AZFAR ISHAQ
Mechanical Engineer
Saudconsult
Sulaimaniyah, Riyadh
Email: azfar.ishaq.7@gmail.com
BSc, GIKI 14

AZMAT MUJTUBA
MECHANICAL MANAGER
Al-Ittefaq Steel Products Co.
P.O. Box 7600, Dammam 31472
B.E. (ME) NED 95

Mechanical Engineers

BADAR JAMAL

Project Manager
Olayan Descon
Jubail
B.E UET Lahore 2004

FAHEEM RAZZAK

Project Coordinator
SAMREF
Yanbu
B.E UET Lahore 2008

FAISAL MAHMUD

Rotating Equipment Specialist Engineer
Tecnicas Reunidas
AlKhobar
Email: fmahmud75@yahoo.com
BSc UET Lahore 1997

FAISAL MALIK

Marketing Manager
Carrier Saudi Arabia - Arabian Air Conditioning Co
P.O. Box 9784, Riyadh 11423
Email: faisal.malik@carrierSaudi.com
B.Sc. (ME) UETL 97, MBA Al-Khair U 97

FAISAL SHAHZAD MEER

QA/QC Manager
Gulf Consolidated Contractors
P.O.Box 895, Dammam 31421
Email: fmeer@gccksa.com
B.Sc UET Lahore 01

FAIZAN NAEEM

Assistant Operator
Shandong Electric Power & Construction Corp SEPCO
Ras Al-Khair Power Plant, Alkhafji
Email: office@sepco3.com
B.E Nanjing U. of Aeronautics and Astro 2015

FAKHAR ZAMAN

Supply chain consultant
Solventure
Ghent- Belgium
Email: eng.fakhar@gmail.com
BSc UETL 14, MS Industrial Management 17

FAREED AHMED

Area Sales Manager
Arabian Air Conditioning Co. Carrier
P.O. Box 9784, Riyadh 11423
Email: fareed.ahmed@carriersaudi.com
B.E. (ME) NED 90

FARHAN HAMID

Lecturer
Jubail Industrial College Royal Commission
Dept of Mechancial Engg Jubail Industrial College
Email: fh_farhan@yahoo.com
B.Sc UET Lahore 96, M.Sc KFUPM 00

FAYYAZ AHMED KHAN

MMS Specialist
Zuhair Fayez Partnership
P.O. Box 9486, Riyadh 11413
B.S. (ME) DIT 79

FAYYAZ MUDDASSIR MUBEEN

DESALINATION DIVISIONAL MANAGER
DESALINATION ENGINEERING SERVICES (DES)
603 DAR AL AMIRI BUILDING, CORNISH ROAD, S
U.A.E
Email: fayyazmubeen@hotmail.com
B.E. (ME) NED 77, MS (ME) KFUPM 81, PGD ITALY

GHULAM HUSSAIN KHAN

Engineer
King Saud University
P.O. Box 800, Riyadh 11421
B.Sc. (ME) UETL 71

GHULAM SARWAR

HVAC Engineer
Rashid Engineering
P.O. Box 4354, Riyadh 11491
B.Sc. (ME) UOP 74

GOHAR NAEEM SHAH

Mechanical Design Engineer
Tecnicas Reunidas
Alkhobar
Email: gnaeems@gmail.com
B.E GIKI 2005

HABIBULLAH TALPUR

Unit Engineer
Saudi Electric Company, PP4
P.O. Box 57, Riyadh 11411
B.E. (ME) SU 73

HAFEEZ UR REHMAN

Deputy General Manager
Saadullah Khan Brothers
Al-Rossais Commercial Center, Riyadh
Email: dgm@skb-ksa.com
B.Sc. (ME) UETL 74

Mechanical Engineers

HAFIZ MUHAMMAD USMAN

Planning Team Lead
Gulf Consolidated Contractors Co.
6719 Awf bin Qasit Street, Raka Janubiya, Khobar
Email: usmanstar@gmail.com
B.E UET Lahore 2004

HAFIZ MUHAMMAD WASEEM

Sales Engineer
Mitsubishi Electric Saudi Ltd.
P.O. Box 14166, Jeddah 21424
B.Sc. (ME) UOP 90

HAMID MAHMOOD SHAH

Sr. Procurement Officer
Hilal Hussein Al-Tuwairqi
P.O. Box 2705, Dammam 31432
B.Sc. (ME) UETT 2000

HAMMAD IFTIKHAR MUSTAFA

Inspection Engineer
M.A. Al-Azzaz Inspection & Testing Services
P.O.Box 31172, Al-Khobar 31952
Email: hammadifi@gmail.com
B.Sc (ME), Near East U, Cyprus 08

HAROON SALEEM QAZI

RTD Analyst II
Schlumburger
P.O. Box 2836, Al-Khobar 31952
Email: haroon_sq@hotmail.com
B.E. (ME) NED 03, M.S. (TEL) NPUL 05

HASSAN RASHEED

Projects Manager - HVAC Building Efficiency
Johnson Controls
Riyadh
Email: hassan.rasheed@jci.com
BE UET Taxila 04

HUMAYUN AKHTAR

Proposal Manager
JGC Gulf International
Email: humayun_akhtar@yahoo.com
MSE, U of Michigan, Ann Arbor USA 88

IJAZ BASHIR

Director Project Management
Zamil Metal Works
Jeddah
B.E UET Lahore 1999

INAM MUHAMMAD

Lecturer Mech. Engg. Dept.
KFUPM
P.O. Box 1252, Dhahran 31261
Email: inamgm@kfupm.edu.sa
B.E. (ME) NED 80, M.S KFUPM 84

IRFAN AHMED KHAN

Sr. Technical Professional
Olayan Descon Engineering Co.
PO 10108, 31961Al-Jubail Industrial City
Email: khanirfan1942@gmail.com
B.Sc. ME) UETL 99, M.Sc. US GER 99

IRFAN ALI KHAN

Chief Engineer
Institute of Public Adminstration
P.O. Box 205, Riyadh 11141
Email: khani@ipa.edu.sa
B.Sc. (ME) AMU Aligarh 77, M.S (ME) AMU Aligarh

IRSHAD AHMED CHAUDHRY

Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
Email: chirshad64@yahoo.com
B.Sc.(ME) UETL 83

IRSHAD RASOOL

Mechanical Engineer
Sinsina Corner Company
Makkah St, P.O.Box 2674, Jubail 31951
Email: irshad.rasool@alsinsina.com
B.Sc UET Lahore 07

ISLAM MUSHEER KHAN

General Manager
Al-Aswad International
P.O. Box 2153, Dammam 31451
Email: islam.m.khan@gmail.com
B.E. (ME) NED 75

ITLAQUE AHMAD KHAN

Sr. Mechanical Inspector
M.A. Al-Azzaz Inspection & Testing Svcs
P.O.Box: 31172, Khobar-31952
Email: itlaque@gmail.com
B.Sc. (ME) UETL 79

JAMIL A. WARSI

Project Director
Al-Zaid Engineering Consultants
P.O. Box 20179, Riyadh 11455
B.E. (M) NED 74

Mechanical Engineers

JAVERIA ASAD
HVAC design Engineer
Email: jav_azhar@hotmail.com
NED Kar 03

JAWAID IQBAL
Area Sales Manager
Arabian Air Conditioning Co. (Carrier)
P.O. BOX 11728 , Jeddah- 21463
B.E. (M) NED 79

JAWWAD UR RAHMAN
Estimation Engineer
CAMERON NATCO AL-RUSHAID
PO Box 11179, Jubail 31961
Email: jawwadurrahman@yahoo.com
B.Sc. (ME) UETL 06

