

# Dynamic growth

The Evergreen Group has been one of the most dynamic panel and furniture making concerns in South East Asia in recent years, growing by both acquisition and expansion. Mike Botting visited the group's latest acquisition, in Southern Sumatera, to bring the first of his reports from S E Asia

**U**nder the leadership of its young and dynamic chief executive JC Kuo, the Evergreen Group has risen from a small wood based business started by Mr Kuo's father over 30 years ago to an internationally operating ready-to-assemble (RTA) furniture, and panel, manufacturer with production facilities in Malaysia, Thailand and now Indonesia.

The success of the group was recognised in a very significant way in November of 2007. This was when Mr Kuo attended an awards dinner on Sentosa Island, Singapore, to receive the accolade of being included in the prestigious *Forbes Asia* magazine's list of the top 200 businesses in the Asia Pacific region with turnover of under one billion US dollars.

Evergreen appeared in the list for Malaysia with sales of US\$180m in 12

months and net income of US\$17m (*WBPI* news, issue 6, 2007, p12).

Part of the rapid growth of Evergreen has been effected by expanding production at its existing facilities and part has been by acquisition and merger.

Falling into the latter category is a joint venture with PT Hutrindo, effective in August 2007, and involving that company's existing MDF production line, PT Hutrindo Jaya Fibreboard Manufacturing Co, and PT Uforin Adhesive Industry, near Palembang in the south of Sumatera island, Indonesia. Evergreen currently holds 51% of the shares in the line and Hutrindo 49%.

The joint venture company is now called PT Hijau Lestari Raya Fibreboard, which means 'Evergreen' in the Indonesian language.

In 1993 Hutrindo, a long-established plywood and veneer producer, decided to



Resin plant undergoing refurbishment

go into MDF as well, placing a turnkey contract with German complete line supplier Siempelkamp for a ContiRoll continuous press line.

However, in common with many Indonesian plywood producers, Hutrindo's business ran into difficulties with the shortage of available logs for its plywood operations due to logging bans, and its new MDF line also halted production, in 2005.

With the MDF line, Evergreen and Hutrindo's joint venture also took on 10ha of the large factory site outside the city of Palembang and rented some further areas for raw material storage from Hutrindo.

Although the MDF line had not run for two years, it had been maintained in full working order, explained Christopher Blaise Marshall, the chief operations manager. Normally based at Evergreen's Parit Raja MDF factory in Malaysia, Mr Blaise Marshall is in charge of getting the Palembang line back into full production – a job which he expected to complete before the end of January 2008.

Also part of the deal was an existing resin production plant on the same site and this was undergoing a full restoration at the time of my visit in late November 2007. Mr Blaise Marshall hoped that production of urea formaldehyde glues would restart in March 2008 as all necessary components had already been purchased.

"The original designed capacity of the

The Palembang  
MDF factory







MDF line control room and, below right, the heat exchanger



MDF line was 9,000m<sup>3</sup>/month and we are targeting 11,000m<sup>3</sup>/month within two to three months of start-up," said the manager.

Access to the Hijau factory by road is difficult but there is the possibility of using the adjacent Musi river and the company has rented land near the River, about four to six hours' voyage from the factory, for storing logs which can then be barged to the site.

Finished MDF panels will also go by river to Palembang port.

"The logs come from a 100 to 200 kilometre radius and we will be utilising only rubberwood initially, although we expect to use acacia and maybe mixed hardwoods in the future," said Mr Blaise Marshall. "We will use rubber wood initially because it is easier to control quality. Latex can be a problem for some mills, but with our experience, and a good sifter and refiner plates, it is not a problem for us.

"Initially the factory will produce E2 grade boards of approximately 700kg/m<sup>3</sup> density, but maybe later we will produce E0 or even Super E0, depending on the demand."

Moisture resistant board is also a possibility, but the company does not foresee much demand for that grade.

The majority of production is destined for export to the Middle East, Far East and South East Asian markets, with some going to the domestic market.

