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**ENTECH- PAKISTAN – AN IEP EXHIBITION  
26-28 DECEMBER, 2013 AT EXPO CENTER, KARACHI**

The Institution of Engineers Pakistan, Karachi Centre is organizing the first ever mega engineering Exhibition “ENTECH PAKISTAN 2013” and 6<sup>th</sup> International Civil Engineering Congress from 26-28 December, 2013 at Karachi Expo Center. This exhibition is being managed by Badar Expo Solutions who are Pakistan’s largest event managers and solutions providers. ENTECH PAKISTAN is a full representation of Pakistan’s engineering sectors at a unique platform to exhibit wide variety of products and services. The scope of the exhibition is to provide manufacturers, builders, constructors, suppliers and services providers from various engineering traits to display their products both to the business buyers as well as the end users. The event will attract right and potential audience, a large number of engineers, government representatives renowned consultants, builders, constructor and foreign missions.

**Soft Launching Ceremony of ENTECH-PAKISTAN  
on 29th November, 2013 at Hotel Marriot, Karachi**



**Engr.S.Jamshed Rizvi, President, IEP addressing at the soft launching ceremony of Entech- Pakistan at Hotel Marriott, Karachi**



**Engr. Farhat Adil, Chairman, IEP, Karachi Centre presenting Welcome Address in the Entech- Pakistan soft launching ceremony to the distinguished guests**



**Engr.Sohail Bashir, Chairman, International Affairs, IEP addressing the event**



**Engr. Ayaz Mirza, Secretary, IEP, Karachi Centre presenting Vote of Thanks**

The Institution of Engineers Pakistan, Karachi Centre arranged a Soft Launching Ceremony of ENTECH-PAKISAN – A Mega IEP Exhibition on 29th November, 2013 at Hotel Marriott, Karachi.

IEP, Karachi Centre is organizing an exhibition Entech-Pakistan from December 26-28, 2013 at Karachi Expo Centre, aiming at bringing manufacture and buyers of engineering products at a single platform.

Engr. Farhat Adil, Chairman, IEP Karachi Centre presented the welcome address, he said that research and development of engineering sector will help the government in strengthening economy and spurred business activities of different sectors including power, automobile, construction, Civil, mechanical, chemical, electrical and textile, he also said that Engineering Sectors are the backbone of the industries and such exhibitions provide best opportunity to showcase products and services of the sector while helping manufacturing, suppliers engineers, dealers and buyers to networking. It is hearting to see participation of local and foreign delegates, which would positively portray the image of Pakistan in the world, the government was committed to help engineering sector all the levels and all out support would be given to potential exhibitions..

Engr. Syed Jamsed Rizvi, President, IEP said Entech- Pakistan is a full representation of Pakistan's Engineering Industry at a unique platform to exhibit wide range of products and services, the scope of this exhibition is to provide manufactures, suppliers and service providers from various engineering sector to display their products both to the business buyers as well as end-users.



**A Group Photograph of participants**



**A Group Photograph of Participants**

Engr. Ayaz Mirza Secretary, IEP presented the vote of thanks, he highlighted that the event would be the biggest engineering exhibition in the history of Pakistan while attracting more than 15,000 visitors from local and multinational companies including executives, senior management, general management, chief engineers, engineers analysts, consultants and delegates from government bodies and associations serving the market, dealers, agent, purchasing professionals manufactures, he also said that Pakistan has emerged as a key player in the region to hold international exhibitions for attracting local and international companies showcasing their products and services to the world. He thanked to Mr. Zohair Naseer COO of Badar Expo Solutions, guests, media and Staff of IEP Karachi Centre.



