



# The Institution of Engineers Pakistan, Karachi Centre

## NEWSLETTER

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**Dr. Farooq Sattar, Former Minister Overseas Pakistanis Inaugurate ENTECH-Pakistan**

## ENTECH-PAKISTAN- An IEP Exhibition Inauguration Ceremony On 26th December, 2013 at Karachi Expo Centre



Prof. Dr. Sarosh H. Lodi, Vice-Chairman (Civil & Structural), IEP Karachi Centre, Engr. S. Jamshed Rizvi, President, Dr. Ferooz Sattar, MNA-Chief Guest, Engr. Farhat Adil, Chairman and Engr. Ayaz Mirza, Secretary, IEP, Karachi Centre

The Inauguration ceremony of ENTECH PAKISTAN 2013 was held on 26<sup>th</sup> December, 2013. The inauguration was started from recitation of Holy Quran by Engr. Amanullah Hanif, Vice-Chairman (Mechanical), IEP Karachi Centre. Engr. Abdul Jabbar Sangi conducted the Inaugural Session of ENTECH PAKISTAN. Engr. Farhat Adil, Chairman, IEP Karachi Centre presented the welcome address and Engr. Ayaz Mirza, Secretary IEP Karachi Centre presented the vote of thanks. Dr. Farooq Sattar, MNA, was the Chief Guest at the Inaugural Session and inaugurated the ENTECH PAKISTAN-2013.

### ENTECH -Pakistan Inaugural Ceremony



Engr. Abdul Jabbar Sangi conducting the Inaugural Ceremony



Engr. Amanullah Hanif recitation from Holy Quran



Engr. Farhat Adil, Chairman, IEP, Karachi Centre presenting the welcome address



Engr. Ayaz Mirza, Secretary, IEP Karachi Centre presenting the vote of thanks



Engr. S.Jamshed Rizvi, President, IEP presenting Flower Bouquet and Engr. Farhat Adil, Chairman, IEP, Karachi Centre presenting the Shield to Dr. Farooq Sattar, Chief Guest of the Inaugural Ceremony, Engr. Ayaz Mirza, Secretary, IEP, Karachi Centre, Engr. Sarosh H. Lodi, Convener 6th ICEC and Mr. Zohair Naseer, COO Badar Expo also seen in the picture



Dr. Farooq Sattar, Former Minister Overseas Pakistanis & Chief Guest of the ENTECH-Pakistan Inaugural Ceremony addressing to the audience



Engr. C.L Nankani, Author presenting the HSE Book published by IEP, Karachi Centre to Dr. Farooq Sattar, Engr. S.Jamshed Rizvi, President, IEP, Engr. Farhat Adil, Chairman, IEP, Karachi Centre and Engr. Anwarul Haq Siddiqui-Author also seen in the picture

ENTECH PAKISTAN-2013 was not just an exhibition of different engineering disciplines but it was a platform for Engineering Students and Institutions to display their projects/Research Papers. Besides ENTECH PAKISTAN-2013 IEP also organized Fourth International Symposium on “**Infrastructure Engineering in Developing Countries (IEDC-2013)**” in collaboration with NED University of Engineering and Technology, Karachi on 26 & 27 December, 2013 and **6<sup>th</sup> International Civil Engineering Congress** on 28 December, 2013.

The following leading organizations participated in the Exhibition.

