



Mentakab PM 1 – State-of-the-art technology for Malaysia



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Graphic

On a 65 acre greenfield site near Mentakab, in Pahang state, is Malaysia's first newsprint mill using recovered paper – the third largest newsprint mill in Asia.

Since April 1999, the long-term goals of **Malaysian Newsprint Industries (MNI)** have now become reality:

- Newsprint production from 100% recovered paper, using modern plant according to the latest state of technology.
- Coverage of nationwide newsprint needs (currently 315,000 t.p.a.) as well as export trading with neighbouring countries.
- Its proximity to the Sungei Pahang river, Malaysia's largest, thus ensuring adequate water supplies and enabling disposal of treated effluent.
- Its central location halfway between the east and west coasts.
- Its nearness to Malaysia's main rail connection with Singapore and Thailand.

In October 1996 MNI took over from Genting Sanyen Corporation – Malaysia's leading producer of packaging paper and corrugated board – a newsprint production project which was at the planning stage. Genting Sanyen relinquished its

diversification plans and handed over the project to MNI, including the order which had been placed for a Voith Sulzer newsprint machine.

First it was necessary to find a suitable site for Malaysia's papermaking debut. The stage was finally set in the middle of the peninsula near Mentakab, a town with 22,000 people. There were several reasons for choosing this site:

In a region still surrounded with jungle, whose main source of income has so far been the timber industry, erecting a newsprint production plant using 100%

Fig. 1: LC cleaning in the Protector system.

Fig. 2: Flotation deinking plant.

Fig. 3: LC screening and partial washing with two VarioSplit units.

Fig. 4: Deltapurge microflotation.





recovered paper is a courageous and visionary step. By creating jobs for 265 people here and providing the necessary training, this plant sets a milestone for the future in the conservation of resources.

In March 1967 construction work started simultaneously on the paper mill, the water supply and effluent treatment infrastructures, and on an oil-fired combined cycle power plant – in this isolated location, all heat and power has to be generated on site. The power plant has three steam turbine units, each generating 24.2 MW with 47 t/h of steam. Two of the generators cover normal production and in-house needs, while the other is held in reserve.

The preparations for paper machine installation began on November 17, 1997 with site surveying and foundation alignment work. By November 30, 1998 – only one year later – installation had been completed. The entire responsibility for erection and commissioning was entrusted to Voith Sulzer Paper Technology.

On February 3, 1999 – nine days before the scheduled date – at 8.08 local time, the first roll of paper was completed at an operating speed of 1,188 m/min. Since eight is a lucky number in Malaysia, this numerical combination both in time and speed might well be a good omen for the future. Commercial paper production had originally been scheduled to start on April 1, 1999, but by then the production was already well above the guaranteed 625 t/day. Output soon exceeded the projected production by 20 percent. Likewise the operating speed of 1,350 m/min was not only reached much earlier than three months after commissioning, but significantly exceeded. This made Mentakab PM 1 the fastest paper machine in the entire Fletcher Challenge Corporation.

The customer's requirement for peak paper technology was certainly an important factor in the cooperation with Voith Sulzer – but that was only one of the reasons. At least as important was the confidence of the customer in benefiting at the same time from comprehensive know-

how transfer and professional support in building up a well-trained operating and maintenance team. In fact this thorough training started well before commissioning – thanks to modern process simulation techniques.

This confidence in reaching the goal *“together”* paid off in no uncertain terms: the commissioning figures speak for themselves.

The scope of supply by Voith Sulzer Paper Technology and subcontractors for Mentakab PM 1 was as follows:

- Complete flotation deinking plant including dual pulping systems, disk filters, oxidative disperger bleaching and reductive bleaching stage, for an output of 840 BDMT/day of finished pulp
- Complete rejects treatment and loop-water purification systems, incorporating Meri Effluent Technology machinery and know-how





Mentakab PM 1 – key technical data*Furnish: 100% recovered paper**Product: newsprint at 40-48.8 g/m²**Uncut web width: 7,940 mm**Design speed: 1,700 m/min**Production speed: 1,500 m/min**Output: 837 t/day at 48.8 g/m²**Rated annual output: approx. 250,000 tonnes**Annual consumption of recovered paper: approx. 300,000 t.p.a.**Freshwater consumption: 14,000 m³/day**Treated effluent: 11,000 m³/day**Solid waste: 80 t/day.*

- Stock preparation line for bought-in thermomechanical pulp (125 BDMT/day)
- Stock feed system with Deculator, disk filter for fibre recovery, rejects treatment and screening systems
- Complete paper machine including GapJet headbox with Profilmatic, DuoFormer CFD, DuoCentri II press section with fourth press and steambox with Profilmatic, CombiDuoRun dry section (60% single tier, 40% double tier), soft calender (2 x 1 nip) with Nipco® rolls, pope roller with automated reel change
- Finishing section with two DuoRoller II and complete roll packaging and transport system
- Engineering and hardware for the entire measuring, control and regulation systems.

The electrical drive system for the paper machine and DuoRollers as well as the DCS system were supplied by Asea Brown Boveri.

We wish MNI every success in their venture for setting up a newsprint production industry in Malaysia. May they achieve a leading position in this growth market, both in Malaysia and the neighbouring countries.