**Engr. M. Ahson Khan  
& Engr. Ali Naqvi**



**A Group Photograph**



**Engr. Tafseer A. Khan &  
Engr. Iqbal A. Khan**

**6<sup>th</sup> International Civil Engineering Congress  
28th December, 2013 at Expo Centre**

IEP Karachi Centre is organizing the Sixth International Civil Engineering Congress (6<sup>th</sup> ICEC-2013) on 28th December, 2013 at Karachi. The 6<sup>th</sup> ICEC-2013 theme is **"Civil Engineering Issues and Future"**

The upcoming 6th International Civil Engineering Congress provides a platform to deliberate upon the above mentioned theme and would have scope to cover the following areas:

<b>Assets Management</b>	<b>Computers I Structures</b>
<b>Coastal &amp; Harbor Engineering</b>	<b>Disaster Management</b>
<b>Environmental Engineering</b>	<b>High- Rise Building</b>
<b>Irrigation &amp; Water Resources</b>	<b>Roads, Highways &amp; Bridges</b>
<b>Safety &amp; Health Management</b>	<b>Sustainable Development</b>
<b>Airport Engineering</b>	<b>Construction Management</b>
<b>Dams and Water Management</b>	<b>Earthquake</b>
<b>Geo Tech. Engineering</b>	<b>Infrastructures Planning</b>
<b>Quality Control &amp; Quality Assurance</b>	<b>Rural Development</b>
<b>Structural Engineering</b>	<b>Transportation</b>

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**4th International Symposium on "Infrastructure Engineering in Developing Countries (IEDC-2013)  
on 26th -27th December, 2013**

IEDC-2013 is aimed to focus and discuss the issues of rising urbanization for sustainable economic growth in developing countries. Three successful international symposia were organized in which were helpful to understand and mitigate urban infrastructure planning, design and management issues. IEDC-2013 is a Peer Reviewed symposium which involves renowned and qualified experts on multidisciplinary areas from all over the world for the exchange of their experience on concepts, trends, and practices of present-day scenarios of infrastructure and transportation issues. All IEDC-2013 accepted papers will be printed in the conference proceedings published by Elsevier Science in the open-access Procedia Engineering series on-line. Procedia Engineering is hosted on [www.Elsevier.com](http://www.Elsevier.com) and on Elsevier content platform Science Direct ([www.sciencedirect.com](http://www.sciencedirect.com)), and will be freely available worldwide. All papers in Procedia will also be indexed by Scopus ([www.scopus.com](http://www.scopus.com)) and Engineering Village (Ei) ([www.engineeringvillage.com](http://www.engineeringvillage.com)). This includes EI Compendex ([www.ei.org/compendex](http://www.ei.org/compendex)). The papers will contain linked references, XML versions and citable DOI numbers. You will be able to provide a hyperlink to all delegates and direct your conference website visitors to your proceedings. All accepted papers will be indexed in DBLP (<http://dblp.uni-trier.de/>). This symposium will provide the potentials and opportunities for nation to establish consensus around priorities for capacity building within and across regions of the world and facilitate access to international support.

**For further enquiries please contact:**

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**IEP Faisalabad Centre Building Foundation Stone  
Laid on 7th November, 2013**



Engr. Syed Jamshed Rizvi, President, Institute of Engineers Pakistan has laid down the foundation stone of I.E.P Faisalabad Center Building on 7th November, 2013. Engr. Sultan Mehmood, Secretary General, Engr. Mujahid Pervaiz Chatha, Chairman, Faisalabad Centre and Engr. Sohail Bashir were also present at the occasion. Engr. Mian Sultan Mehmood addressed that Engineering Profession has much importance in the progress of the Nations and I.E.P is leading in this regards, and by the efforts of Engr. Mujahid Pervaiz Chatha that I.E.P Centre has been established at Faisalabad for the Engineers of Faisalabad. In future, this center will have basic importance for professional training. He also requested the Engineers to come forward and support professionally and financially for the construction of this project.



**HSE Book “An Introduction to Occupational Health,  
Safety and Environment”**

**By Engr. Anwar UI Haq Siddiqui and Engr. C.L.Nankani**

Engr. Anwarul Haq Siddiqui briefed about the book on HSE “An Introduction to Occupational Health, Safety and Environment” in the Think Tank Committee meeting on Sunday the 10th November, 2013 at IEP Council Hall.