<ul style="list-style-type: none"> <li>❖ Agha Steel Group</li> <li>❖ Advance Electronics International</li> <li>❖ Agha Steel Industries</li> <li>❖ Alcop (Aluminum Company of Pakistan Industries (Pvt) Limited)</li> <li>❖ Al-Ghazi Tractors Limited</li> <li>❖ Amreli Steels Limited,</li> <li>❖ Aquafin Pakistan (Pvt) Limited,</li> <li>❖ Banu Mukhtar Contracting (Pvt) Limited,</li> <li>❖ Clipsal Pakistan (Pvt) Limited,</li> <li>❖ Creative Group</li> <li>❖ Diamond Jumbolon</li> <li>❖ Energy Solutions (Pvt) Limited</li> <li>❖ Fabricon (Pvt) Limited,</li> <li>❖ Faizan Steel Group</li> <li>❖ Fakhri Brothers</li> <li>❖ GH Solar (Zhejiang GangHang Solar Technology Co.)</li> <li>❖ Greaves Pakistan (Pvt) Limited,</li> <li>❖ International Industries Limited,</li> <li>❖ Islamabad Industrial &amp; Trading Corp.</li> <li>❖ Kansai Paint (Pvt) Limited,</li> <li>❖ Libra Engineering</li> <li>❖ Lucky Cement Limited</li> <li>❖ Magnacrete Private limited,</li> <li>❖ Mammut Building Systems</li> <li>❖ Matrixx Company</li> </ul>	<ul style="list-style-type: none"> <li>❖ Mecatech (Pvt) Limited,</li> <li>❖ MESEC (Modern Equipment Services &amp; Engineering Consultants)</li> <li>❖ Najam Associates</li> <li>❖ National Tiles &amp; Ceramics Limited</li> <li>❖ Orient Energy Systems</li> <li>❖ Pak Hy Oils Limited</li> <li>❖ Pakistan Petroleum Limited</li> <li>❖ Pakistan Safety Glass Works (Pvt) Limited,</li> <li>❖ Pioneer Cables Limited</li> <li>❖ Power Cement Limited</li> <li>❖ R.A.Engineering &amp; Services (Pvt) Limited,</li> <li>❖ Razaque Steel (Pvt) limited,</li> <li>❖ Schinder Electric</li> <li>❖ SGS Pakisgtan (Pvt) Limited,</li> <li>❖ Shaikh Wilayat Ahmed &amp; Sons</li> <li>❖ Thermcraft</li> <li>❖ Times Electric</li> <li>❖ Unified Communication Solutions</li> <li>❖ Karachi Electric Supply Company Limited (KESC)</li> <li>❖ Pakistan Standard &amp; Quality Control Authority (PSQCA)</li> <li>❖ Pakistan Council of Scientific and Industrial Research (PCSIR)</li> <li>❖ Lucky-Paragon Readymix Limited</li> <li>❖ Tradekey.com</li> <li>❖ The Engineer</li> <li>❖ Solarizatina Welfare Organization (SWO)</li> </ul>
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**The Pakistan Petroleum Limited, Lucky Cement, Kasani Paint and Schneider Electric were the major sponsors of the Exhibition, while SAITA (Pakistan) Pte. Limited sponsored NED University of Engineering and Technology and IEP, Karachi Centre thanked to all Major Sponsors of the ENTECH-Pakistan**

Following Engineering Universities/Institutions also participated in the Exhibition.

- NED University of Engineering and Technology (Sponsored by SAITA Pakistan (Pvt) Limited)
- Sir Syed University of Engineering and Technology
- Usman Institute of Technology,
- Nazeer Hussain University
- DHA Suffa University
- Preston Institute of Management Science and Technology (PIMSAT)
- PAF-KIET

A Exhibitor Show Directory was also published on the occasion consisting of events schedule of Fourth International Symposium on “**Infrastructure Engineering in Developing Countries (IEDC-2013)**”, **6<sup>th</sup> International Civil Engineering Congress**, Floor Plan, Exhibitors index and Exhibitors profiles.

Messages from the following dignitaries were received on this occasion and were published in the show directory.

- His Excellency Mian Muhammad Nawaz Sharif
- Prime Minister, Islamic Republic of Pakistan
- Muhammad Shahbaz Sharif
- Engr. S. Jamshed Rizvi, President, IEP
- Engr. Mian Sultan Mahmood Secretary General, IEP
- Engr. Farhat Adil, Chairman, IEP Karachi Centre
- Engr. Ayaz Mirza, Secretary, IEP Karachi Centre
- Engr. Sohail Bashir, Chief Organizer, ENTECH Pakistan 2013
- Mr. Zohair Naseer, Chief Operating Officer, Badar Expo Solutions