### The production line

The drum debarker was supplied by Fuji Kogyo, while chippers are from Pallmann. Texpan supplied the screens and the chip cleaner came from Imal. The original

Siempelkamp sifter has been modified to improve its performance.

The refining system, from Andritz, has a 14in plug screw feeder and 16in discharge screw. The refiner is a 45/48in unit.

The blow-line dryer is heated using thermal oil and a heat exchanger, as well as flue gas from the energy plant which goes to a mixing chamber and then to the heat exchanger. Heat energy comes from three new boilers supplied by GTS. These replaced a Vyncke system which was destroyed by fire some time ago.

Two of the three boilers run on wood waste using the original Vyncke furnace, while the other runs on dust, burnt by a GTS system. Mr Blaise Marshall does not envisage needing any source of fuel other than wood waste.

The glue kitchen and volumetric dosing systems were supplied by Imal, while forming, pre-pressing and of course pressing, is by Siempelkamp.

The ContiRoll continuous press is 9ft wide and 16m long and runs with the original Sandvik stainless steel belts, which, apart from the removal of some minor dents, were fully serviceable.

A Siempelkamp system cuts the panels to size at the end of the production line.

"Initially we will produce standard 8x4ft panels," said Mr Blaise Marshall, "but we have a 9ft wide press, so we will

see what other sizes we might offer in the future. We could run 3x9ft as long as the panel profile is good up to nine feet wide – time will tell."

In the control room, the original synoptic control panels are good enough to get the mill running well.

The Steinemann six-head sander was part of the original equipment supplied and has also been kept in good condition.

To keep emissions to a minimum, the factory runs a closed-loop system. "We elongated the dryer tube and added a Bison-type back filter, fabricated locally, because this mill has historically had problems with dust emissions," explained Mr Blaise Marshall.

The process water supply comes from the river and is filtered and chemically treated in an already existing plant, while waste water will be filtered in a locally-made filtration and water treatment plant.

PT Hijau Lestari Raya Fibreboard will mainly produce thicker panels as the press has a design speed of around 500mm/second, although this may be increased at a later date.

Evergreen Group's other factories in Malaysia are already well-equipped to produce thinner panels anyway: Evergreen Fibreboard Bhd at Batu Pahat has one Mende line and one Dieffenbacher continuous press line, both for MDF. Also in Malaysia there is Allgreen, a particle-board line with a two-opening Dieffenbacher press.

In Johor Bahru there is also another Mende line and a Küsters line (formerly owned by Merbok). Total panel production capacity in Malaysia adds up to 480,000m<sup>3</sup>/year.

An extensive RTA furniture making factory is also located in Parit Raja.

Again for MDF, there is Siam Fibreboard in Hat Yai, southern Thailand (see p36), which has two continuous Siempelkamp lines running and a third, greenfield, Dieffenbacher, line currently under construction and due to go into production towards the end of this year. Production capacity of these three lines adds up to 570,000m<sup>3</sup>/year.

There are other major projects currently underway too, including an energy generation plant at Hat Yai, nearing completion at the time of my visit there.

JC Kuo is continually looking for ways to expand his group and it seems certain that PT Hijau Lestari Raya Fibreboard will not be the last new site to be added to the Evergreen Group.

Meanwhile, who knows, there is actually space for a second line in the Palembang factory.....□



# Powered supply

Siam Fibreboard, part of the Malaysian-headquartered Evergreen Group, started out with two almost derelict MDF lines which were bought from receivers. Massive investment in the site followed, with some major new developments now well under way

**W**e have charted the story of a massive panel production complex in Hat Yai, southern Thailand, for about the last 11 years – most of which have been turbulent.

However, as we reported in *WBPI* issues 1, 2005 and 1, 2007, recent years have seen a revival of a large part of the site under two new owners.

Just to recap briefly, that original complex was conceived by STA in the mid-1990s but soon ran into severe financial difficulties. In February 2004, MP Particleboard of Thailand and Evergreen Group of Malaysia jointly purchased a large part of the assets from the receivers of STA Group.