Engr. Anwarul Haq Siddiqui thanked IEP, Karachi Centre Local Council for sponsoring this book and specially Engr. Syed Jamshed Rizvi, President, IEP for his encouragement, Engr. Farhat Adil, Chairman, and Engr. Ayaz Mirza, Secretary, IEP, Karachi Centre and administrative support given by Engr. M. Abdullah Farooqui, Engr. Akhter Quddus, HSE Consultant and Engr. Abdul Muqtadar Siddiqui (Attock Oils) for technical review of this book, Engr. Zaffar Zuberi, Past President, IEP Engr. Sohail Bashir, Chairman International Affairs, IEP, Engr. S.M. Pervez Sadiq, Vice-Chairman (Industrial), IEPKC and other Council Members for their team spirit and support. Thanks are also due to Mr. Sikandar Mannan DD, Mr. Shareef Khan Qadri, AD and Mr. Saifuddin, AD, IEP Karachi Centre for overall logistic support in the printing and publishing of this book.

## Installation of a 2 KW Solar Power Unit



1. Engr Javed Nasir has installed a Solar Power Unit – capacity 2 kW – at his residence. The unit consists of the following:
  - a) Solar PV Panels. Ten panels of 190 watts each; output 36 V, 5.2 A. The panels have been purchased from a local vendor in Karachi at Rs 80.00 per watt. The guaranteed life of these PV Panels is claimed to be 25 years with declining power output after 8 years. Total cost of panels: Rs 152, 000.00.
  - b) Two panels are joined in series to give an output of 72 volt and 5 such sets are then joined in parallel to give a net output of 26 amps at 72 V DC.
  - c) The PV Panels have been placed in one frame, which is raised 8 feet to clear the parapet walls. This frame is fixed and has been placed in southward direction at a 20° angle. A photograph is attached. At present, the output from the system from 8:00 am to 5:00 pm is satisfactory, while output during winters remains to be ascertained. Cost of mounting frame: Rs 25, 000.00.
  - d) The next two most important items are Charge Controller and Inverter. Nowadays, these two are available in a single housing. It is essential to select a pure sine wave inverter for optimum performance. There are a number of systems available which consist of a Solar Inverter and a built-in Charge Controller. Engr Javed Nasir selected NEXTUPS, a reputable Chinese brand, which has a capacity of 3, 000 watts. This particular equipment has three inputs: a 48 V DC Battery, 72 V DC PV and 220 C AC. A small LCD Screen displays various parameters and status of input/output. It also comes with a USB Port and an RS 232 outlet for connecting with a network doe remote monitoring. Cost: Rs 110, 000.00.
  - e) The heart of the system is the Battery System. Deep discharge batteries are recommended for solar power units. AGM VRLA Deep Discharge Cycle Batteries, with a projected life of 10 years, have been selected for this unit. Four batteries of 100 AH capacity each, have been purchased from Galaxy Traders Karachi. Cost: Rs 60, 000.00.
  - f) Associated hardware such as DC Cables, DC Isolator Switches, AC Circuit Breakers to hook up the system. Estimated Cost: Rs 5, 000.00
2. A trained electrician would be required to set up the system. Cost of labour: Rs 2, 500.00
- 3) Once the system has been installed, and is in use, then arrangements should also be made to wash the PV Panels once a fortnight. This will ensure designed output, because dust and shrubs have an adverse effect on the output of the panels.

Total Cost of a 1, 900 watt-System: Rs 354, 500.00, which comes to Rs 187.00 per watt, which is a very good price for a solar power unit.

## 1.0 KW PERMANENT MAGNET WIND TURBINE HP WT001



**Charge Controller:** Battery charging, overcharging and dump load activation all is done automatically through charge controller fitted separately. When battery is fully charged about 54volts the charge controller shifts charging current to dump load and vice versa. A switch is provided at the charge controller box to manually select to charge the batteries or switch on dump load or select auto mode.

