

by WARD WILLIAMS

Greenply Industries

# India's new MDF mill



**P**anels & Furniture Asia visits Greenply Industries Ltd., located in the North of India, at Rudrapur, 240 km from New Delhi, India's capital city.

MDF is not new to India. Until now, only four MDF mills of any size have been built, with capacities ranging in size from 150 to 265 m<sup>3</sup>/day. The Greenply mill, now under erection, will clock in at 600 m<sup>3</sup>/day, or 180,000 m<sup>3</sup>/year.

Two other new operations are Balaji Action and Teekays, both with expected capacities of 150 m<sup>3</sup>/day (each equivalent to 45,000 m<sup>3</sup>/year) for an eventual total of 90,000 m<sup>3</sup>/year.

The total capacity of the existing aforementioned three mills under construction is 270,000 m<sup>3</sup>/year. Thus, India will soon be able to join the "One-half million m<sup>3</sup>/year MDF Club," which is a notable step forward in the nation's industrial development!

## India's particleboard and hardboard history

Particleboard and hardboard manufacture in India both have long histories, dating back to the 1950s. MDF followed in 1989, employing European technology and hardware. Most of these plants were of moderate size when compared to those found in Europe and North America, ranging between 30,000 and 90,000 m<sup>3</sup>/year. India's largest PB mill (a new project by Star Panel) is rated at 240,000 m<sup>3</sup>/year.

Plywood, based on extensive native hardwoods, played a major and historic role in the development of this nation's panel industry. The first plants were put in by British interests in the North & NE parts of India, including the historic Andaman Islands, circa 1925.

Wood product manufacturing went into a tailspin in the late 1990s after the Government called a halt to harvesting operations. Approximately 80 mills in the North East shut down, forcing new plants to open near seaports where timber could be imported. (Note: There is no officially reported total figure for the overall output per year of all types of Indian panels.)

## An Asian emblem for the future

The millsite is at Rudrapur, a city 240 km east of New Delhi in India's North. The technology and virtually all of the hardware are being sourced from European suppliers.

Logs will be broken down in a drop-fed drum chipper supplied by BRUKS, and chips (with bark still on) will be reclaimed by Euc ladder-type units to be supplied by a prominent material handling supplier, Tras-mec of Italy. The refiner from Metso is an EVO 54/56. Drying in two stages in an SMT (Sunds MDF



*A view of the concrete refiner building with the dryer structures in the background*



*Installed thermal oil pumps next to the press*

Technologies) fluegas-heated dryer, which will feed fibre into a Z-sifter.

Dieffenbacher of Eppingen, Germany, is building the forming line, which is to be followed by a 28-metre continuous press. Incidentally, this unit will be India's first such installation of its type.

The outfeed line is being supplied by the new SMT technology combined and will lead to a Lukki installation for the intermediate and time storage.

Mr. Mittal explains, "The most popular size in India is 8 x 4 ft, and our line will produce master panels of 8-ft width, but it also will have the capability to produce 7-ft-wide panels. We will also be the first manufacturers to supply MDF in 8x6 and 7x6 sizes."

There are five existing plants as follows:

- Shirdi Industries - 150 m<sup>3</sup>/day - 45,000 m<sup>3</sup>/year**
- Nuchem Ltd. - 200 m<sup>3</sup>/day - 45,000 m<sup>3</sup>/year**
- Mangalam Timber - 200 m<sup>3</sup>/day - 60,000 m<sup>3</sup>/year**
- Bajaj Hindustan 1 - 285 m<sup>3</sup>/day - 85000 m<sup>3</sup>/year**
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**Total capacity of above 4 mills: 1,120 m<sup>3</sup>/day - 310,000 m<sup>3</sup>/year**  
**Total MDF eventual capacity of India's seven producers: 580,000 m<sup>3</sup>/year.**

\*\*Data is made available via the kind cooperation of Mr. Shobhan Mittal of Greenply

An 8-head sander, being supplied by Steinemann of Switzerland, is of latest configuration with a design speed of 100-120 m/minute, less than the standard velocity, as much as the 5.5 metre long master panels will be shorter than the longer panels needed to justify higher sanding speeds due to



*Dryer stage 2*

### The Asian Subcontinent's Shining Star!

#### Economic colossus: Key data on India:

- 7th largest country in the world
- A land area of 32.87 million km<sup>2</sup>
- A population of 1.15 billion persons
- A GNP exceeding 1 trillion USD dollars (GDP)
- A GDP growth approximating 9% (5-year average)
- Per capita income growth in the 7% - 8% range
- An economy rising steadily by approximately 8% - 10% per year over the last five years
- A "Top 10" nation in total forest area.
- Forest cover is 20.6%.
- Others: China 14.3%, Indonesia 60.6%, Malaysia 47.1%

\*\*Source: UN-FAO



Energy plant

single panel feeding cycle time.

