A

Report on

Technical workshop

"Vishwakarma Yojana : Sustainable planning for villages"

19th October, Saturday 2013

Venue: Auditorium , BVM Campus, Vallabh Vidyanagar, Anand

Workshop Themes

Energy Audit

Sustainable Solutions:

Rain water Harvesting

Presented By:

Dr. Indrajit Patel & Mrs. Jagruti Shah

Gujarat Technological University

Ahmedabad, Gujarat

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Technical workshop of Vishwakarma Yojana at BVM College, VV Nagar

(19th October, 2013)

GTU had organized a one day Technical workshop of Vishwakarma: Phase-II for central region held on 19th October, 2013 at 9:30 am at auditorium of BVM Engineering College, Anand.

The workshop was inaugurated by esteemed Chief Guest Shri M. J. Patel, Hon'ble Joint Secretary, CVM, VV Nagar, Guest of Honour Shri V. M. Patel Hon'ble Joint Secretary, CVM, VV Nagar, Dr. F. S. Umrigar, Principal, BVM Engineering College, Dr. Indrajit Patel, Hon'ble director, Vishwakarma Yojana, Dr. L. B. Zala, Head of Civil Engineering Department, Dr. A. K. Verma, Head of Structural Engineering Department, Dr. B.K. Parekh, Head of Electrical Engineering Department. Also distinguished guests and speakers like Prof. Yogesh Prajapati, BVM College, Mr. Shahi Shah, Trustee, Engineering Seva Trust, Vadodara, Mr. Sanjay Patel, CMD, SP Renewable energy sources Pvt Ltd., Borsad-Anand were present.

18 Nodal officers from BVM-Anand, BBIT-Anand, Parul Institute-Vadodara, GEC-Godhra, GP-Godhra, GEC-Dahod, GP- Dahod, GP-Chhotaudepur, GEC-Bharuch & KJP-Bharuch and 288 Students from respective colleges attended workshop.

Ms Varsha Raina, PG student of BVM College welcomed all. As per our Indian tradition, Workshop was initiated with Prayer & lighting of the lamp. She requested Dr. F.S. Umrigar to share his view on this Occasion.

Dr. F. S. Umrigar, Principal welcomed all in BVM Campus. He appreciated efforts of all Students & faculties from Vishwakarma Yojana. He shared an example of metropolitan city issue. Identifying basic needs, employment opportunity, Rural Infrastructure management Techniques for Rural people is necessary for Indian villages. He appreciated the initiatives of GTU for the development of Student to get real world experience.

Dr. Indrajit Patel, Hon'ble Director, briefed all about the progress of Vishwakarma Yojana stepwise, objectives features, planning & present Status work to be dine during current phase, modality of project in context to rural development & role of education institutions. With the core theme of technical workshop, he explained the aspect of Sustainable planning for villages. Issues due to Globe warming, Biodiversity, Disasters and many more are increased in

this era. Sustainable planning means to fulfil present needs without compromising the future demand & that can be only possible by using natural resources. In this semester, Students have to design at least one village by using natural resources as stated by him.

He has given example of Punsari village with the facilities like 24 hrs Wi-Fi, Drinking water, CCTV Cameras, Pucca Roads, Street Lights & other basic amenities which was developed by Panchyat fund only. He shared various examples of Sustainable designs for the villages and told Students to give their best efforts for village development. He sincerely thanked all Stake holders and contributors for timely support and guidance.

Shri V. M. Patel, Hon'ble Joint Secretary, CVM - VV Nagar shared his view on this occasion. 80 % of people lives in Village with the occupation of Agriculture. In the developing Countries issues like population rising, Pollution due to industrialization, High Migration rate & others problems raised in urbanization. To overcome all these issues, developing rural area with providing all basic infrastructure facilities is a key solution for our country. Vishwakarma

Yojana is one of the approach to help our society with students' efforts. He wished all for best work.

