

Wood for thought on better 'made in India' furniture

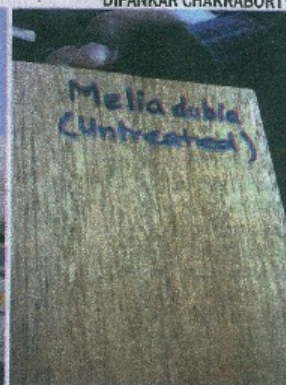
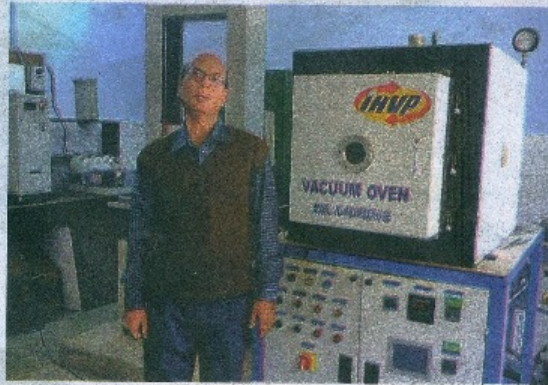
Scientists develop technology for thermal modification of wood into high-quality timber

DIPANKAR CHAKRABORTY

Dipankar Chakraborty
bmfeedback@gmail.com
TWEETS @BangaloreMirror

Indian scientists have developed a cost-effective technology that adds value, colour and strength to timber woods, some of which grow in Karnataka but traditionally considered poor cousins of their other elite counterparts like mahogany (*Swietenia* spp.), rosewood (*Dalbergia* spp.), sal (*Shorea robusta*), shisham or sissoo (*Dalbergia sissoo*), teak (*Tectona grandis*), etc. The new findings — and experimentation to follow via launch of a pilot project ahead of commercialisation of what scientists call 'thermally processed' woods — is likely to revolutionise the multi-billion rupees Indian furniture and wood-products industry.

At present processed woods are mainly imported from Europe at huge cost. The breakthrough is expected to bring down the use of environmentally harmful toxic preservative and dyeing chemicals being used to add that extra colour, shine and teak-like effect on wooden furniture, panels and flooring tiles currently available in the market. Some of these trees are: rubberwood (*Hevea brasiliensis*), bengali jali (*Acacia auriculiformis*), eucalypts (*Eucalypts*



Dr SR Shukla stands in front of the 'Vacuum Oven' which thermally processes inferior wood to better quality wood (Left); and modified *Melia dubia*

tereticornis), and kadbevu (*Melia dubia*). These woods could not be used to their fullest potential for making finished high-end wood products and furniture. All that will change with the development of new thermal wood processing technology by scientists at the Bangalore-based Institute of Wood Science and Technology (IWST).

A team of Bengaluru-based wood scientists led by Dr S R Shukla in the Wood Properties and Uses Division of IWST, under Indian Council of Forestry Research and Education (ICFRE), Ministry of Environment, Forest and Climate Change, New Delhi, have come up with a prototype

of 'Vacuum Oven' or a Treatment Chamber to thermally process the inferior quality wood varieties into high-quality woods. Dr Shukla claims the processed woods can substitute certain high value species used for parquet flooring, siding, cladding and decking purposes. They are also suitable for external applications like cladding, window frames, garden furniture etc.

The modification of woods into high-value species is done through high-temperature (150-250 degree C) in inert environment inside the 'Vacuum Oven'. The prototype of the thermal modification system has been assembled at the city's Peenya based manu-

facturing company.

The ICFRE has now initiated steps to set up the first pilot project of Thermal Wood Processing Plant with the financial aid from Punjab Forest Department in Punjab at a cost of about Rs 50 Lakhs. IWST director Dr V Ramakantha is confident of the pilot project's success. He says commercialisation of modified wood would begin thereafter. There is huge demand for modified woods for furnitures and panelling in India. The improved Indian variety of *Acacia* woods will be available in the range of Rs 1500-2000 per cubic feet (cft) as against the Rs. 3500-4000 per cft of modified imported woods.