Leading newspapers gave a large coverage of this Exhibition in their newspapers. The ENTECH-Pakistan and congresses were a success and well attended. For more pictures & details visit website: [www.iepkarachi.org](http://www.iepkarachi.org)

**FOURTH INTERNATIONAL SYMPOSIUM ON INFRASTRUCTURE  
ENGINEERING IN DEVELOPING COUNTRIES (IEDC-2013)**



**Prof. Dr. M. Afzal Haque, Vice-Chancellor NED UET addressing the Inaugural session (Left) and View of addressing the Inaugural session with University personnel (Right)**

Fourth international symposium on infrastructure engineering in developing countries (IEDC-2013) has been organized successfully by Institute of Engineers, Pakistan, Karachi Centre (IEP) and NED University of Engineering and Technology with significant collaboration of HEC (Higher Education Commission), PEC (Pakistan Engineering Council), Procedia Engineering and Elsevier at Expo Center, Karachi from 26<sup>th</sup> to 27<sup>th</sup> December, 2013. Initial two days were meant for IEDC symposium and last day was specifically designed for IEP. Previously IEDC-2010 has been successfully accomplished by NED University of Engineering and Technology in which internationally authors has participated for the presentation of their papers and concluded with remarkable and strategic solutions way forward that was basically the foundation of IEDC-2013. Initially the session was presided over by the Vice Chancellor NED UET, Prof. Dr. Muhammad Afzal Haque. In his remarks he stressed upon the need of all stake holders to work together combining infrastructure utilities and development, and carry out work in a way to benefit society and mankind.



Shield awarding to  
Dr. Muhammad Adnan

The first technical session was chaired by Mr. Gul Najam Jami, Assistant Country Director UNDP. He elaborated the role of UNDP in development of Urban Infrastructure in Pakistan. This session consist on three research papers namely, 'Development of a regional transport policy support system for rural planning agencies in the developing world', 'Estimation of traffic congestion cost- A case study on a major arterials in Karachi' and 'Monitoring spatial and temporal transformation in cultivated land coverage in Karachi using geo spatial techniques', by Mir Aftab Hussain Talpur, Dr. Muhammad Adnan and Ms Anila Kausar respectively. The theme is set for the land use planning and representation with geographical perspective. For proper motivations, souvenirs were awarded to the authors by session chair.



Prof. Tarbiat Modares preseting  
awarding the symposium Shield

The second technical session was chaired by Prof. Dr. Amir Kavussi, Associate Professor at Tarbiat Modares University Tehran, Iran. He appreciated the work of Urban Engineering Department and NED University, and showed his gladness with the research and the value given to the infrastructure development. This session consist of four research papers with presentations entitling ' Land sustainability analysis for petrol filling stations using GIS', ' Approach to fire related disaster management in high density urban area', ' Cost evaluation of vehicles involved in road traffic accident in Karachi Pakistan-Macro spatial perspectives' and ' Time dynamic characteristics of road crashes in developing countries', by Mr. Shabbir Hussain Khahro, Mr. Muhammad Azeem, Mr Salman Zubair and Mr. Khawaja Sheeraz respectively. The papers were specifically meant with the base line of safety and policy formulation work for stakeholders



Prof. Faheem Ahsan presenting  
the shield to Prof. Dr. Ir. Ansar-  
ul- Haq Yasar

The second day of the conference was initiated by Prof. Dr. Ir. Ansar-ul-Haq Yasar, Professor at Transportation Research Institute (IMOB), Hasselt University, Belgium by his key note speech. He suggested in a manner that an era of prosperity or glory will not come via a course of natural evolution; it needs a group of pioneers with a vision for the future and determination. According to his perspective; in Pakistan transportation planning tends to favor those major cities or areas with more political power.



