

GUJRANWALA TOOLS DIES & MOULDS CENTRE



CERAMICS DEVELOPMENT & TRAINING COMPLEX



TUSDEC Newsletter
Issue - 09

TECHNOLOGY UPGRADATION AND SKILL DEVELOPMENT COMPANY



Industrial Technology Benchmarking is on The Roll

Two major stakeholder meetings take place to help selected industrial sectors to find solutions with best practices. (Story Inside)



Training Session on Plant Condition and Monitoring in Lahore

TUSDEC Competitive Edge

TUSDEC was institutionalized by Ministry of Industries and Production as a not-for-profit guarantee limited company to upgrade technology and skills of key and strategic industrial clusters in order to connect Pakistan to the global value chain. Over the years, TUSDEC has implemented a range of development initiatives in areas such as Engineering, Cement, Garments, Renewable Energy, Ceramics and Skill Development supported by Government of Pakistan, National and International donors.

Currently, TUSDEC is running various state of the art Technology Upgradation Centers (TUCs) across Pakistan which are supporting local industry through modern design, testing, training, technical assistance and consultancy services. TUSDEC has so far trained more than 78,000 engineers, industry professionals and students through its skill development

centers to accomplish Government's vision of producing skilled human capital. TUSDEC is also emphasizing vocational skill development of vulnerable communities by pursuing many TVET (Technical, Vocational Education & Training) initiatives focusing at the capacity building of marginalized youth and women thereby enabling them to mitigate the socioeconomic adversaries.

TUSDEC is also taking initiatives to support key industrial sectors of Pakistan through dissemination of reliable information. Such initiative includes development of Industrial Technology Acquisition Policy for Pakistan, Industrial Technology Benchmarking of two key sectors including Cutlery and Surgical (Implant & Electro Medical Devices). These initiatives are aligned with MoIP's vision to achieve Efficient, Sustainable and Inclusive Industrial Development in Pakistan.

Industrial Technology Benchmarking

TUSDEC is implementing "Industrial Technology Benchmarking" in order to address the need of technology advancement for priority industrial sectors of Pakistan. Initially the sectors of Surgical (Electro-medical, Dental & Surgical Implants) & Cutlery (Mass Scale Production & Continuous Polishing of Tableware) have been selected. The project is funded by Pakistan Industrial Development Corporation (PIDC) and facilitating these sectors in entering high value markets through engagement of international experts/consultants for identification of demand based & value-added products / technologies and benchmarking with international market leaders. The initiative will help to develop workable proposals for catering medium to long term requirements of these potential sector for technology up-gradation and export led industrialization.



First Stakeholders Consultation Meeting



Second Stakeholders Consultation Meeting

Technology Upgradation Centers (TUCs)

Product Design & Development Facilitation

TUSDEC offers 3D Scanning and Reverse Engineering services at very reasonable and competitive rates. A non-contact 3D scanner from Italy is employed for the purpose. It can digitize with an accuracy of $\pm 0.005\text{mm}$ and scan-able area is within an envelope of One Sq. Meter ($1\text{m} \times 1\text{m}$ or $3\text{ft} \times 3\text{ft}$). Point Cloud Data and finished 3D models as surfaces and solids, in various file formats can be provided. So far, TUSDEC has helped the industrial with economical solutions for 3D scanning services that saved lot of time, cost and resources for the beneficiary industries. The center has so far completed 251 designing & scanning jobs. Some models could be seen as under;



Engineering Support Centers (ESCs) - Hyderabad, Peshawar & Lasbella

Technology Upgradation and Skill Development Company (TUSDEC) has established three Light Engineering Support Centers (ESCs) at Hyderabad, Lasbella and Peshawar, sponsored by Asian Development Bank. The centers are designed as Common Facility Centers (CFCs) to provide support to engineering industry of Sindh, Baluchistan and KPK, with modern design, training, technical assistance and consultancy services in high precision manufacturing.

The centers have become operational and also created a room for employment of trained labor in these facilities at the same time, helping manufacturing industry with services of highest standards of manufacturing.