KASHIF ZIA
General Manager
Petromen Corp.
P.O. Box - 7720, Dammam - 31472
Email: kashiftotal@hotmail.com
B.E. (ME) NED 93, MS (CS) NED 98, MBA IBM 98

KHALID ALI
Material Purchasing Engr.
Saudi Electric Company SEC-SOA
P.O. Box 2012, Abha
B.Sc. (ME) UETE 86

KHALID LATIF
Project Manager
SABIC
P.O. Box 10002, Jubail 31961
B.Sc. (ME) UETL 76

KHALID MASOOD BARLAS
Mechanical Engreer
Saleh Abal Khail Consulting Engrs.
P.O. Box 4296, Riyadh 11491
B.E. (ME) SU 69

KHAWAR IQBAL KHAN
Sr. Mechanical Engineer
FAKIEH Group
P.O. Box 7797, Makkah
Email: khawar51@yahoo.com
B.Sc. (ME) UETL 75

KHURRAM NADEEM
National Sales Sr. Director
AlKhorayef Lubricants Company
Alkhobar
Email: khurramnadeem369@yahoo.co.uk
B.E NED Univ. Karachi 1995, MBA Preston Univ. Kar

LIAQAT ALI SAHI
Unit Supervisor
Saudi Aramco
P.O. Box 968, Dhahran 31311
Email: liaqat.sahi@aramco.com
B.Sc (ME) UETL 79

M. IMRAN ASGHAR
Section Head (Planning/Proj)
National Industrial Gases Co. (GAS)
P.O. Box 10110, Jubail 31961
Email: imran1312@hotmail.com
B.E. (ME) UETL 90, CCE 2000, CIMSC 2005, CIA 20

MAHMOOD BUTT NAZIR
Senior Mechanical Engineer
Gulf Consolidated Co.
Dammam
Email: mhmdbutt@yahoo.com
B.Sc. (ME) UETL 85

MIAN ABDUL REHMAN SARWAR
Senior Engr. Production
Al-Tuwairiqi(National Steel Co.)
P.O. Box 3869, Al-Khobar 31952
Email: mars_uetian@hotmail.com
B.Sc. (ME) UETL 04

MIAN GHULAM HAIDER
Mechanical (Field Engineer)
Sin Sina Corner Co.
PO Box 1050, Jubail 31951, Jubail
Email: mianhaider@gmail.com
B.Sc. (ME) GIKIES 10

MIAN SHAMIM AHMAD
Sr. Mech Engineer
Rashid Engineering
P.O. Box 4354, Riyadh 11491
Email: mianshamim@hotmail.com
B.Sc. (ME) UOP 74

MIR ZAMAN KHAN
Chief Engineer(Mechanical)
Zuhair Fayez Partnership
P.O. Box. 5445, Jeddah 21422
Email: khan_mir55@hotmail.com
B.Sc. (ME) UP 76

Mechanical Engineers

MOHAMMAD ABBAS ANSARI
Field Engineer (Mechanical)
MARAFIQ
MARAFIQ, Potable Water Facilty Tareeq-113, Jubail
B.Sc. (ME) UETL 93

MOHAMMAD ANWAR DAWOOD MEMON
S.Quality Assurance Specialist
Royal Saudi Naval Forces
P.O. Box 22463, Riyadh 11495
Email: admemon@hotmail.com
B.E. (M) NED 71

MOHAMMAD ARSHAD
Material Engineer
Grain Silo And Flour Mill Orgnization
P.O. Box 3402, Riyadh 11471
Email: arshad@gsfmo.gov.sa
B.E. (ME) NED 80

MOHAMMAD ARSHED JAVAID
Material Purchasing Engr.
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
Email: malikarshed@hotmail.com
B.Sc. (ME) UETL 84

MOHAMMAD ASGHAR MUGHAL
Staff Engineer, Maintenance
PETROKEMYA
P.O. Box 10002, Jubail 31961
B.E. (ME) NED 79

MOHAMMAD ASHRAF ZIA
Project Engineer
ABWA Co. Ltd.
P.O. Box 10460, Riyadh 11433
Email: ashrafzia76@hotmail.com
B.Sc. (ME) UETL 92

MOHAMMAD FAHEEM WAJID
Construction Manager
Abdullah AlNemshan Contr. Co.
Jubail
Email: fahimwajid@yahoo.com
B.Sc (ME) UETL 97

MOHAMMAD FEROZE ALAM
Mechanical/Piping Engineer - I
Saudi Consolidated Engineering Co. (SCEC)
P.O. Box 1713, Al-Khobar 31952
Email: falam55@yahoo.com
B.E (ME) NED 84

MOHAMMAD IRSHAD
Mechanical Engineer
SABCO
P.O.Box 10011, Jubail,
Email: irshadm@rcjubail.gov.sa
B.E. (ME) NED 69, ME Chicago 80

MOHAMMAD ISHAQUE QAZI
Mechanical Engineer
Int'l Airports Projects, KKIA
P.O. Box 12531, Riyadh 11483
B.Sc. (ME) GCET 62

MOHAMMAD JAMSHAID MEER
Suprv. Proj. Coord. Unit
Saudi Aramco
P.O. Box 13761, Dhahran
Email: mohammad.meer@aramco.com
B.Sc. (ME) UETL 80

MOHAMMAD JUNAID YOUNUS
Field Operations Supervisor
Al - Qahtani Pipe Coating Industries
Al Khalidiah Al shamaliah, Dammam
Email: junaid.y@msn.com
B.E Nanjing U. of Aeronautics & Astro 2016

MOHAMMAD MUDABBIR QURESHI
Service Sales Engineer
Carrier Saudi Service Company
Salah ud Din Ayubi rd, Riyadh
Email: m_mudabbir@hotmail.com
BE Mech, UETL 03, MBA BU Malaysia 09

MOHAMMAD SAEED AKHTAR
Manager Contracts & Procurment
Imad Company
P.O. Box 677, Al-Khobar 31952
Email: saieedakhtar@gmail.com
B.Sc (ME) UETL 74, M.Sc. AIT 77

MOHAMMAD SAGHIR
Executive Manager
Alqan Contracting Est.
P.O. Box 221314, Riyadh
Email: saghir@ea.net.pk
B.Sc. (ME) UC 87, M.Sc Brunel U 00

MOHAMMAD SHAHZEB QURESHI
Mechanical Engineer
Saudi Trading & Research Co. Ltd.
Khobar
Email: shahzeb.qureshi@gmail.com
BE (ME) GIKI 08

Mechanical Engineers

MOHAMMAD SULAIMAN LALA
Mechancial Engineer
Saline Water Conversion Corporation
P.O. Box 5968, Riyadh 11432
B.E (ME) NED 71

MOHAMMAD TARIQ
Sr. Reliability Engr.
Petrokemya
P.O. Box 10002, Jubail
Email: tariqstaa@yahoo.com
B.Sc. (ME) UETL 85

MOHAMMAD TARIQ
Mechanical Engineer
Dar Al-Majd Consulting Engineers
P.O. Box 60212, Riyadh 11545
B.Sc. (ME) MMU 80

MOHAMMAD TARIQ FAQUIH
Operation Engineer
Saudi Electric Company (CRB)
Power Plant No 9, P.O. Box 57, Riyadh 11411
B.E. (ME) NED 76

MOHAMMAD YAQUB
Lecturer
KFUPM
KFUPM Box 767, Dhahran 31261
Email: myrahim@kfupm.edu.sa
B.E. (ME) 84, M.S KFUPM 90

MOHAMMAD YOUNAS
Lecturer ME Dept.
KFUPM
P.O. Box 196, Dhahran 31261
Email: myounasa@kfupm.edu.sa
B.Sc. (ME) UETL 78, M.S KFUPM 84