Shri M. J. Patel, Hon'ble Joint Secretary welcomed all. He told Student to plan with brain, by using advance technology & natural resources for Sustainable planning. He Shared examples of Solar lights, Solar Pump, Rain water Harvesting System, Biogas Plants, wind & Tidal energy for Gujarat State. He Congratulated GTU for such initiatives & gave best wishes to all.

Dr. A. K. Verma, Head of Structural Engineering Department told Students to design with holistic approach by studying condition of rural area different techniques should be adopted. He told to focus on issues of sanitation which is widely prevailing in our villages. He told students to give their best Solutions for Villages because village development is key for the development of any country.

Dr. L. B. Zala thanked Education Department, Commissionarate of Technical Education for bringing such a initiatives. He acknowledged efforts of GTU & its Team. He expressed deep sense of gratitude to Hon'ble VC, Dr. Akshai Agrawal – GTU for his unwavering encouragement, motivation & support to the project. He thanked all Nodal officers & students for involving in to such a prestigious project.

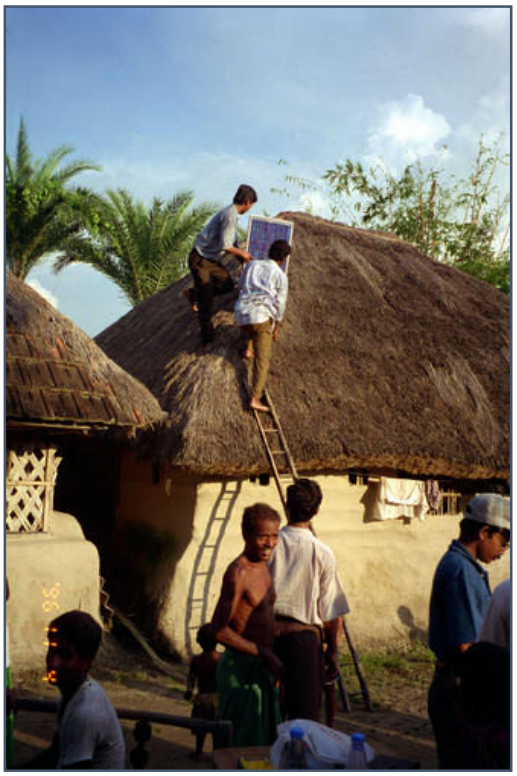
Participants at the Technical workshop

Mrs. Jagruti Shah- Project co-ordinator has briefed all for Technical Session. Technical Session have grouped in three core themes for Sustainable Planning which include Energy Audit, Rainwater Harvesting & Energy efficient Building, Waste to energy for villages.

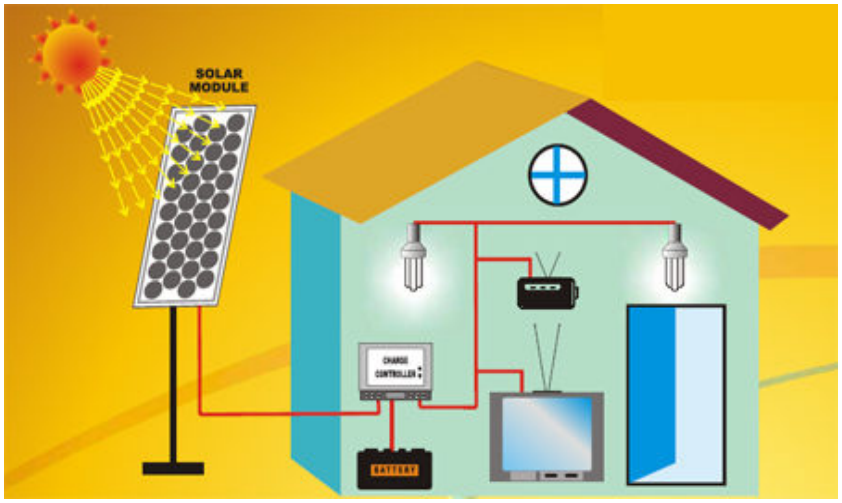
Technical Session – I: Energy Audit

The first Session was conducted by Prof. Yogesh Prajapati from BVM Engineering Collage. He is a certified Engineer from the Bureau of Energy Audit. Mr. Prajapati has performed energy audit for Reserve bank of India, Zudys Cadila Pharmacy, ONGC-Hajira & other well-known firms.