TUSDEC successfully rendered the following services to the industry;

- Projects set-up (Construction phase completed, Machinery procured, installed and made operational)
- 200 Industrial Jobs performed
- 129 individuals trained
- 8 trainings completed



TUSDEC Engineering Support Centers

Gujranwala Tools Dies & Moulds Centre (GTDMC)

Located in Gujranwala, GTDMC is a very sophisticated facility capable of providing high tech services to the surrounding industry. It offers comprehensive engineering solutions for industry. With years of experience of TUSDEC team, GTDMC is now fully operational and providing commercial product design, machining, tool making, die making, moulds making, heat treatment and surface texturing as well as all aspects of manufacturing development services.

In addition to precision manufacturing, services, GTDMC is also providing technical workforce to the local industries by training youth in number of trades

including
AutoCAD, CNC
Turning
Center
Operator, CNC
Programmer, Milling
Machine Operator, Tool and Die Making, CNC Maintenance, CAD CAM.



GTDMC Services

- Drawing, Draughting & Design Documentation Services
- Product Design & Development Services including CAD assisted conceptualization & Reverse Engineering
- Product design, fully or semi-automated machining, tooling plus fundamental manufacturing process development
- Tool, Die, Moulds, Jig, Fixture and Gauge Making Services
- Precision EDM and WEDM Services
- Rapid Manufacturing Services including direct CNC Machining & Selective Laser Sintering
- Engineering Analysis Services including FEM, FEA, Moulds Flow
- Metrology & Measurement Services including reverse engineering, CMM, First Article Inspection, custom quality
- HD 3D Printing - Automatically build functional parts, casting patterns and tooling inserts from 3-D CAD data

- Vendor Selection, Qualification & Manufacturing Consulting Services



Gujranwala Tools Dies & Moulds Centre

Ceramics Development & Training Complex (CDTC)

CDTC has been established by TUSDEC (Technology Upgradation and Skill Development Company) to assist Pakistan's major sanitary ware cluster around Gujranwala. The Centre is upgrading the Ceramics Industry, particularly the sanitary ware, by providing a common facility in terms of training and contemporary machinery to enhance the product quality & productivity. The Centre is enhancing the efficiency in production process of sanitary wares manufacturing sector by providing training, testing facilities and consultancy.



CDTC Services

- CAD/CAM/CAE/Analysis & Simulation Software
- Shuttle Kiln (Fuel: Natural Gas/ LPG)
- Auto Clave Test
- Flush Test Rig
- VICAT Apparatus
- PH Test
- Laboratory Dryer



Ceramics Development & Training Complex

GTDMC & CDTC MERGER WITH TUSDEC BEARING FRUITS

GTDMC & CDTC recently merged into TUSDEC vide Notification from M/o Industries & Production dated 11th December, 2017. Now TUSDEC is proactively working to make these sustainable and highly beneficial for the local industry.

Cement Research & Development Institute (CR&DI)

CR&DI is working under the administrative control of TUSDEC since 2005. CR&DI is offering services in OPC, SRC, White cement and allied materials compliant to the national and international standards like ASTM, BSS, IS, PSS, SLS etc.

895 physical and chemical samples tested in 2017-18. Major client includes NESPAK, Maple Leaf, Zeeruk Int (Pvt) Ltd, ZKB Reliable, Attock Cement, Fauji Cement, Pioneer Cement Ltd.



Research Lab

Skills Development Centers (SDCs)

NIDA Lahore

Training on Plant Condition Monitoring for Reliable Production and Extension in life of Plant Assets



TUSDEC/NIDA has organized a comprehensive training on Plant Condition Monitoring in a local hotel covering the techniques of vibration analysis, oil & lube analysis, field balancing, laser alignment & infrared thermography techniques using thermal imaging cameras. Lead Trainer having Doctorate in the field of Condition monitoring and vast industrial experience conducted the training session. Practical demonstration and field visit was also carried out to enhance understanding of 22 participants gathered from corporate sector and strategic organizations like ICI, KSB Pumps, Berger Paints, KRL etc. Three days training was arranged in collaboration with Institute of Reliability and Centered Maintenance (IRCM).

NIDA Quetta

Training on AutoCAD (Civil, Mechanical, Architecture)

NIDA Quetta introduced a comprehensive training course on creating 2D drawings using AutoCAD software. The course focuses on basic drafting techniques and is structured to suit users across a broad range of industries.