MOHAMMAD ZAFAR SAGHIR
Senior Engineer
Saudi Electric Company (SEC-COA)
P.O. Box 57, Riyadh 11411
Email: zafar_saghir@hotmail.com
B.E. (ME) MUET 80

MOHAMMAD ZAHID SOHAIL
National Sales Manager
Arabian Auto Agency
P.O. Box 2111, DAMMAM-31451
Email: mzsohail@yahoo.com
B.Sc. (ME) UETL 78

MOHD EIHAB UR RAHMAN KHAN
Assistant Operator
Shandong Electric Power and Construction Corporation
SEPCO III Office, Ras Al-Khair Power Plant, Alkhafji
Email: office@sepco3.com
B.E Nanjing U. of Aeronautics & Astro 2015

MOHIUDDIN AHMED
Lecturer
KFUPM
P.O. Box 102, Dhahran 31261
Email: mohiudin@kfupm.edu.sa
B.Sc. (ME) UETL 80, MS KFUPM 84

MUDASAR ALI
Planning Engineer
Olayan Descon Industries Co. Ltd.
Jubail
Email: mudasar_aquarian@hotmail.com
B.E. (ME) NED 06

MUHAMMAD ADNAN AHMED
Piping Engineer
Wood Group
Al-Khobar
Email: adnan.nedian@gmail.com
B.E. (ME) NED 03

MUHAMMAD AKHTAR
Technical Sales Manager
Thyssenkrupp Saudi Arabia
P.O.Box 1454 Riyadh 11431
Email: akhtarabc@yahoo.com
B.E., UETL 92, M.Sc., UETT 03

MUHAMMAD ASIM BAIG
CEO
Meridian Quality Management
Off. No. 1195, Bldg 574, Road 31, Area Alhamriya, Bal
Email: ceo@meqmp.net
B.E. (ME) NED 95

MUHAMMAD FIAZ
NDT/Welding Specialist
Sadara Chemical Company
Jubail
Email: mfiaz7@yahoo.com
BE UET Lahore 96, ASNT NDT Lvl 3 #190850

MUHAMMAD HASSAN KAMAL
Piping Engineer
JGC Gulf International
P.O. Box 2257 Al-Khobar 31952
Email: hkamal68@gmail.com
BE (ME) NUST 05

Mechanical Engineers

MUHAMMAD HASSAN KAMAL

Piping Stress Analysis Engr,
JGC Gulf International Ltd
P.O. Box 2257 Al-Khobar 31952
Email: hkamal68@gmail.com
B.E. (ME) NUST 05

MUHAMMAD NASRULLAH

QAQC MANAGER CORPORATE
OLAYAN DESCON IND. CO. LTD.
JUBAIL
Email: mnasrullah@olayandescon.com
B.Sc UET Lahore 99

MUHAMMAD RAZA CHEEMA

Design Engineer
Zamil Industrial
Alkhobar
Email: mrcheema@live.com
BSc UET 2009, MSc UET 2014

MUHAMMAD TALHA

Planning Engineer
Sinsina Corner Company
Yanbu
Email: talha0321@hotmail.com
B.Sc UET Lahore 16

NADEEM UZ ZAFAR KHAN

Project Engineer
SABIC
Jubail
Email: khannz@sabic.com
B.E. (ME) NED 91

NAVEED IQBAL QURESHI

Mechanical Engineer
Ministry of Defense and Aviation
P.O. Box 58303, Riyadh 11594
B.Sc. (ME) UETL 84

NISHAT AHMAD

Manager Business Development
Sin Sina Corner Co.
PO Box 1050, Jubail 31951, Jubail
Email: nishat.ahmad@alsinsina.com
B.Sc. (ME) UETL 99, MBA IUBWP 05

PIR ABDUL MAJID

Sales Engineer
Arabian Auto Agency
PO Box 2111, Dammam 31451
Email: peerabadi@yahoo.com
B.Sc. (EE) NWFP UET 04

MUHAMMAD MUNIR BAIG

Sr. Mechanical Engineer
Aljazira Engg & Consultants
PO Box 17919, Riyadh 11494
Email: munir.baig9@gmail.com
B.Sc. (ME) UEL 71

MUHAMMAD PERVAIZ HAMAYOUN

Commercial Manager
Olayan Descon Engg Co.
P.O. Box 10108, Jubail Industrial City 31961
Email: mphamayoun@olayandescon.com
B.Sc. (ME) UETL 96, MBA LUMS 00

MUHAMMAD TAHIR

Senior Trainer
Dairy & Food Polytechnic
P.O.Box 52, Alkharj 11492
Email: tahir_eng88@yahoo.com
Btech ME, Indus Uni 11

MUHAMMAD WAQAS AHMED

Maintenance Engineer
Saudi Arabian Fertilizer Company (SAFCO)
P.O. Box 11044, Al-Jubail 31961
Email: waqas.malik@gmail.com
B.Sc. (ME) GIKI 05

NAJIB REHMAN

Head Mechancial Dept.
Zuhair Fayez Partnership
P.O. Box 5445, Jeddah 21422
Email: najibrehman@yahoo.com
B.E. (ME) NED 80

NISAR AHMAD ATTA

Mehanical Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
B.Sc.(ME) UET 78, M.Sc.(ME) 98

PERVAIZ AKBAR

General Manager - Plant Services
Abdullah A. Al-Barrak & Sons Co.
Jubail
Email: pakbar@abis.com.sa
B.Sc. (ME) UETL, 75

QAISAR ABBAS

Design Engineer III
FLUOR ARABIA LIMITED
Email: qaisar.ali@fluor.com
B.E UET Taxila 2003

Mechanical Engineers

RAFIQ AHMED LAGRIAL

Jubail Area Manager
Ground Engineering Contractors
P.O. Box 1053, Al-Khobar 31952
Email: gec@zajil.net
B.E. (Mech) NED 94

RAHEEL AQEEL QURESHI

Area Manager
XYLEM
Riyadh, KSA
Email: raheelaqeel@gmail.com
B.Sc. (ME) UETL 07

RAJA RIZWAN IMTIAZ

Sr. Reliability Engineer
Petrokemya
P.O. Box 10002, Jubail
Email: imtiazrr@petrokemya.sabic.com
B.Sc. (ME) NWFP UET 88

RAO ABID IKHTIAR

Project Engineer
Petrofac Saudi Arabia Ltd.
Al Khobar 31952,
Email: rabidrao@yahoo.co.uk
B.Sc. (ME) UETL 02

REHAN NOOR KHAN

Lecturer
Immam AbdulRahman Bin Faisal University
PO Box 2397, Dammam 31451
Email: rehannoor@gmail.com
BSc UETL 78, MSc KFUPM 82

REHMAT ALI

Executive Manager
Hajaris Genral Contracting Est.
Al-Baha Trading Building, Jiddah Street, Jubail
Email: rali@hajaris.com
B.Tech (ME) UETL 99

RIZWAN KHAN

Mechanical Engineer
Banderyah Commercial Center
Alkhobar
Email: rizwankhan170@gmail.com
B.E NED 14

RIZWAN ZAFAR SIDDIQUI

Production Engineer
Al-Tuwairqi Group
PO Box 1323, Damamm
Email: rzs_786@hotmail.com
B.Sc. (ME) UETL 05

S. ABID HUSSAIN

Product & System Supp. Manager
Arabian Airconditioning Co. (Carrier)
P.O. Box 690, Riyadh 31932
Email: abid.hussain@carriersaudi.com
B.E. (ME) NED 89