Group photo of speakers with  
volunteers in concluding session

Final session was based on four technical papers chaired by Prof. Faheem Ahsan, expert member, BOS, Department of Urban and Infrastructure Engineering, Ex-Dean Faculty Civil Engineering at NED University. Authors presented on 'Sample preparation technique for fiber reinforced cemented soils', ' Application of different testing method for evaluating effects of hydrated lime in bituminous mixes', ' Laboratory characterization of Hot Mix Asphalt (HMA) using strength' and on the research and development about the cement, concrete and admixture done by Lucky Cement Industries, by Prof. Dr. Amanullah Marri, Dr. Amir Kavussi, Mr. Kashif A. Khan and Mr. Muhammad Kashif, manager customer service and support Lucky Cement Ltd, respectively. At the end of this session Prof. Dr. Faheem Ahsan awarded the conference souvenirs to the speakers. Paper were vetted by International referee & published in International publication Elsevier, first time in the history of IEP.

## 6<sup>th</sup> International Civil Engineering Congress 28th December, 2013 at Karachi Expo Center



Engr. Sohail Bashir  
Coordinator 6-ICEC



Engr. Mian Sultan Mehmood  
Secretary General, IEP



Lt. Gen.(R) Muhammad Zubair  
Chief Guest & Keynote Speaker



Engr. S.Jamshed Rizvi  
President, IEP



Engr. Farhat Adil  
Chairman, IEP, KC



Engr. Ayaz Mirza  
Secretary, IEP, KC

The 6<sup>th</sup> International Civil Engineering Congress was held on 28<sup>th</sup> December, 2013, at Karachi Expo Center. Theme of the Congress was "Civil Engineering Issues & Future" The Congress started from recitation of Holy Quran by Engr. Ali Sohail. Engr. Sohail Bashir, Coordinator and facilitator 6<sup>th</sup> International Civil Engineering Congress conducted the Inaugural Session of 6<sup>th</sup> International Civil Engineering Congress. Engr. Farhat Adil, Chairman, IEP Karachi Centre presented the welcome address. Engr. Ayaz Mirza, Secretary IEP Karachi Centre presented the vote of thanks. Lt. Gen (Retd) Muhammad Zubair, HI (M) was the Chief Guest at the Inaugural Session and presented the Keynote Address titled "Neelum Jhelum Hydroelectric Project" which was highly appreciated by the participants. Engr. Sohail Bashir, Coordinator, conducted the Technical Sessions of 6<sup>th</sup> International Civil Engineering Congress. Engr. S. Jamshed Rizvi, President, IEP, Engr. Farhat Adil Chairman, IEP Karachi Centre, Engr. Ayaz Mirza, Secretary IEP Karachi Centre presented the Congress shield and memento to the Chief Guest.

### NEELUM JHELUM HYDROELECTRIC PROJECT By Lt. General ( Retd) Muhamad Zubair , HI (M)

#### INTRODUCTION

Neelum Jhelum Hydroelectric Project is a flagship mega project of immense national importance. It is located in the vicinity of Muzaffarabad (AJ&K), envisages the diversion of Neelum River water through a tunnel and after producing power, out-falling into Jhelum River. A Composite Dam (Gravity + Rock fill) 160 m long and 60 m high is being constructed on Neelum River at Nauseri 41 km north east of Muzaffarabad. The Dam will divert the water into a headrace tunnel of 28.5 KM length. 19.6 KM stretch of the Headrace Tunnel is twin tunnel having dia of about 8.5 m each. The remaining 8.93 KM tunnel is a single tunnel of diameter 9.6 m. About 11.5 KM stretch of the twin tunnels will be constructed through Tunnel Boring Machines having cross-section ranging from 52m<sup>2</sup> to 58m<sup>2</sup>. The Headrace Tunnel is accessed by eight (8) Adits for removal of excavated spoil and other works. The Headrace Tunnel crosses Jhelum River approximately 200 m below its bed level. Power House of the Project is located near Chattar Kalas, 22 KM south of Muzaffarabad. Neelum Jhelum Hydroelectric Project has an installed capacity of 969 MW and will generate 5.15 Billion units of electricity annually.

#### IMPORTANCE OF PROJECT

Timely completion of this Project will reduce the gap between demand and supply of power in the Country. Moreover, due to its timely/early completion, Govt. of Pakistan can claim water rights of River Neelum, which otherwise, Govt. of India can claim if Kishanganga Dam is completed earlier.