The two Siempelkamp ContiRoll continuous particleboard lines were taken on by MP, since renamed Panel Plus, while the two similarly equipped MDF lines were taken on by Evergreen Group under the new name of Siam Fibreboard.

All four lines were in need of extensive refurbishment and upgrading after years of either little, or no, usage and are now running very successfully.

The ceo of Evergreen Group, JC Kuo, having invested a lot of time and money in

raising his two MDF lines to world-class performance, then set about planning the future for Siam Fibreboard.

One of the first things he did was to order a third continuous MDF line to be constructed on 30 acres of additional land adjacent to his existing factory. The land was again purchased from the STA receivers.

At the time of my visit in early December 2007, ground works were well under way and Mr Kuo was busy sourcing steel frame elements from wherever they could be had in a very tight world steel market.

The new production line was on order, with Dieffenbacher being chosen for the supply of the 8ftx28m continuous press line. The contracts were signed with the supplier in April 2007 and the machinery is due on site in May 2008.

"This will be the longest press we will have in the Group and will thus be versatile," said Mr Kuo. "We will be able to produce thicknesses from less than 2.5mm to 30mm because of the versatility of this press."

Contracts were also signed in May 2007 with Andritz for the refiner and GTS for the energy plant.

Mr Kuo admitted that the delivery times for the machinery had gone against him since his original planned start-up time, due to the general boom in the machinery market since that time. His intention is to start up the new line in the fourth quarter of 2008 and I have not known Mr Kuo's many projects to run late up to now.

Anticipated capacity is around 750m<sup>3</sup>/day or 270,000m<sup>3</sup>/year. "Maybe more," said Mr Kuo intriguingly.

Siam has also bought a short-cycle press secondhand from a Panel Plus facility in Bangkok. Mr Kuo intended to have that Wemhöner line in operation by about June this year.

The investment in major machinery for



the third line is in the order of RM120m (US\$37m) and has been funded entirely by the existing two MDF lines at Hat Yai.

The new office building, under construction at the time of my visit last year, was in full use and features an ingeniously-designed water garden in an unroofed space between the new office building and the factory itself.

However, this new development, impressive as it is, is dwarfed by Siam's latest construction – the buildings to house a new electricity generating plant.

It was the need for this facility which led Mr Kuo to put back his planned start-up date for the third MDF line from end-2006, thus unfortunately incurring the further delays already mentioned.

The massive generating plant was undergoing tests last December in preparation for full start-up in early 2008.

With the original purchase of the two MDF lines came one electricity substation from the original STA set-up. This has been shared with Panel Plus since the two companies entered their joint venture, but Siam's third MDF line would have taken demand right up to 100% capacity on that one substation – obviously not a viable situation.

"So we decided to build our own generating plant," said Mr Kuo. "We purchased it from a Chinese specialist manufacturer of such equipment almost as a turnkey con-





had yet to be tested.

Another major, though invisible, change at Hat Yai is the fact that Evergreen bought out Panel Plus' shares in Siam Fibreboard Co Ltd in September 2007, thus ending the joint venture arrangement under which the two MDF and two particleboard lines were bought from the STA receivers.

Meanwhile, the Evergreen group has not been idle back where it started, in Malaysia. A new resin plant at the Batu Pahat MDF factory will supply all resin types for panel making and lamination to group MDF lines in Batu Pahat and Johor Bahru, as well as to the Allgreen particleboard plant in Segamat.

The resin plant has an annual capacity of 60,000 tonnes of formaldehyde and 8,000 tonnes per month of resins. It was designed by Cal Polymers and built by specialist sub-contractors, while Cal provided drawings, key components and an overseeing role for the construction.

The plant is due in full production by

tract, except for the buildings and their foundations.”