SAIF UR REHMAN

Sales Manager CCR
Arabian Air Conditioning Co. (Carrier)
P.O. Box 9784, Riyadh 11423
Email: saif.rehman@carriersaudi.com
B.E. (ME) NED 90, MBA (Mar) PUK 97

SAIFULLAH SALEEM

CEO
Powerex International (Pvt) Ltd.
P.O. Box 221481, Riyadh 11311
Email: powerexksa@hotmail.com
B.Sc. (ME) UETL 91

SAJID BALOCH

Equipment Maint. Div Head
Olayan Descon
Jubail
B.E UET Lahore 2004

SAMI UDDIN CHUGHTAI

Operations Manager
Gulf Consolidated Contractor Co.Ltd
.
Al-Khobar
Email: samipk003@yahoo.com
B.Sc. (ME) UETL 91

SAQIB NAZIR

Production Engineer
Olayan Descon Engineering Co. Jubail,KSA
P.O Box 10108,Jubail 31961KSA
Email: saqibnazir21@hotmail.com
B.Sc. (ME) NWFP UET 03

SARFRAZ AHMAD MALIK

Maint. Trg. Coordinator
PETROKEMYA
P.O. Box 10002, Jubail 31961
B.Sc. (ME) UETL 79

SHABBIR AHMED SIDDIQUI

Senior Mechanical Engineer
Saudconsult
P.O. Box 2341, Riyadh 11451
Email: shabbir_ahmed74@hotmail.com
B.E. (M) NED 75

Mechanical Engineers

SHAHEER AZAM

Technical Coordinator
MAAZ
B.Sc UET Lahore 16

SHAHER YAR

Project Control Engineer
Sinsina Corner Company
Makkah St, Jubail 35514
Email: ucetbzu81@gmail.com
B.Sc Bahauddin Zakariya U. Multan 15

SHAHID MASOOD

Mechanical Designer
Al-Hugayet Est
c/o Aramco, So. Area Design Service Dept., Abqaiq
Email: shahid_masood@hotmail.com
B.Sc. (ME) UETL 94

SHAHZAD AHMAD NAEEM

Vendor Inspection
AMO & Partner Engg. Co.
Khobar
Email: sanaeem@gmail.com
B.Sc. (ME) UETL 02

SHAKOOR ALAM

Operations Manager
Ground Engineering Contractors
P.O. Box 2870, Al-Khobar 31952
Email: gec@zajil.net
B.Sc. (ME) UETL 89

SHAMEEM AHMAD

Sr. Power Engineer
Saline Water Conversion Corporation
P.O. Box 8068, Jubail 31951
Email: shamim91@yahoo.com
B.E. (M) NED 77

SHAMIM UDDIN

Chief Mechanical Engineer
Rashid Engineering
P.O. Box 4354, Riyadh 11491
Email: shamim_uddin@yahoo.com
B.E. (ME) NED 72

SHAMS-UR-REHMAN

Technical Manager
Hydro Power Support Est.
P.O. Box 86658 Dammam 31452
Email: engrshamss@hotmail.com
B.Sc. (ME) NWFPUET 99

SHAUKAT PERVAIZ

Division Manager Mech.
Dunya Establishment.
P.O. Box 2483, Riyadh 11451
Email: shaukat36@hotmail.com
B.Sc. (ME) UETL 89

SHEIKH MUHAMMAD IRSHAD SHAMI

Project Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha,
B.E. (ME) UET 91

SHIEKH NISAR MUHAMMAD

Project Engineer
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
Email: snisar50@hotmail.com
B.E. (ME) NED 75

SUHAIB AHMED KHAN

Senior Maintenance Engineer
Al Kuhaimi Metal Industries Ltd.
Prince Sultan St #15, Alkhobar
Email: suhaib_khan24@yahoo.com
B.E Nanjing U. of Aeronautics & Astro 2016

SYED AHMED MAHMOOD

Senior Mechanical Engineer
Arabian BEMCO
Jeddah
B.E. (ME) NED 75

SYED ALI ABID

Sales Engineer
Arabian Air Conditioning Co.
P.O. Box 9784, Riyadh 11423
B.E. (ME) BUET Khuzdar 98

SYED ARSHAD RAZA

Assistant Professor
Imam Abdulrahman Bin Faisal University
Rakah Alshimaliah
Email: saraza@iau.edu.sa
BE NED Kar 97, MSc ICS KFUPM 01, PhD MIS
Edith Cowan University, Australia 12

SYED ASIM ATHAR

Project Engineer
Jana Chemical Industries, Jubail
Jubail Ind City 31961,
Email: a_athar@hotmail.com
B.Sc. (ME) UETL 1993

Mechanical Engineers

SYED EHTESHAM AZHAR

Service Manager
Demag cranes & components
P.O.Box 31235 Al Khobar
Email: ehtesham35@gmail.com
B.Sc. (ME) UETL 97

SYED KAFIL AHMED HASHMI

Superintendent Transportation
Saudi Cement Com.
P.O. Box 3394, Dammam 31471
Email: kafil_hashmi@hotmail.com
B.E. (ME), NED 74

SYED KHALID UMER

PROJECT DIRECTOR
ALMARASIM GATE CONT&TRAD
P.O. Box 16558, Riyadh 11471
Email: khalidumer2002@yahoo.com
B.E. (ME) NED 76

SYED KHURRAM AHMED

Lead Project Engineer
Saudi Aramco
Hayi AlJohra Al Jubail City
Email: syed.ahmad31@aramco.com
B.E. (ME) NED 00

SYED MANZAR HASNAIN

Senior Mechanical Engineer
Dar Al-Majd Consulting Engineers
P.O. Box 60212, Riyadh 11545
B.E. (ME) NED 78

SYED MOHAMMAD ZUBAIR

Professor, ME Dept.
KFUPM
P.O. Box 1474, Dhahran 31261
Email: smzubair@kfupm.edu.sa
B.Sc. (ME) UETL 78, M.E KFUPM 80, Ph.D GT 85

SYED MUHAMMAD PERVEZ

HVAC Enigineer (Design)
Saudi Consulting Services
Malaz, Riyadh, KSA
Email: engr_smp@yahoo.ca
B.E. (ME) NED 98

SYED NASIR UDDIN

Technical Support Manager
Gulf Elevators and Escalators Co Ltd
Riyadh
B.E. (ME) Mehran UET Hyderabad 95

SYED SAFDAR RAZA NAQVI

MESC Engineer (Mechanical)
Saline Water Conv. Corp. (SWCC)
P.O. Box 60889, Riyadh 11555
Email: swccnaqvi@hotmail.com
B.E. (ME) NED 83

SYED SAJID HUSSAIN

Mechanical Engineer
Saudi Oger
P.O. Box 1938, Riyadh 11441
B.E.(ME) NED 85

SYED SHAHANSHAH HUSSAIN

Contract Management Specialist
China National Petroleum Corporation
Email: hussain-bukhari@hotmail.com
B.Sc Swinburne U. of Technology Australia 12

SYED WALIULLAH HUSAINI

Procurement Manager
Arabian Bemco
P.O. Box 3143, Jeddah 21471
B.E.(ME) NED 72

SYED ZIKRUR REHMAN

Research Assistant
King Saud University
P.O. Box 800, Riyadh 11421
Email: szrehman@ksu.edu.sa
B.E.(ME) NED 83, M.E UOD 88

TAHIR RASHID KHAN

Mechanical Enginner
Eastern Petrochemical Co.
P.O. Box 10035, Jubail 31961
B.Sc (ME) UETL 78

TAHSEEN AHMED QAZI

Production Manager
META Switchgear Co
P.O.Box 355988, Riyadh-11383
Email: tahseenqazi@gmail.com
BE Mech NED 92, MS Env NED 04

