



**NATIONAL WORKSHOP
ON
"JUGAAD" IN MANUFACTURING**

**Organized by
MAIN WORKSHOP
INSTITUTE OF TECHNOLOGY
BANARAS HINDU UNIVERSITY
VARANASI - 221 005, U.P.**



January 8-9, 2011

Objectives:

The "National Meet of Engineering practitioners on "JUGAAD" IN MANUFACTURING is basically organized for exchange of experience & knowledge in the field of fabrication of parts & components within the limited resources. The term "JUGAAD" IN MANUFACTURING represent the success & achievement within limited resources. The idea used in "JUGAAD" IN MANUFACTURING by someone need to be recorded & transfer to other practitioners so as other can also be motivated to improve the skill to handle the crises. The technical employees of engineering Institution are always handicap due to limited resources (man, machines and materials). The challenges for Technical staff in the field of fabrication of parts/ component as well as substantiating in research activities are unpredictable. Therefore the Engineering practitioners and technical employees are using their experience and knowledge to overcome the situation and this is what we commonly say "JUGAAD".

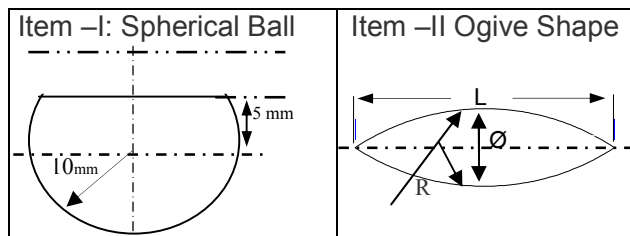
Who can participate? : Technical Employees of teaching institution and Engineering practitioners of industries can take part in this workshop.

Why to participate? : Experience & knowledge of individual need to be recorded for future reference and use.

What to do? : Send the registration form along with the registration fees. The write up if any, related to fabrication of any unique component must include operation plan, machine used and *Jugaad* made.

Not Clear!

How to fabricate the given items. Send the operation plan, machine required or used, JUGAAD needed to fabricate the given items.



Please send hard/soft copy giving full details such as operation plan and machine(s) used to fabricate item (I) and (II).

Still not clear? : Send your enquires on following address and mail to:

Shri M.D. Tyagi
Workshop Superintendent
Main Workshop, Institute of Technology
Banaras Hindu University
Varanasi - 221 005

&

Organising Secretary
National Workshop on
"JUGAAD" IN MANUFACTURING

Tele. No.	(0542) 2307028 – 29
Cell No.	+919450545514
Fax No.	+ 91-542-2368174
E-mail	ws@itbhu.ac.in

Registration Fee: Send DD in favour of Organising Secretary, NWJM, IT, BHU, Varanasi.

1. Students & Technical Staff from Teaching Institution : Rs. 500.00 (2.) Technical Staff from Industries : Rs. 1000.00
3. Sponsorship (With three Registrations free) : Rs. 5000.00

Dead Line: Invitation to submit abstract & Registration with full length paper on or before 30th November 2010 by post or email to ws@itbhu.ac.in.

Venue: MAIN WORKSHOP, INSTITUTE OF TECHNOLOGY BANARAS HINDU UNIVERSITY, VARANASI- 5.



About the city: The city of Varanasi, known as the city of temples and learning, is a place of great historical and cultural importance. This religious capital of India is situated on the banks of the holy river Ganges and is presided over by Lord Shiva. It is the heart of India and an epitome of the synthesis of cultures, religions and races. The holy Buddhist place, Sarnath is in its precincts. Varanasi is the premiere place of oriental learning. Simultaneously it is keeping pace with modern advanced knowledge. It has three universities, one Tibetan Institute and Institute of Arabic Studies. The city is reputed for silk fabrics, perfumes, artistic brass and copper wares and a variety of handicrafts. It is an important centre of literature, art and culture. It has produced great poets, writers, musicians and scholars. This vibrant city of joy knowledge and liberation has a magnetic attraction for people all over the world. The city is well connected by rail, road and air. Minimum temperature will be around 5⁰C.