Surfacing is to be assigned to a Giben sanding line from Italy, followed by a book saw, also of Giben manufacture.

On the heat plant side, a Thermax moving-grate (coal, agro-waste and wood-fired) is equipped with an ESP. The dryer will be flue-gas-fired. Thermax, a prominent Indian supplier and market leader of energy systems, has developed the energy plant based on their expertise in the field, with assistance and guidance from Dieffenbacher's technical team.

Other key suppliers include Scheuch of Austria for the main pneumatics, Tras-mec and PAL for material handling and conveying, and Siemens for the S7 7PLC and Wonderware Intouch HMI.

Consultant for the project is Dave Allen of Auckland, New

Zealand, who has a number of MDF mills throughout Asia, Latin America, Australia and NZ in his portfolio. Asked to comment on this landmark high-tech Indian MDF mill, he called it "a very modern technolog concept plant. It is being implemented to turn out 200,000 cubic metres per year. This translates to 605 m<sup>3</sup>/day on a 330 m<sup>3</sup>/day on a basis of 16-millimetre panels."

Equipment from Germany supplier factories have already been delivered in March this year, aiming for a startup target date in December, 2009.

### Wide use of MDF panels is foreseen by Greenply chief

In his speech at the 2009 Seattle Symposium, Greenply Executive Director Shobhan Mittal referred to an Indian market share estimate of 20% for composite wood panels MDF and PB. There is a high degree of panel value-added treatment by HPL, decorative veneers and PVC foils and other techniques.

This provides the base panel suppliers with a very broad range of application areas, as found throughout the "MDF world" elsewhere but includes certain products popular with Indian consumers. These include decorative gifts and toys, Indian handicraft items, sports goods, scientific instruments, hifi, slates, shoe heels and scales.

### Enthusiasm and optimism for MDF's future

The Indian wood panel industry executive, Shobhan Mittal, forecasts greater efforts by his industry colleagues in promoting modern panels. He foresees consumers changing their tastes, resulting in a boost in consumption. With plywood at a standstill in India, engineered wood panels of MDF will expand their horizons. To top it all off, he points to the Indian economy's robust growth, bringing with it an overall surge in demand for panels.

Bravo MDF! **PFA**

## Author's Note:

### On the edge of a new era

This new world-class MDF development described here is on the threshold of opening up for India a new era of wood-based innovations in furniture, cabinetry, fixtures and, interiors. Indian art and artefacts have charmed and inspired admirers for millennia. They will soon have a strategic opportunity of large proportion as a base for further development - both inspiring and utilitarian in applications.

The properties of MDF such as its earth-like natural color and uniformity of texture plus dimensional strength, coupled with ease of forming and finishing, will all be highly sought after by designers, artisans, architects and the ultimate buyers, users and specifiers. "Made In India MDF" could well become a new symbol to excite and inspire those who appreciate value, quality and attractive appearance and functionality in their surroundings.



Shobhan Mittal has blended a solid education in business and technology along with practical experience in the wood based panels industry that prepared him to take over the Engineered Panel Division of Greenply Industries Limited. This is a family-owned business that is engaged in many different aspects of panel production, value-added processing and marketing of forest products throughout India. Shoban's father, Mr. Shiv Prakash Mittal, is the Executive Director of the enterprise.

Shobhan describes his current duties: responsibility for the Engineered Panel Division within Greenply and its production, sales, marketing, finance, HR, advertising and PR, as well as the whole operations of the integrated plywood and PB mills in Uttarakhand. He is working to set up a pan-India dealer network for the engineered panel division, along with advertising/PR. He is also involved in supporting the national marketing of other company products, including veneers, doors and plywood oversees national marketing of other company products, including veneers, doors and plywood. The Number One responsibility, however, centres on the investment of 300 Crores (equivalent to US\$65 million) in the new MDF mill at Uttarakhand, as described in the accompanying report.

Dave Allen, New Zealand consultant, participated in Greenply's project. The experience he gained in more than thirty MDF and other panel board projects throughout the Southern Hemisphere was provided to the Greenply owners for the new mill. He is based in Auckland, New Zealand, where he has long been associated with Metso and its predecessors. His field of work stretches from Southern Brazil through Argentina, Chile and Ecuador into Asia, including Malaysia.