In his presentation, he presented Energy Scenario, Energy Basics, Energy Audit, its Need, Types, Phases, Typical Energy Audit Questions, Energy Audit of Some Load Found in Villages, Energy Saving Examples, Instruments and Metering for Energy Audit, Energy Consumption Scenario in Rural India, Some Applications of Renewable Energy sources for Rural Development. He explained students the meaning of energy audit. Energy Audit means the verification, monitoring and analysis of use of energy including submission of technical report containing recommendations for improving energy efficiency with cost benefit analysis and an action plan to reduce energy consumption. Energy Audit is a systematic study of energy inputs, conversion and outputs of energy consuming equipment. Goal of Energy Audit is to reduce energy consumption per unit. He also briefed



some points to save energy like: Switching OFF ideal Lights, Fans, Reduce Water, Steam, Compressed Air Leakages, Use of high Efficiency Pumps, Fans, Motors, Lights, Cleaning of equipment, water treatments etc., Use of Compressors, Fans, Pumps with minimum pressure, Temperature,, flow, Use of small size equipment like Motors, Pumps, Refrigerators, T.V sets, 400 Ltr. Fridge will consume more energy than



165 Ltr. 42 Inch T.V consume 4 times more power than 21 Inch., Cycling/ walking in place of 2/4 wheelers., Mail, Telephone in place of Travel. He also explained some applications of renewable energy sources for rural area with design. Students from Electrical Engineering branch asked various questions

reading electrification problems in villages at the end of the session. Mrs. Jagruti shah thanked Prof. Prajapati on behalf of GTU.

Technical Session – II: Rain Water Harvesting System & Energy Efficient Building

Shri Shashi Shah is well known Engineer & Trustee of Engineering Seva Trust in Vadodara Conducted this session. He has designed various Energy efficient Buildings & Rain water harvesting systems.

His presentation was in two parts which included: Rain water Harvesting system and Energy efficient Building. He discussed various types & components to design Rain water harvesting System and issues phased by village dwellers. He shared various examples with design for rain water harvesting system for different conditions.

