Summary of Visit to
IWST - Advanced Wood Working Training Centre, Bangalore on 01-oct-2021

https://iwst.icfre.gov.in/awwtc/awwtc.htm

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1. Objective: To explore opportunities for machine tool industries in Wood Working Machinery and allied activities

2. Participants:

- Mr. Nikhil Agrawal, Managing Director, Nagel Special Machines Pvt. Ltd.
- Mr. Shuvo Mukhopadhyay - COO - Taurus Private Limited
- Mr. S Satish Kumar, Sr. Advisor, IMTMA

3. Introduction:

Institute of Wood Science and Technology (IWST), is a Research institute situated in Bangalore in Karnataka. It works under the Indian Council of Forestry Research and Education of the Ministry of Environment and Forests, Govt. of India. The Advanced Woodworking Training Center (AWTC) is located at the Institute of Wood Science & Technology (IWST). The AWTC was started as the first Training Center in India and its basic aim is to enhance the quality of Indian wood products manufacturing industries so as to attain global competitiveness by using the state of art machineries from Italy. This center will help the Industrialists to have an exposure of various wood working machineries.

Visit to IWST - Advanced Wood Working Training Centre, AWTC, Bangalore, was meant for capturing first-hand information about various wood working machineries, types of woods, wood processing aspects, basics of seasoning and also exploring and generating opportunities for machine tool industries to build machinery and equipments for the Wood Working and Furniture manufacturing industries.

3.1.1 Summary of the visit :

Wood working task force members visited IWST- Advanced Wood Working Training Centre (https://iwst.icfre.gov.in/awwtc/awwtc.htm) and Wood Museum and interacted with staff and faculty and witnessed demonstration of wood profiling/routing, edge banding, sanding, boring, sawing, seasoning machines and equipments.

AWTC is having, conventional machines and CNC machines which are used for imparting skill training to participants. They also conduct one year residential diploma course in wood working. Faculty of AWTC demonstrated the various wood working machinery listed below:

1) Sliding table Panel Saw
2) Surface thickness planar – VEBA-FS400
3) Multiple spindle boring machine – VITAP
4) Stapler for making frames, photo frames
5) Narrow belt sander, conventional machine
6) Profile cutter / copy profiler
7) Universal Oscillating sander – ACM-OBS-150
8) ORMA Hydraulic Press, 150bar, for hot and cold lamination
9) Wood turning lathe
10) CNC Router - Roverk 1224 – used for nesting for panel machining
11) CNC Work Centre - Rover A3 – 3 heads, used for boring-vertical and horizontal, routing and sawing
12) Through feed edge banding machine
13) Seasoning equipments

Opportunity for members:

- For study of various Wood working machines – features and operation and processes
- Open atmosphere and easy access - Can visit the AWTC with prior appointment to understand the process
- Facility can be used for testing of wood samples
- Facility can assist in providing seasoning of small batch of wood
- They can offer customised training in wood processing for a small batch of participants

IWST- Advanced Wood Working Training Centre facility:

This unit offers short term, medium term and diploma courses in skilling

CNC ROUTING MACHINE
Used for cutting, drilling, boring and shaping

BAND SAW
Used for rip cutting, cross cutting, profile cutting and chamfering on wood piece

CHAIN MORTISE MACHINE
Used to make mortising holes for the purpose of making Tenon and Mortise joints

SLIDING TABLE PANEL SAW
Used to cut the big sizes of panels to the required size

MULTI SPINDLE BORING MACHINE
Used to make multi boring & holes for the purpose of joining the wooden panel boards

NARROW BELT SANDING MACHINE
Used to Smooth finish the wooden planks surfaces

PIN HEAD ROUTE
Used for routing operations on the wooden planks

SURFACE PLANER AND THICKNESSER
Used to planning flat surfaces of the wood pieces

CIRCULAR SAW
Used to do rip cutting, cross cutting and grooving operation

RADIAL ARM SAW
Used to grooving, cross cutting, mitre cutting, chamfering and rip cutting

SPINDLE MOULDER
Used to make edge profiling operation on the wooden planks to give beautiful shape to the edge

THROUGH FEED EDGE BANDING MACHINE
Used to make edge profiling operation on the wooden planks to give beautiful shape to the edge

(Source : AWTC)

Glimpse of machines at AWTC

(Courtesy : AWTC)

3.1.2 Opportunity for Machine Tool membership :

- ✓ Most of the machines listed above can be realised by our membership OEM's.
- ✓ Safety aspects are very critical and needs to be addressed for each of the equipments/ machines

3.1.3 Contact Details :

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3.1.4 Annexure:

Information about Machines used in IWST - Advanced Wood Working Training Centre

1. BIESSE Rover K FT – 1224

WORKING FIELD

		X	Y	Z	
				WITHOUT / WITH SWEEPER ARM	WITH ROLLERS HOLD-DOWN UNIT
ROVER K FT 1224	mm/inch	2465/97	1260/50	170/7	90/4

SPEED

	X	Y	Z	
m/min foot/min	25/82,0	60/196,9	25/82,0	low speed
m/min foot/min	60/196,9	60/196,9	25/82,0	high speed

VECTOR SPEED

m/min foot/min	65/213,3	low speed
m/min foot/min	85/278,4	high speed

https://www.biesse.com/in/wood/cnc-work-centres/rover-k-ft

2. BIESSE Rover A3

Specifications

X stroke	3528 mm
Y stroke	1635 mm
Z stroke	200 mm
Axis nbr	3
Tool changer positions	10
Vacuum pump	250 m³/h
CNC type	BIESSEWORKS

https://www.biesse.com/in/wood/cnc-work-centres

Description

- Machining Center Biesse Type A3 ROVER
- Working areas: X = 3060 mm, Y = 1260mm, Z = 150 mm
- Stroke of axis: X = 3528 mm, Y = 1635 mm, Z = 200 mm - 6 shots ATS-L = 1200 mm