NIDA Sialkot

Training on Inspection Techniques for Mechanical Technology

NIDA Sialkot conducted training on inspection techniques for mechanical technology. The institute offers wide range of CAD/CAM courses facilitating local industries through skill development.

Major Training Courses

- 2D & 3D Drafting using AutoCAD
- Export Documentation & Business Communication Skills
- Office Management Program
- Graphic & Vector Design
- Product Development Using Delcam

NIDA Peshawar

NIDA Peshawar conducted IOSH Managing Safety (UK) training for Government Officers of KPK. The training helped in capacity building of management and supervisory level professionals to ensure safety effectively at workplace in compliance with both their organization's policy and best practices in health and safety.



NIDA Karachi

NIDA Karachi is conducting trainings for PMSYDP NAVTTC PHASE IV/Batch II (2018)



SkillTech International Karachi

Upgradation of Electronics/Electrical Lab in SkillTech International Karachi

SkillTech International Karachi upgraded its Electronics/Electrical Lab to meet the latest standards of training delivery for our engineers. SkillTech developed PLC, electrical wiring boards, three phase wiring, HMI development etc. to give more understanding regarding electrical/electronic technology towards trainings.



Industrial Automation & Process Control (PLC/DCS/HMI/SCADA) workshop conducted at SkillTech International Karachi

The workshop provided practical & conceptual knowledge of PLC/DCS/HMI/SCADA among engineering students & professionals from Asia Petroleum and leading engineering universities.



Linkages with Development Partners



TUSDEC signed MoU with Department of Industrial Manufacturing & Engineering, UET Lahore

Lahore: Technology Upgradation and Skill Development Company (TUSDEC) and Department of Industrial & Manufacturing Engineering, UET, have signed a MoU at UET, Lahore to extend cooperation in areas of mutual interest. By this understanding, both TUSDEC and Dept. of IME, UET agree to share respective strengths, experiences, methodologies for technology upgradation, skill development, advisory and business development services etc. aimed at promoting quality, productivity, value addition and competitiveness in industrial sector of Pakistan

TUSDEC and Punjab Energy Efficiency and Conservation Agency (PEECA), Energy Department Punjab, jointly to Promote Energy Efficient Technologies in Punjab

Lahore: Technology Upgradation and Skill Development Company (TUSDEC) and Punjab Energy Efficiency and Conservation Agency (PEECA), Energy Department Punjab, have signed a MoU at TUSDEC head office, Lahore to extend cooperation in areas of mutual interest.



Workshop on Energy Efficiency and Conservation

TUSDEC & PEECA conducted one day workshop on "Energy Efficiency and Conservation Measures for Industrial Sector" at Multan Chamber of Commerce and Industry (MCCI). Through the workshop, TUSDEC sensitized the masses on the benefits of energy efficiency and conservation measures for the industrial sectors in Punjab. It was emphasized that the Government should reduce duty on import of energy conservation equipment and parts to encourage use of energy-saving solutions and development of the local industry. TUSDEC officials reiterated that we must reduce the cost of production by saving energy to compete our neighboring countries in world market. It was further emphasized that Technology upgradation based on smart and efficient energy resources in developing countries can take them to the next level of development



TUSDEC Shortlisted by UNHCR for Project in Livelihood

As Part of the UNHCR selection process of partners, the UNHCR implementing Partner Management Committee (IPMC) has thoroughly reviewed the concept note of TUSDEC and its risk assessment strategy for UNHCR "Livelihoods Program Cycle 2018-19". The UNHCR team has shortlisted TUSDEC for the potential implementation of "Livelihoods" project.



TUSDEC Joins Productivity, Quality and Innovation (PQI) Initiative of Planning Commission as its key implementing partner

Ministry of Planning, Development & Reform (MoPDR) and National Productivity Organization organized Pakistan Productivity, Quality, & Innovation (PQI) Initiative launch and Stakeholders Conference in Islamabad along with its key implementing partners including Technology Upgradation and Skill Development Company (TUSDEC). The Government of Pakistan has taken the initiative to improve Productivity, Quality, and Innovation (PQI) culture in the country by fostering an enabling environment for key sectors. The project will ultimately be scaled to 20-25 priority sectors in the future.



NATIONWIDE FACILITIES



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