Executive Committee:

Prof. D. P. Singh : **Chief Patron**
Vice Chancellor, BHU
Prof. K. P. Singh : **Patron**
Director, I.T., BHU
Prof. Virendra Singh : **Vice - Patron**
Dean, Faculty of Engg. & Tech.
Prof. A. K. Jha : **Convenor**
Deptt. of Mechanical Engineering
Prof. Santosh Kumar : **Co – Convenor**
Deptt. of Mechanical Engineering
Shri M. D. Tyagi : **Organising Secretary**
Workshop Supdt., Main Workshop
Dr. S. K. Mandal : **Treasurer**
Asstt. Workshop Supdt., Main Workshop

Advisory Committee:

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Prof. R. S. Singh	Prof. V. K. Srivastava
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Organising Committee:

Mr. L. S. Rao, Foreman, Main Workshop, I.T., BHU
Mr. B. Rajak, Foreman, Main Workshop, I.T., BHU
Er. Bipin Kr. Srivastava, Senior Section Engineer, DLW



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Registration Form**



Name :----- Designation:-----

Organization's Name & Address :-----

Mailing Address -----

E-mail:-----Phone/Fax:-----Accommodation : Required

Demand Draft/Cheque No. ----- Not Required

- Please send Rs. 500/- Per person as advance for 2 days shared accommodation in BHU campus.

Recommendation by sponsoring Authority(with office seal)

Signature of the Applicant

Date:-

Place:-

Example: - Cutting of a small thick titanium work piece into two round pieces.



- ▶ 1st figure shows two pieces rectangular blocks (JUGAAD).
- ▶ 2nd figure shows the specimen in holding position in the block.
- ▶ 3rd figure shows the specimen after finishing the job.

Bicycle weeder



- **Advantages :**
- A person can weed one acre land in five hour.
- It is very easy to operate and is ideally suited to the needs of marginal farmers who can not afford to maintain bullocks.
- The tiller attachment enables the farmers to cultivate light and medium soil up to a depth of 3 cm.
- Only one labour is required to operate it. The device is so simple that even 12 year old boy or woman can operate it safely without difficulty.

Pump made from Bamboo for irrigation purpose



Salient Features of 3.5 inch pump (metal barrels) with bamboo treadles

- It has a 3.5-inch barrel diameter.
- Made of Mild Steel (MS) sheet metal, the pump weighs approximately 5 kg.
- It is ideal for lifting water from water table depth ranging from 8 feet to 20 feet (maximum lift 25 feet).
- Water output is approximately 0.8 to 1.25 litres per second.

Micro Windmill Mobile charger



The Micro Windmill Mobile charger is developed by NV Satyanarayana a science graduate based in India. It uses Wind to charge the Mobile phone. It is basically a small fan with blades of 10 cms diameter connected to a generator with an output wire which connects to your mobile phone. The average efficiency of windmills is found to be 35 per cent as compared with five to 15 per cent of solar units. The components are weather proof so you can use it any weather conditions and being lightweight it can be carried easily. Batteries of Laptops, Handhelds, MP3 players, Videogames can be charged using the Micro Windmill Charger.

Modified Wood Stove



Traditional wood stoves, by virtue of their design, do not optimally use the heat generated and also emit much smoke and pollutants due to incomplete combustion. In this case, the stove consists of two chambers, each with a burner for cooking, and a geyser for heating water. Both burners can be used simultaneously, saving time and using the heat effectively. The heating chambers are oriented at different levels in order to be able to completely utilise the heat energy produced connected to a chimney, which provides part of the draft. Inside the main chamber, mud has been used as insulating material to retain the heat. There are air vents on the sides of the first chamber to allow cooling of stove so that it is not too hot to touch for the women/men using it.

Scooter mounted washing machine



- Based on the same principle of flour mill Shaikh Jahangir made the scooter mounted washing machine. The machine will be mounted on the back seat of scooter and will be powered by the scooter engine with the help of V-belt and pulley transmission system.
- The washing machine have horizontal rotating shaft. There are two cylinders; outer one is used as the body. The inner cylinder which is made of perforated sheet of metal is used to put the cloths for washing. Outer cylinder is used to contain the water. The inside cylinder is attached to the shaft which in turn is powered by the engine through V-belt and pulley transmission system.