TARIQ BIN ZAFAR

Chairman
MAAZ Inspection/Testing/Training
P.O. Box 31172, Alkhobar 31952
Email: tariqalhussaini@gmail.com
B.E. (ME), NED. 76

Mechanical Engineers

TARIQ JAVED

General Manager B2B Sales
Petromin Corporation
Jeddah
Email: tjaved@petromin.com
B.Sc. (ME) UETTaxila 03, MBA UoT Canada

UMER AHSAN

Mechanical Inspection Engr.
Al-Azzaz
P.O.BOX 31172 KHOBAR 31952
Email: umar@maaz.com.sa
B.E. (ME) UETL 10

USAMA BIN AHMED

Senior Schedule Controller
JGC Gulf International Pvt Ltd
Al Khobar
Email: engr.usama@hotmail.com
BE NED Kar 08

USMAN AHMAD

Production Manager
M/S Al-Shahrani Factory/MOTS
P.O. Box 8620, Riyadh 11632
Email: usman@mots.com.sa
B.Sc. (ME) UETL 07

USMAN WAHEED ASLAM

Associate Consultant
StretigicGears Management Consulting
KFUPM Box 557 Dhahran 31261
Email: usmanwaheed98@gmail.com
BS KFUPM, Dhahran 20

WAMIQ AL-HUSSAINI

Inspector
RICI-MAAZ
BE PNEC-NUST 17

WAQAR AZEEM

Project Control Specialist
Fluor Arabia Limited, Jubail
B.E UET Lahore 2007

WARIS ALI

Estimation Engineer
Sinsina Corner Co.
PO Box 1050, Jubail 31951
B.Sc. (ME) UETL 05

YASIR IRSHAD

Engineer
Olayan Descon Industrial Company Ltd.
P.O. Box. 10108, Jubail 31961
Email: nust_yasir@hotmail.com
B.E. (ME) NUST 06

YASIR MAZHAR

Sr. Executive Engineer
S&A Abahsain Co. Ltd.
P.O. Box 11766, Jubail
Email: yasir_mazhar@yahoo.com
B.E. (ME) NED 94

ZAFAR AHMED TALPUR

President
Al-Hamrani - Fuchs Petroleum Ltd.
P.O. Box 7103, Jeddah 21462
Email: ztalpur@fuchs.com.sa
B.Sc. (ME) UETL 66

ZAHEER AHMED

Manager Marketing
HAJARIS Gen Cont
PO Box 101018, Jubail City, 31961
Email: zaheer@hajarais.com
B.Sc. (ME) RFU 81, M.Sc. (ME) RFU 83

ZAHEER UDDIN AHMAD

Director
Saudi Plastic Factory
P.O. Box 759, Riyadh 11421
B.Sc (ME) UETL 76

ZAMAN TALIB

Mechanical Engineer
Ulaish, Riyadh
Riyadh
Email: zamantalib31@gmail.com
B.Sc Mech Comsats Sahiwal 19

ZUBAIR AKHTAR

Senior Mechanical Engineer
SWCC
P.O. Box 5968, Riyadh 11432
B.E. (ME) NED 76

ZULFIQAR AHMED KHAN

National Parts Manager
ROLACO Automotive
Dammam
Email: szak_khan@hotmail.com
B.Sc. (ME) UETL 91, MBA Preston U 98

Mechanical Engineers

ABDUL RAHEEM MEMON

Sr. Procurement QA/QC Supervisor
ARKAD Engg & Construction Co.
Alkhobar, Dammam
Email: abdulraheem_44@yahoo.com
BE, Mehran UET, Jamshoro 07

ABDUL RAZZAQ

Manager Refractories
Al-Tuwarqi National Steel Dammam
Industrial Area 2
B.Sc. (MET) UETL 88

ATEEQ UR REHMAN KAILANI

Executive Manager
Paradise Import Export Company
P.O. Box 220702, Riyadh 11311
Email: kailani@hotmail.com
B.Sc. (MET) UETL 86

AZIZ ULLAH KHAN___

Branch Manager
Arab Inspection Company
P.O. Box 3306 Dammam 31471
Email: aziz_inspection@yahoo.com
B.E. (MET) NED 78

DAUD TAHIR

NDT INSPECTOR
RICI MAAZ
DAMMAM
B.Sc UET Lahore 13

FAWWAD ALI BHATTI

Area Manager
Petromin
PO Box 1323, Dammam
Email: fawwad.bhatti@petromin.com
B.E. (MET) DCET 04, ME (MET) NED 09

FAZAL-UR-REHMAN AWAN

Staff Scientist
Sabic Research & Technology
P.O. Box 11669, Jubail 31961
B.E. (MET) NED 83, Ph.D (MET) IC UK 94, MBA IB

HASEEB AHMED

Sr. QA/QC Engr.
Olayan Descon Industrial Company Ltd.
P.O. Box. 10108, Jubail 31961
Email: haseebahm@gmail.com
B.Sc. (MET) UETL 07

KHURRAM SHAHZAD

Manager QA/QC
GCC-Gulf Consolidated Contractors Company
PO. 895 -Dammam-31421
Email: khurram0723@gmail.com
B.Sc Inst Of chemical Engg. Lhr 99, TQM Inst Of chem
Lhr 04

KHURRAM SHAHZAD

QA/QC Manager
Gulf Consolidated Contractors Co
Rakkah Dammam 31421
Email: khurram0723@gmail.com
B.Sc. (MET) ICET PU 99

MUHAMMAD HASNAIN JAMIL

Asst Manager
V-Line Saudi Arabia Ltd.
Jubail
Email: hasnain@v-line.com
B.Sc. (MET) GIKI 07

MUHAMMAD NAEEM

Production Engineer
Al-tuwairqi Group of Companies
P O Box 2705 Dammam 31461
Email: mnbasra@yahoo.com
B.E Metallurgy, Dawood College 05

MUHAMMAD SALMAN

Production Engineer EAF
Altuwairqi group
Al Khobar shumaliya
Email: salmanbutt84@gmail.com
B.Sc U. of Punjab Lhr 08

SAKANDAR HAYAAT

Sr Project Engineer
Titanium & Steel Mfg Company
Khobar
B.Sc. (MET) ICET UP 05

SYED FAHEEM AHMAD ZAIDI

QA/QC Engineer
RICI MAAZ
Email: faheem.ahmed@maaz.com.sa
BE UET Lahore 07

SYED M. JAMIL-UL-HAQUE

Researcher
SABIC
PO Box 1169, Jubail 31961
Email: jamilsh@sabic.com
B.E. (MET) NED 78