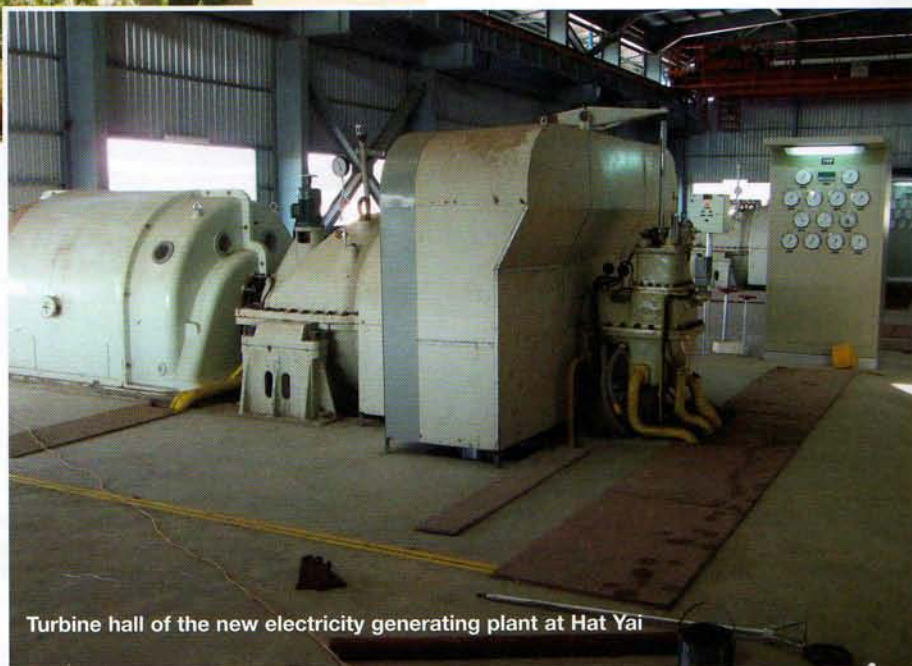
The Siam site is adjacent to a river and the area has suffered from flooding in the past so the land is not ideal for heavy construction. For this reason, Siam had to sink over 700 piles up to 8-12m deep to ensure a safe basis for the plant. The land level also had to be raised before construction could begin as there is a significant fall towards the river.

The main generator building housing the three turbines is almost 30m high.

Electricity generation will be carried out by a biomass steam turbine using wood waste but also designed to take up to 50% coal as fuel. “We intend to use mainly wood as it is cheaper but we could import coal from Indonesia,” said Mr Kuo. “The capacity of the plant is sufficient for the two existing MDF lines, plus some spare capacity. However, we plan to expand the capacity in about a year’s time to supply the third line as well – this extra capacity has already been designed into the plant.”

Siam has a team of experienced specialists from China to cover the development of the plant and has employed the services of Mr Lee Kwok Choy, formerly of Guthrie MDF of Malaysia, to oversee the project.

Cooling water for the electricity plant is taken from the river where Siam has constructed a pump room on the river’s edge.



Turbine hall of the new electricity generating plant at Hat Yai

This was considerably complicated by the fact that it had to be specially designed to cope with a 10m seasonal rise and fall in the river level.

That water is then filtered in a special filtration plant and treated by reverse osmosis to supply the boilers and the cooling towers.

These boilers will also supply steam to the MDF refiners and the flue gas from the generation plant will not go to waste either.

The plant will produce 20 tonnes of clinker per day and options for utilising that in a profitable way on site were under consideration at the time of my visit. These included making building bricks but that

May 2008 and represents an investment of around US\$6.5-7.0m.

Mr JC Kuo is something of a visionary in the SE Asia panel business and always seems to have further plans for expansion of panel capacity on top of his operations in Indonesia (see p27), Malaysia and Thailand, or for increasing the efficiency of his operations by projects such as the electricity plant.

It is this kind of entrepreneurial activity that got him listed in a group of the top 200 companies in the Asia Pacific region in *Forbes Asia* magazine in 2007; he fully intends to be at the award ceremony in 2008 as well. □