**Batteries:** Wind turbine generates 3ph AC voltage which is rectified to DC voltage for storage in the batteries in 48volts format. Four batteries of 200 AH are provided to store the charge. Sign wave UPS convert the battery charge to 220V AC. This aspect is most important and to be above at all time. In general one should not be close to the wind turbine tower or within circle of 40 feet from the pole of the wind turbine during normal operation. Furthermore must be away from the plane of the blade rotation. Guy wires holding the tower not to be pulled or pushed. Children should not play with the guy wires. When wind speed is abnormally high or it is a stormy condition all should take a sheltered place. Wind turbine is designed to keep watch on all such occasions. If wind speed is high the turbine at the top of the tower will tilt upwards to move the turbine out of the wind direction until the speed is within safe limit. If a blade or blades get damaged or broken the whole turbine shall be in a very unstable condition and shall vibrate very vigorously. In such situation all persons should take shelter. The charge controller to be switched to dump load this will slow down the turbine. Then bring the turbine to the ground as usual.

**Specification:** 1 KW Horizontal Axis Wind Turbine, Rated Speed: 400rpm, Rotor Diameter: 3.45 Meters. Rated Voltage: 48 V DC, 4 batteries

### HSE Alert- Driving Safely in the Rain



**Routinely check your tires:** Always check your tires before you hit the road. Keep tires properly inflated. Check the tires tread depth. Proper tread depth will help prevent skids and aquaplaning.

**Slow down:** As rain falls, it mixes with grime and oil on the road creating slick conditions perfect for skids. The best way to avoid skidding is to slow down. Driving at a slower pace allows more of the tire's tread to make contact with the road, which leads to better traction.

**Know how to recover from a skid:** Skids can happen even to the most cautious drivers. If your car does skids, remember not to Slam on the brakes. Do no pump the brakes if you have an anti-lock braking system (ABS). Instead, apply firm, steady pressure to the brakes and steer the car in the direction of the skids.

**Keep your distance from the car ahead:** Wet-weather driving demands gentle use of all the main controls- steering, clutch, brake and accelerator-and a larger allowance for errors and emergencies. During rainy weather more distance is required to brake, it is important not the tailgate. Where possible, keep a little more than two car lengths between you and the vehicle in front of you.

**Drive in the tracks of a car ahead of you:** Avoid using your brakes. Whenever possible, slow down by taking your foot off the accelerator.

**Turn the lights on:** Turn you headlights on, even in a light rain. Not only do they help you see the road, but they'll help other drivers see you. If your car has daytime running lights, you should turn them on, so vehicles behind you can see you better.

- **Never attempt to cross running, Avoid travels heavy rain , Go slowly, Use car wipers on rainy days, Buckle up, Avoid rash & speed driving, Turn on headlights, Avoid cruise control, Tailgate & be alert, Apply the brakes earlier with less force.**

## NAI GAJ Dam PROJECT

### NAI GAJ DAM PROJECT

**N**ai Gaj Dam is under construction across the Gaj River in District Dadu, Sindh Province at a distance of about 65 km to the north –west of Dadu. The Dam will have 0.16 MAF (197.0m<sup>3</sup>) live storage capacity. Major objective of the Project is to conserve flood water of Gaj River for irrigated agriculture development of 28,800 acres of new command area and assured irrigation supplies to 18,000 acres of lower riparian.

**Client :** Water and Power Development Authority

**Cost :** PKR 26,000 million

**Period of Execution:** 2012 – 2015

**SOW :** Design Review & Construction Supervision

**Status :** On-going



### MANGLA DAM RAISING PROJECT

**T**he project was assigned to Mangla joint venture (MJV) by Water and Power Development Authority (WAPDA) for construction supervision of raising of existing Mangla dam, located on river Jhelum. TCI is also associated with MJV for project execution.

The aim is to raise existing dam by 30 ft (9.14 m) to conserve flood discharges and enhance its live storage by 2.9 MAF (3577 M m<sup>3</sup>) and provide 100 MW, 644 GWh of additional energy annually.