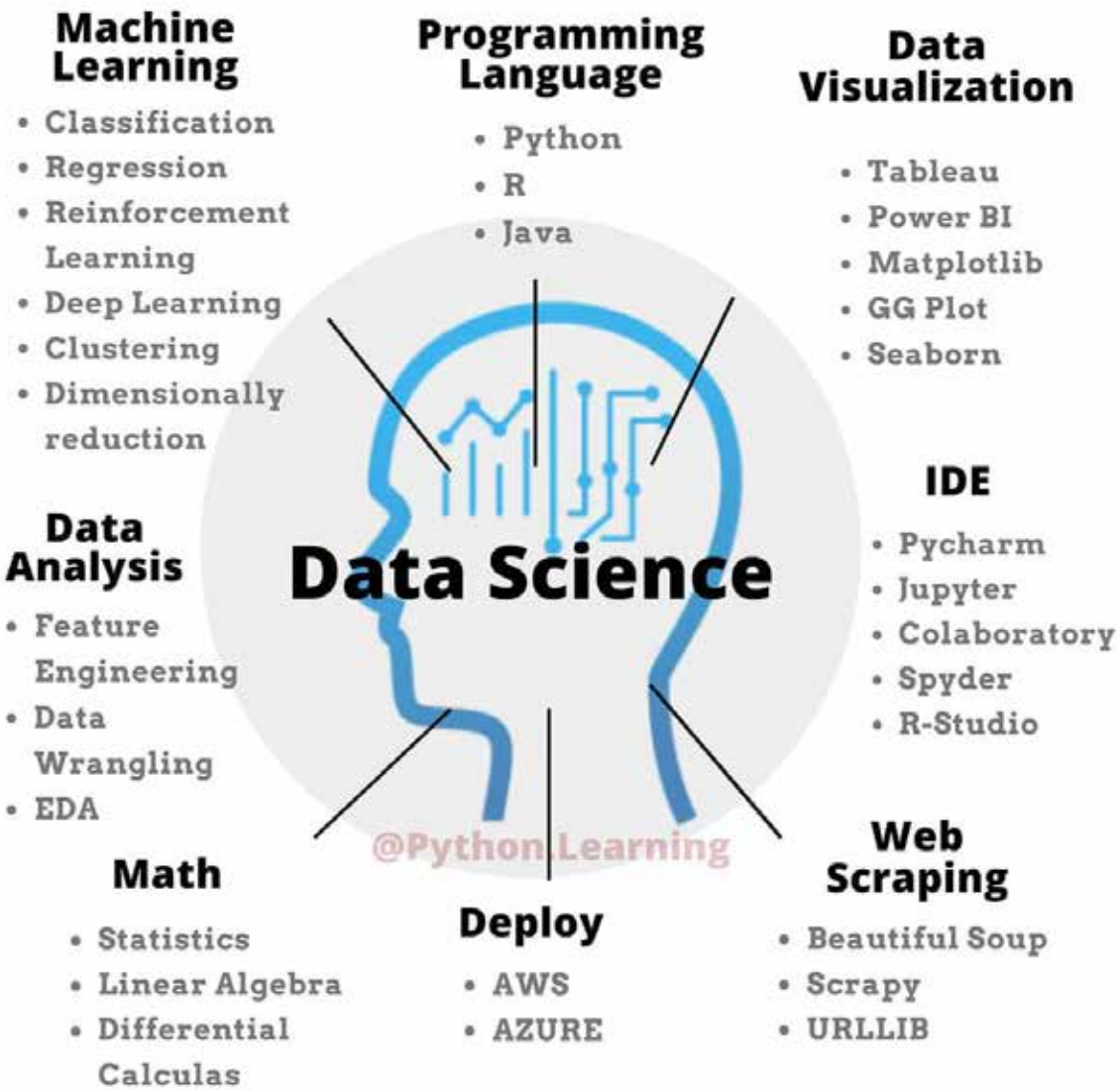
Mechanical Engineers

TAJAMMAL HUSSAIN
Assistant Manager (Shift)
National Steel Co.
P.O. Box 7922, Dammam 31472
B.Sc. (MET) PU 94

TARIQ AHMED SHEIKH
Senior Engr/Gas Turbine spcl.
Saudi Electric Company SEC-SOA
P.O. Box 616, Abha
Email: tariq52a@hotmail.com
B.Sc. (MET) UET 84, M.Sc. (MET) USD USA 92

TARIQ MEHMOOD
Senior Researcher (RP)
SABIC (Research & Technology)
PO Box 11669, Jubail City
Email: mehmoodtq@sabic.com
B.E. (MET) NED 79

ZAFAR IQBAL
Production engineer EAF
Altuwairqi group Arab steel
Al Khobar shumalia
Email: zafar35met@gmail.com
B.Sc Chemical Engg U. of Punjab 09



Engineers from **Other disciplines**

ABDUL AZIZ SAQIB

Sr. Staff Telecom. Advisor
Royal Saudi Air Force
P.O. Box 59742, Riyadh 11535
B.E. (Aero) NED 77, M.A.(Economics) KU PK

ABID ALI

Senior RF Optimization Engineer
Saudi Networker Services
Nuzha District,Riyadh
Email: abidaliuet@gmail.com
b. Sc. Telecommunication, UET KPK 2008

AHMAD NAEEM

Costing & Planning Engr.
Sinsina Corner Co.
PO Box 1050, Jubail 31951
Email: anaeem@alsinsina.com
B.Sc. (Mechatronics) UETL 04

AHMAR SHAFI

Director Telecomm. Dept.
KFUPM
KFUPM
Email: ahmar@kfupm.edu.sa
B.E. (EE) NED 97, MS KFUPM 99

AHMED TAHIR

Planning Engineer Jr.
GCC-Gulf Consolidated Contractors Company
GCC COMPP Office, Abqaiq
Email: ahmed.tahir.mughal@hotmail.com
B.Sc UET Lahore 19

AKBAR ALI

Project & Turnaround Engineer
YASREF, Yanbu
Email: akbar.nus@gmail.com
B.E. NED 06, M.Sc. NU SPR 09

BILAL WAHEED ASLAM

Consultant
Ellixer Management Consulting
KFUPM Box 557 Dhahran 31261
Email: bilal.w@elixir.com.sa
BS KFUPM, Dhahran 15

FAHAD MAHBOOB

Technical Support Manager
PELCO
Riyadh
Email: eng_fahad_mahboob@hotmail.com
B.E. (ES Opt Comm) GIKI 02

FARHAN AHMED

Email: farhan_1232@hotmail.com
B.E. Petroleum, NED 13

HAFIZ IMDADULLAH

Expediting Engineer
Snamprogetti Saudi Arabia
AL-HUGAYET TOWER, AL-KHOBAR 31952
Email: hafiz.engineer@hotmail.com
B.Sc. (Petr) UETL 07

HAROON HAIDER KHAN

Manager Business Dev
Alsanad Co. Ltd
PO Box 1834, Al-Khobar 31952
B.E. (Mechatronics) NUST 02

IFTIKHAR ALI

Telecom Engr
Saudi Consulting Services
Email: iffi.ali.pak@gmail.com
BE Telecom, Air Univ, ISB 09

IFTIKHAR NADEEM

Advisor, Information Tech.
KFUPM
P.O. Box 531, Dhahran 31261
Email: ifti@kfupm.edu.sa
M.Sc. (Sys E) KFUPM 92

IMRAN KHAN MALIK

Planning Engineer
Olayandescon
Jubail
Email: engr_malik01@yahoo.com
B.E. (Ind.E)) MUET Jam 03

KAFEEL AMEEN KHAWAJA, DR.