#### Present progress of different components of the Project.

For the construction of the Dam at Nauseri, Neelum River has been successfully diverted through a Diversion tunnel on 15 October 2011. Afterwards second stage diversion work has also been completed by constructing longitudinal coffer dam that has allowed the water to pass through the Debris Channel.

- At the Desander 100% excavation has been completed (Dam site progress 61%)
- Both the Tunnel Boring Machines (TBMs) have been fully deployed. Up till now, 3.1 km tunnel has been bored.
- Powerhouse excavation has been completed.
- Excavation of Transformer Hall has been completed.
- 3x4 MW WARTSILA Generators (12 MW) have been operationalized.
- 4x4 MW MAN Generators (16 MW) have been operationalized.
- 42 km tunnels have been excavated (including 15.5 KM Adits) – 63 %
- Jhelum River Crossing work also commenced – Presently, the tunnel is being excavated under River Jhelum.
- Concrete Lining of Head Race Tunnel in Progress – 700 m.

#### PROJECT IMPLEMENTATION / STATUS

Work on the project commenced on January 30, 2008. Construction Contract was awarded, to a joint venture of China Gezhouba Group of Company and China Machinery Engineering Corporation (CGGC-CMEC) at a cost of Rs. 90.90 Billions. As a result of increase in scope of work due to a number of design changes and other technical reasons, the completion of the Project was being delayed by 18 to 24 months. To accelerate the work on the Project and to avoid the delays as well as to complete the Project in 2016, Two Tunnel Boring Machines (Costing US\$ 92.5 million) have been deployed for the excavation of critical parts of twin Tunnels of the Headrace Tunnels.

#### FINANCIAL ISSUES

The approved PC-1 cost of the project was Rs. 84.50 billion. As a result of increase in scope of work due to a number of design changes and other technical reasons, the PC-1 of the Project has been revised. ECNEC has already accorded approval of the 2nd Revised PC-1 for a total cost of Rs. 274.88 Billion. The main issue hampering the execution of the Project pertains to financing. To resolve this, Prime Minister of Pakistan had accorded approval to provide Rs. 24 billion up to June 2013 for smooth running of the Project. Out of that amount only Rs. 4 billion have materialized. At present, about Rs. 14 billion is due to be paid to the Contractor against certified Interim payment Certificates (IPCs). The current monthly IPC payments is approximately Rs. 2 Billion which will swell to Rs. 3 billion due to operation of TBMs and envisaged acceleration of the Project. EXIM Bank China Loan (US\$ 448 million) shall be effective in first quarter of 2014. Total expenditure to date is Rs 98 billion (including Rs 30.4 billion Neelum Surcharge). All construction activities are mobilized and progressing as planned. On the express direction of Honorable Prime Minister of Pakistan, WAPDA has embarked upon a Best Efforts Plan to install first unit by December 2015 – all dependent upon sustained cash flow.



Engr. Farhat Adil, Chairman, IEP, Karachi Centre presenting the Shield and Certificate to Keynote Speaker Lt. General (Retd) Muhammad Zubair, SI (M)



Engr. Syed Jamshed Rizvi, President, IEP, Karachi Centre presenting the HSE Book published by IEP, Karachi Centre to Lt. General (Retd) Muhammad Zubair, SI (M)



Engr. Farhat Adil, Chairman, IEP, Karachi Centre presenting the souvenir to Lt. General (Retd) Muhammad Zubair, SI (M)

### Pictorial View of the ENTECH- Pakistan an IEP Exhibition



Dr. Farooq Sattar visiting the K-Electric Limited stall



Dr. Farooq Sattar visiting the PIMSAT stall



Dr. Farooq Sattar visiting the NED UET stall



Dr. Farooq Sattar visiting the PAF- KIET stall



Dr. Farooq Sattar visiting the UIT stall



Group Photographs

### The closing ceremony Chief Guest Mr. Haider Abbas Rizvi, Former MNA visiting the ENTECH- Pakistan An IEP Exhibition at Karachi Expo Centre on 28th December, 2014