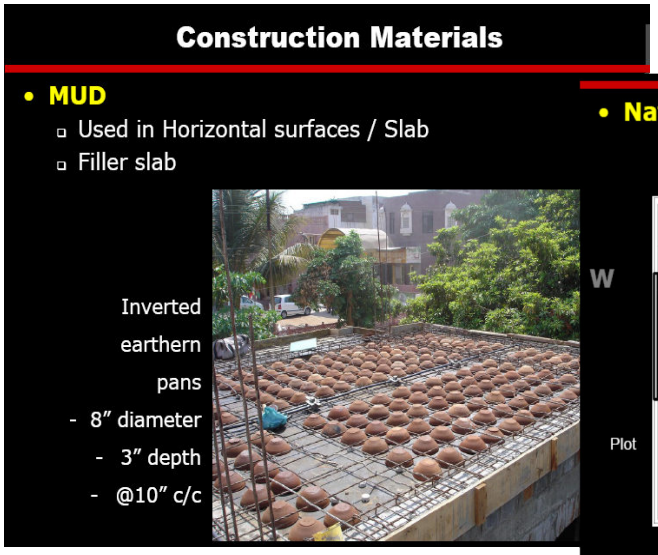
If water is Running- make it to Walk,

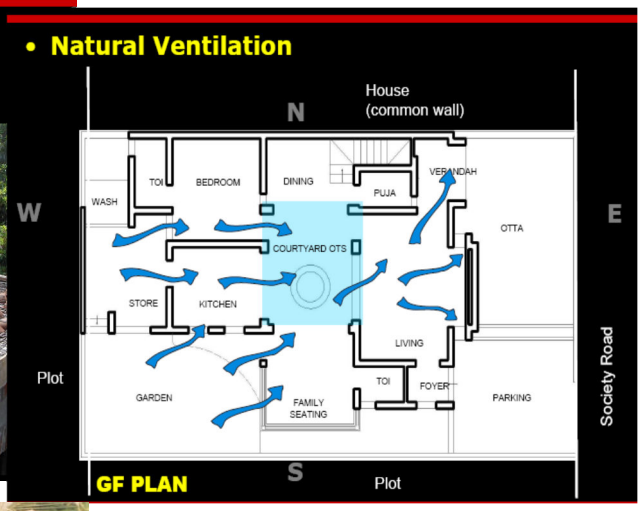
Walking- make it to Stand

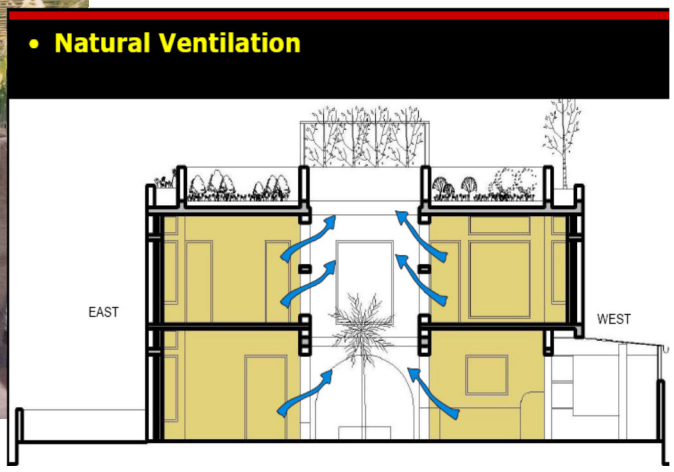
Standing- make it to Sit,

Sitting- make it to Sleep

He explained various basic parameters to design energy efficient building. Energy efficient building is a building which consumes minimum energy at construction level as well as maintenance level. He briefed various properties of construction materials. He shared example of Society designed by him at Vadodara.