**Client :** Water and Power Development Authority

**Cost :** US\$ 1,043.00 million

**Period of Execution:** 2005 – 2013

**SOW :** Construction Supervision

**Status :** On-going



### DARMALAK, SURGUL AND NAKBAND DAMS IN KPK.

**T**he project was assigned by Small Dams Organization of Irrigation department, Government of KPK. The scope of the works included Review of Feasibility report, Detailed Engineering Design, Preparation of Tender Documents and Construction Supervision of three dams in District Kohat of KPK.

**Client :** Small Dams Organisation, KPK

**Cost :** PKR 1100 million

**Period of Execution:** 2008 – 2013

**SOW :** Feasibility Study, Detailed Design & Construction Supervision

**Status :** On-going



## NEWS IN PICTURES



Group Photograph taken on the occasion of Alternate Energy Committee Meeting of IEP, Karachi Centre on 9th November, 2013 at IEP Karachi Centre Office



Group Photograph taken on the occasion of Special Local Council Meeting HELD on 9th November, 2013 at IEP Council Hall.



Engr. Farhat Adil, Chairman and Engr. Ayaz Mirza, Secretary, IEP, Karachi Centre conducted the 541st Local Council Meeting held on 26th November, 2013 at IEP Council Hall. Engr. M. Farhat Khan, Ex-MNA attended the local council meeting by special invitation.



Group Photograph the Think Tank Committee Meeting held on Sunday the 17th November, 2013



Engr. Beena Riaz and Engr. Khalid Munir attended the Think Tank Committee Meeting



Engr. Nooruddin Ahmed Chaired the Think Tank Committee Meeting, Engr. Iqbal Ahmed Khan, Engr. G.A. Cyclewala and Engr. Munir Ahmed also seen in the picture



## INTERNATIONAL CONFERENCES

**"4th Quadrennial Fib Congress-2014 "Improving Performance of Concrete Structures" from 10-14th February, 2014 at Mumbai-India**

**"12th International Conference on Concrete Innovations and its advanced Development from 12-14th August, 2014 at Petalling Jaya-Malaysia**

**"25th Congress of Large Dams Stavanger on June-2015 at Norway**

**For further information please contact: Institution of Engineers Pakistan  
Headquarters- Lahore Tel: 024-35750699, E-mail: iephq@gmail.com**



### Inauguration of Engr. Abul Kalam, NEDUET Library



The inauguration of "ENGR ABUL KALAM LIBRARY" was held on Friday, 22 November 2013 in NED. Mrs. Abul Kalam was the chief guest of the ceremony and it was attended by the friends of late Vice Chancellor, his colleagues and faculty. Mrs. Kalam said that "I am honoured to be invited to this university where my husband spent so many years. It is looking so nice and thanked to the new Vice Chancellor, Dr. Afzal Haque. I wish that this university will always prosper". Pro-VC-I Dr Muzaffar Mahmood recalled his feelings and shared that "I also remember Engr. Abul Kalam's fine sense of humour. Kalam Sahib would forever be remembered; his personality was unique. He worked tirelessly for the institution. It was due to his persistent efforts that the departments from four to twenty four". Prof Dr Afzal Haque, the present Vice Chancellor of the University, speaking on the occasion said "It is my misfortune that I could never work under his supervision. But when I visited Karachi Shipyards for some professional work, I heard from others that he was a man of principles". He said that it was the university syndicate who decided to honour our longest-serving VC and recognise his services by naming the library after him. Pro-VC-II, Prof Dr S.F.A. Rafeeqi, said that "there was always something to learn from Engr Abul Kalam. His yesteryear values never went unnoticed". Afterwards, the curtain raising ceremony of the plaque was done by Mrs. Kalam, Vice Chancellor and the syndicate members.

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### **ATTENTION IEP MEMBERS**

It has been observed that a number of engineers have changed their addresses and other details. The same needs to be updated in our records at IEP. All members are requested to kindly update their particulars.

They can do so directly at the  
IEP Karachi Centre Website.

<http://www.iepkarachi.org.pk>

### **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:

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[secretary@iepkarachi.org.pk](mailto:secretary@iepkarachi.org.pk)