Mr. Haider Abbas Rizvi, Former MNA visiting the stall of Fabricon limited



Mr. Haider Abbas Rizvi, Former MNA visiting the stall



Mr. Haider Abbas Rizvi, Former MNA visiting the stall of Cemcon



Engr. Ayaz Mirza Secretary, IEP, Karachi Centre presenting the shield to Mr. Haider Abbas Rizvi



Mr. Haider Abbas Rizvi visiting the Stall



Group photo with IEP Karachi Centre Staff

**Engr. Ahsan Iqbal, Federal Minister for Planning & Development, Government of Pakistan attended the Special Local Council meeting of IEP, Karachi Centre on 4th January, 2014 in IEP Council Hall**

Engr. Ahsan Iqbal, Federal Minister for Planning & Development visited IEP Karachi Centre Office, in this regard a Special Local Council Meeting was convened. All Local Council Members and Members of Think Tank Committee were invited. Engr. Sohail Bashir presented the members consolidated views/points to Engr. Ahsan Iqbal, which was appreciated by the house. Engr. Khalid Munir suggested that points may be circulated to all the members for their updates. Engr. Ahsan Iqbal asked the house to nominate some person to prepare the Services Structure for Engineers. Engr. Nooruddin Ahmed proposed the name of Mr. Tasneem Siddiqui for preparation of the Service Structure for Engineers. Engr. Ahsan Iqbal has invited names for Government Policy Makers Committee. Engr. S. M. Pervez Sadiq, Engr. Syed Jamshed Rizvi, President, IEP Engr. Farhat Adil, Chairman, IEP, Karachi Centre Engr. Amir Zameer Ahmed Khan, Secretary, IEP Lahore Centre and Engr. Khalid Munir attended a meeting at Sindh Secretariat held on morning on 4th January, 2014 called by Engr. Ahsan Iqbal, Federal Minister for Planning & Development.



Engr. Ayaz Mirza, Secretary, IEP, Karachi Centre presenting the Bouquets to Engr. Ahsan Iqbal, Federal Minister for Planning & Development



Engr. Farhat Adil, Chairman, IEP, Karachi Centre presenting the memento to Engr. Ahsan Iqbal, Federal Minister for Planning & Development



Group Photograph of Local Council Members with Engr. Ahsan Iqbal, Federal Minister for Planning & Development



Engr. S. Jamshed Rizvi, President, IEP presenting the HSE Book published by IEP, Karachi Centre to Engr. Ahsan Iqbal, Federal Minister for Planning & Development

**291st Central Council Meeting on 29th December, 2013 at IEP Karachi Centre office**



Engr. S. Jamshed Rizvi, President, IEP Chaired the meeting



Group Photo of Central Council Members



Dr. Sarosh H. Lodi, Dr. S.F.A Rafeeqi and Engr. Sohail Bashir attending the Central Council Meeting



Members attending the Central Council Meeting

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**Secretary**  
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**Announcement**  
IEP is very grateful to all the sponsors of ENTECH-PAKISTAN-2013. It will be a regular annual feature of IEP, Karachi Centre. New Dates for ENTECH-PAKISTAN-2014 will be announced shortly

**IEP BLOG**  
IEP Karachi Centre has developed a BLOG on its website: <http://www.iepkarachi.org.pk> where members can discuss matters of technical interest & share their experience. All members are requested to visit BLOG and forward their comments for its improvement on our e-mail address: [main@iepkarachi.org.pk](mailto:main@iepkarachi.org.pk), [secretary@iepkarachi.org.pk](mailto:secretary@iepkarachi.org.pk)

**First Meeting of Women Engineers on 11th January, 2014**



Photographs taken in the First Women Engineers Meeting on 11 January, 2014 at IEP Council Hall, Engr. Nooruddin Ahmed, Engr. Beena Riaz, Engr. Asfia Aleem, Engr. Bushara Nadeem, and Engr. Shugufta Aslam