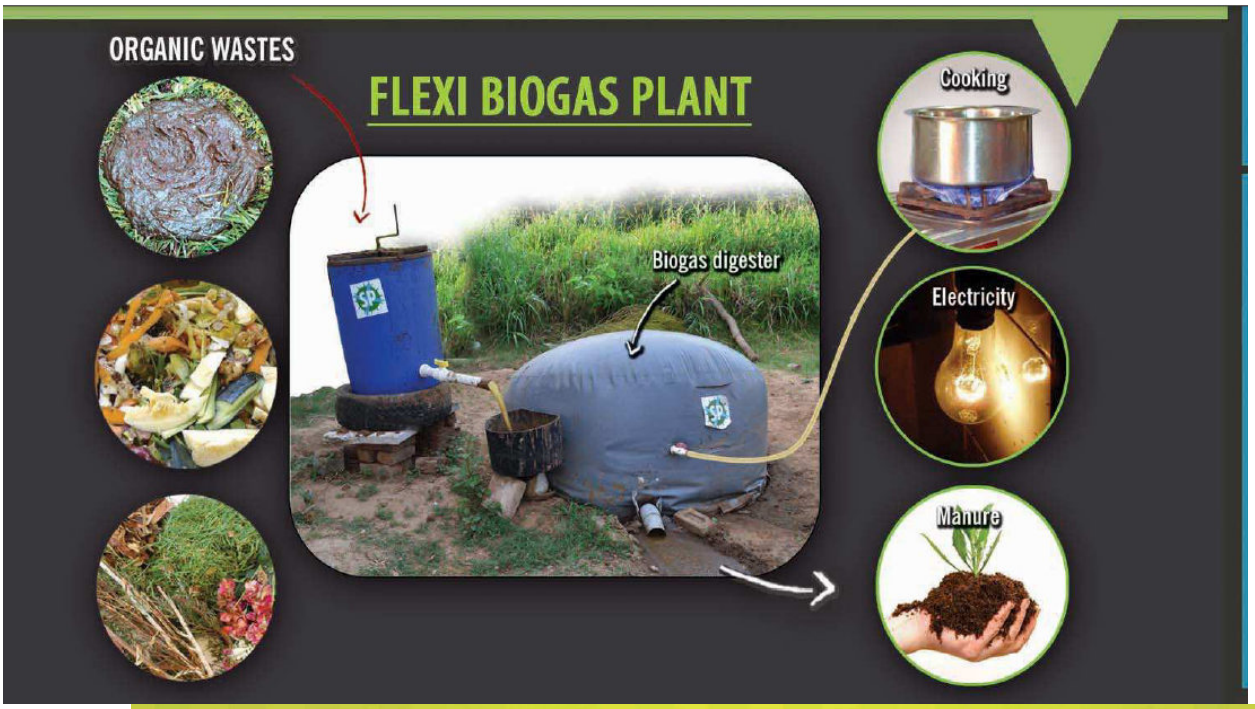


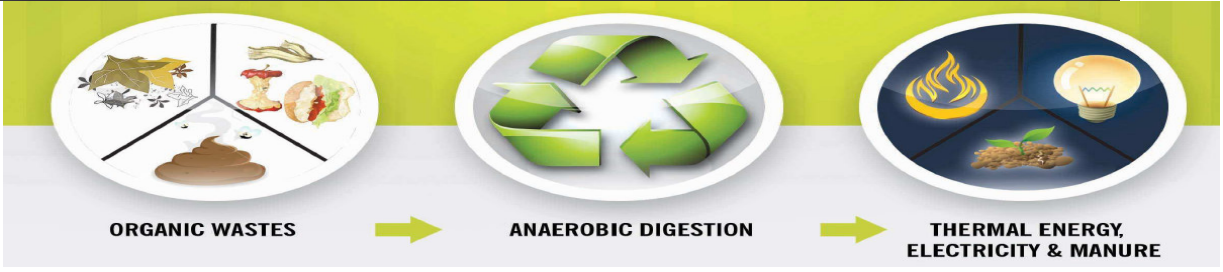
His presentation included advance & Innovative techniques for the construction with local material. Nodal officers and students asked various issues phasing by them and solutions for the same was given. Jagruti shah thanked Mr. Shashi Shah for his valuable guidance and motivation to students.

Technical Session – III: Sustainable Solution: Waste to Energy

Mr. Sanjay Patel, CMD of SP Renewable energy source Ltd has conducted this session. He has experience of more than 15 years in engineering & design activities of renewable energy Sources and waste to energy generation specially for villages.

He presented various sustainable solutions for villages of India. He mainly focused on the design of Biogas Plant for the village condition of Gujarat. Design manufactured by him was optimum solution for the Indian villages. He explained the concept of waste to energy and how it can be benefited to Indian Villages. He explained applications of biogas plant. He motivated students for such a innovations for villages.





Brain Storming Session

Mrs. Jagruti briefed about design phase to Student & Nodal Officers. Student & Nodal officers shared their Problems & issues for designs in villages. She has given various solutions to their issues & difficulties. She shared various guidelines for designing part.

Prof. Amit Vankar, Nodal officer thanked all Student, Nodal Officers & Staff of BVM College & team of GTU for making orientation program success for Vishwakarma Yojana.

On behalf of Vishwakarma Yojana, GTU, Ahemdabad

Dr. Indrajit Patel

Usha Banker

Jagruti Shah