Production Engineer
Turky Trading & Contracting Ltd.
P.O. Box 31269, Al-Khobar 31952
Email: kafeel.khawaja@talk21.com
B.E. KCL 97, M.Sc KCL 98, PhD 05

KHURRAM SHEHZAD

Sr. Geotechnical Engineer
Ground Engineering Contractors (GEC)
P.O.Box 1053, AlKhobar- 31952
Email: gec-kho@gecsaudi.com
B.Sc Asian Inst. Thailand 08, M.Sc U of Alberta, Can 1

Engineers from **Other disciplines**

MAAZ SHOAIB

MAQBOOL HUSSAIN

Environmental Engineer
Saudi Consulting Services
P.O. Box 2341, Riyadh 11451
Email: maqboolsa@yahoo.com
M.Sc. (Env E) MSU98, M.Sc (Chem) QAU 92

MAZHAR MUZAFFAR

SMT Engineer
Comptel
Mursalat Compound, Riyadh
Email: mazharshariq@hotmail.com
B.Sc (CS), NICE U, Karachi 00

MOHAMMAD ARSALAN JAWED

Industrial Engineer
Saudi Readymix Concrete Company
Al Bandariyah, P.O. Box 31839, Al Khobar 31952
Email: arsalanjawed45@gmail.com
BE PNEC, NUST (Karachi) 15

MOHAMMAD AZAM RANDHAWA

MOHAMMAD JAMAL-UD-DIN

I&C Engineer
'Weatherford
Email: jamal.mct@gmail.com
B.Sc.(Mechatronics) UETL 08

MOHAMMAD OMAR BAIG

Calibration Engineer
Muhammad Abdullah Al Azzaz
Alkhobar
Email: omerbaig2009@gmail.com
BE Industrial Engg, U of Mgmt & Tech 15

MOHAMMAD USMAN LATIF

Sales Director
SIEMENS
PO Box 719, Khobar 31952
Email: usman.latif@gmail.com
B.E. (Ind. E) NED 98

MOHAMMED ZIAUL ISLAM

Training Specialist
JV of SABIC & Mitsubishi
Jubail 31961
Email: islammz@gas.sabic.com
B.Sc. (Ind. Eng) MEU 77

MUDASSAR YASIN SIDDIQI

Project Manager-II
STC Solution
Riyadh
Email: mudassar_wac@hotmail.com
B.E. AIOU 06

MUHAMMAD ASIF

Manager, SLA & Reporting
STC Solutions
Hanafi Street, Ishbiliyah, Riyadh
Email: asif.arshed@gmail.com
BE Telecom, AIOU 2007, MBA Virtual Univ 2016

MUHAMMAD ASLAM BROHI

Construction Engineer
AETCON
P.O.Box 250974, Riyadh 11391
Email: aslambrohi@hotmail.com
B.E. (Ind) MUET 93

MUHAMMAD AZMAT

Technical Specialist
STC
Email: Engineer_azmat@hotmail.com
BE Mechatronics, UET Lahore 2004

MUHAMMAD BILAL AHMAD

Senior Engineer, Q & I
Ghazlan Power Plant, Rahima, Ras Tanura
Email: 91602@se.com.sa
BSIE, Adamson U 95, MSME, U of ST, Philippines 97

MUHAMMAD DANISH FARAZ

Procurement Engineer
Olayan Descon Industrial Company Ltd.
P.O. Box. 10108, Jubail 31961
Email: engr.danish@hotmail.com
B.E. (Ind.E) DCET 07

MUHAMMAD IRFAN SULEMAN

Lead Auditor & Trainer
Bureau Veritas
Al Khobar
Email: misulemanmeo@gmail.com
BE Environmental, UETL 09

Engineers from **Other disciplines**

MUHAMMAD JAWAD ALI
Technical Manager (Metrology Div)
M. A. Al Azzaz Co.
P.O.Box 31172, Alkhobar
Email: jawadali29@hotmail.com
BSc Industrial & Manufacturing, UET Lahore 06, MBA 10

MUHAMMAD SHAKIL
Project Engineer
SIEMENS
Al-Rajhi Tower 7th fl Dammam-Khobar Highway
Email: muhammad.shakil@gmail.com
B.E. NED 01, M.Sc. KFUPM

NOMAN ULLAH
Master Student
KFUPM
KFUPM Student residence
Email: nomanullah786@yahoo.com
BE I&ME NUST 14

SAAD MEHMOOD SIDDIQUI
QA & QC Engineer
Obeikan Technical Fabrics
Industrial City , Riyadh
Email: sms6683@gmail.com
B.Sc. (Textile Engg) TIP 07

SOHAIB ZAMAN KHAN
Project Engineer
Yokogawa Saudi Arabia Co.
PO BOX 3368, Al-Khobar 31952
Email: suhaibzamank@hotmail.com
B.S. (Mechatronics) UETL 04

SYED HARIS ALI
Planning Engineer
Olayan Descon Industrial Co.
Jubail, KSA
Email: sharisalis@hotmail.com
B.E. DCET 06

TARIQ SHAHZAD ALI AHMED
Manager Operations
Al-Shareef Factory for Cartoon Containers
Rabwa, Riyadh
B.Sc. (Ind. Engg) UETL 03

UMAR MUNIR
S&S Engineer
TIG-TESCO
Khobar
Email: engr.umer@tig-tesco.com
B.E. (Mechatronics) AIRU 08

MUHAMMAD NAVEED FARUQUI
Manager Plant and Equipment
AETCON
Riyadh
Email: naveedfaruqui37@gmail.com
B.E. NED 96

NADEEM RAHIM BAKHSH
Urban Planner
Saudconsult
Hara, Riyadh
Email: nadeembaksh@yahoo.com
BSc City Plan. 00, MSc 02, UETL

RIAZ UL HAQ
Mechanical Engineer
JACOBS ZATE Engineering Consultant
AlJubail
Email: engr_riaz26@yahoo.com
B.E Industrial Dawood Univ Karachi 2010

SAHER AFTAB AHMED
Email: saher_aftab2006@hotmail.com
BS Textile Engg 15

SUMIYA EBRAHIM
Email: sumaiyachotani@gmail.com
BCIT NED Kar 15

TARIQ HUSSAIN YOUSAF ALI
Riyadh
Email: tariq.hussain16@gmail.com
BE EE, UET Lahore 2007

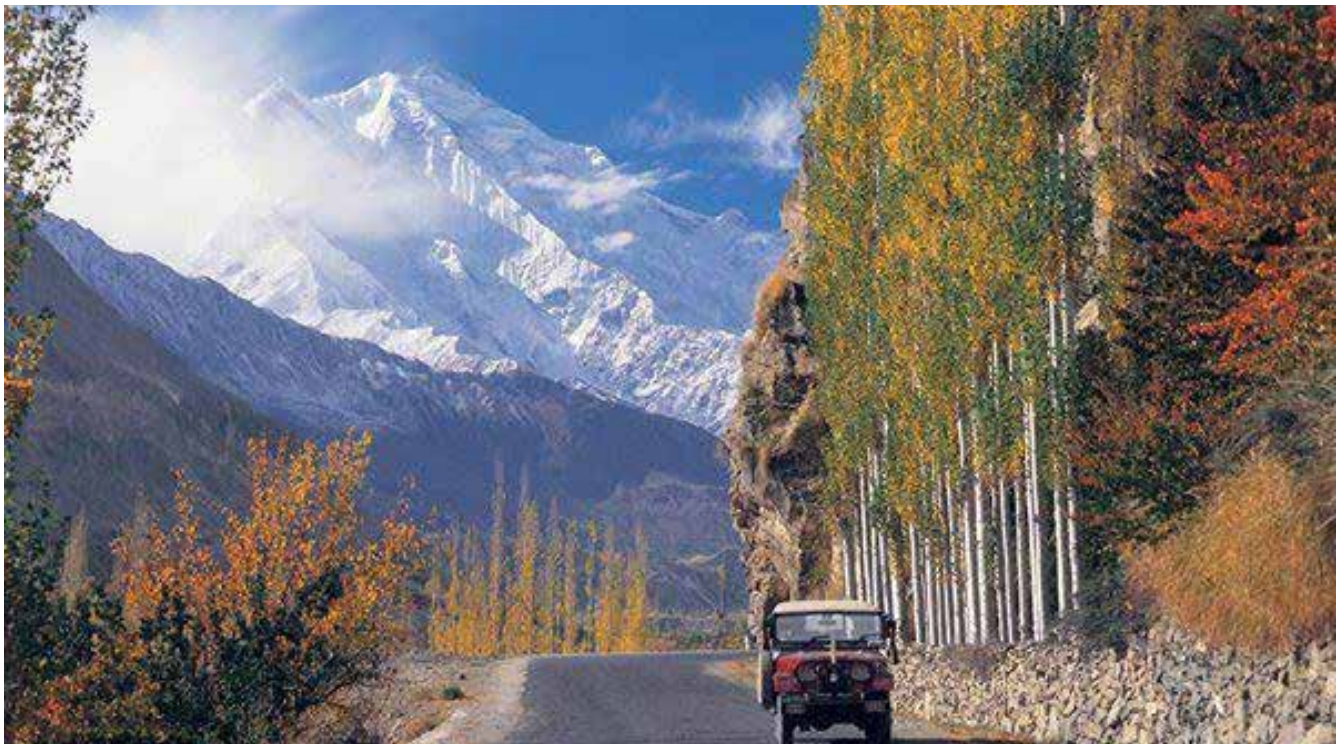
TAZIM HUSSAIN KAZMI
Instructor
General Authority of Civil Aviation (GACA)
P.O. Box: 15441, Jeddah 21444
Email: tazimkazmi@yahoo.com
B.E. (Avionics) PAF KU 71, MBA USA 97

USAMA BIN WASEEM
Operational Analyst
Muhammad Abdullah Al Azzaz
Dammam
Email: usamawaseem23@gmail.com
BE Petroleum, UET Lahore 14

Engineers from **Other disciplines**

USAMAH BIN TARIQ
System Engineer
Ather Telecom
Olaya
Email: usamah.bin.tariq@gmail.com
B.Sc. (TELCOM) MAJU 10

WAQAR AHMAD
ISP Engineer
Nokia Solutions & Networks (NSN)
Tatweer Towers B2, P.O. Box 340, Riyadh 11351
Email: waqar_ahmad@hotmail.com
B.Sc (CS), Preston U 06



Visit your dreamland Northern areas of Pakistan

The Institution of Engineers, Pakistan

HQ Office, Engineering Centre, Liberty Roundabout, Main Boulevard., Gulberg III, Lahore 54000.
Ph: 042 – 35754043 / 35750699 Email: iephqr@gmail.com

(www.iep.com.pk)

Affix latest passport size photograph

1. Name in Full in Block Letters
2. Father's Name
3. NIC Number _____-_____-_____
4. Date of Birth _____-_____-_____
5. Permanent Address _____
6. Present / Postal Address _____
7. Telephone Number Office _____ Residence _____
   Mobile _____ Email _____
8. Basic Education _____
   Certificate/Degree Obtained _____ Year _____
   College / University _____
9. Engineering Education _____
   Degree Obtained _____ Year _____
   College / University _____
10. Post-Graduate Education _____
    Degree Obtained _____ Year _____
    College & University _____
11. Professional Training & _____
    Names of Organizations _____
    where Obtained _____
12. Membership (s) of other _____
    Professional Bodies, If Any _____
    _____
13. Practical Experience:

Sr. No.	ORGANIZATION	POSITION HELD	FROM	TO	Total Years
1.					
2.					
3.					
4.					
5.					

PLEASE ATTACH A COPY OF DETAILED BIO-DATA

14. Class of membership in which admission is sought

☐ Chartered Engineers ☐ Fellow ☐ Member ☐ Associate ☐ Affiliate ☐ Subscriber

Current Membership Number _____

PEC Registration Number _____

_____
Applicant's Signature

Proposer's Name (in block letters)	Signature	Date	Class of Membership

Seconder's Name (in block letters)			

Grade of Membership General Requirements	Transfer Fee Fellow to Chartered Engineer	Age (Minimum) Years	Entrance Fee	Transfer Fee Member to Fellow	Life Fee	Life Membership fee for Pakistan Engineer Readers Club	Annual Sub-Scription	Diploma / Certificate Fee	Total
	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. **Chartered Engineer** (A) Must be a Fellow of IEP (B) Must be holding, or must have held in the past, positions of high responsibility in the Engineering profession, for a minimum of 20 years.	--	45	--	--	2000/-	1500/-	--	200/-	3700/-
2. **Fellow** Must have all the qualifications of a Member and must be holding or must have held, in the past, position(s) of high responsibility in the Engineering profession for a minimum of 10 years. The applicant must have at least one technical paper (published in a journal of repute) to his credit. *Please enclose four hard copies and one soft copy of the technical paper for IEP's record.*		40	--	1000/-	2000/-	1500/-	--	150/-	4650/-
3. **Member** Must be in possession of: (A) Section A & B of IE (Pak), or (B) Degree in Engineering from any recognized University, or (C) Any other qualifications exempting the applicant from the above.		21	150/- 150/-	--	-- 1100/-	1500/- 1500/-	100/- --	100/- 100/-	1850/- 2850/-
4. **Affiliate** Must be an engineer, or a person, or a body of persons not belonging to other categories of corporate membership, whose interests are related to engineering profession by virtue of his/her occupation.		25			2000/-	1500/-	--	150/-	3650/-
5. **Subscriber** Any Business Enterprise, Company, Government Department, Registered Film or individual not eligible for Fellow, Membership, Affiliate Membership or students Membership who wishes to be so attached with IEP.		30 (For Individual)	--	--	5000/-	1500/-	--	150/-	6650/-

N.B.: 1. Proposer & Seconder must be Corporate Members of IEP.

2. This Application Form must be properly filled in and signed by the applicant, proposer and seconders & submitted to the H.Q. Office through the Local Centre concerned, together with attested copies of the Matriculation Certificate, Engineering Degree & CNIC Copy.

3. Please enclose a bank draft or crossed cheque in favor of IEP HQ for:
   a) Life Membership Fee
   b) Subscription for IEP Journal "The Pakistan Engineer"
   c) Fee for Life Membership of Readers Club to receive monthly Journal of IEP as and when published.
   d) Diploma Fee

4. When applying for fellowship of I.E.P. please quote current Membership Number.

5. Only Members of IEP are eligible for Fellow Membership.

If the applicant is not already a member of the Readers' Club.

Quaid Quotes

• The constitution of Pakistan has yet to be framed by the Pakistan Constituent Assembly. I do not know what the ultimate shape of this constitution is going to be, but I am sure that it will be of a democratic type, embodying the essential principle of Islam. Today, they are as applicable in actual life as they were 1,300 years ago. Islam and its idealism have taught us democracy. It has taught equality of man, justice and fairplay to everybody. We are the inheritors of these glorious traditions and are fully alive to our responsibilities and obligations as framers of the future constitution of Pakistan. In any case Pakistan is not going to be a theocratic State to be ruled by priests with a divine mission. We have many non-Muslims — Hindus, Christians, and Parsis — but they are all Pakistanis. They will enjoy the same rights and privileges as any other citizens and will play their rightful part in the affairs of Pakistan.

(Broadcast to the people of the United States of America on Pakistan, February 1948)

• You are free to go to your temples, you are free to go to your mosques or to any other place of worship in this State of Pakistan. You may belong to any religion or caste or creed. That has nothing to do with the business of the State.

(Presidential address to the first Constituent Assembly of Pakistan, Karachi, 11 August 1947)

• I have one underlying principle in mind: the principle of Muslim democracy. It is my belief that our salvation lies in following the golden rules of conduct set for us by our great lawgiver, the Prophet of Islam.

(In 1948, Address to Sibi Darbar)

• I cannot understand the logic of those who have been deliberately and mischievously propagating that the Constitution of Pakistan will not be based on Islamic Sharia. Islamic principles today are as much applicable to life as they were 1300 years ago.

(Address to Karachi Bar Association in January 25, 1948)