

Paper Machinery Divisions:

Soporcel 2 – Europe's largest capacity fine paper machine



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Last January Voith Sulzer Paper Technology was awarded an order by Soporcel Portugal for a wood-free graphical paper production line. This order is all the more notable in view of stiff competition by Valmet, who supplied the customer with PM 1 in 1990.

In June 1984 SOPORCEL (Sociedade Portuguesa de Cellulose) started producing bleached eucalyptus pulp at a greenfield mill on the Atlantic coast between Lisbon

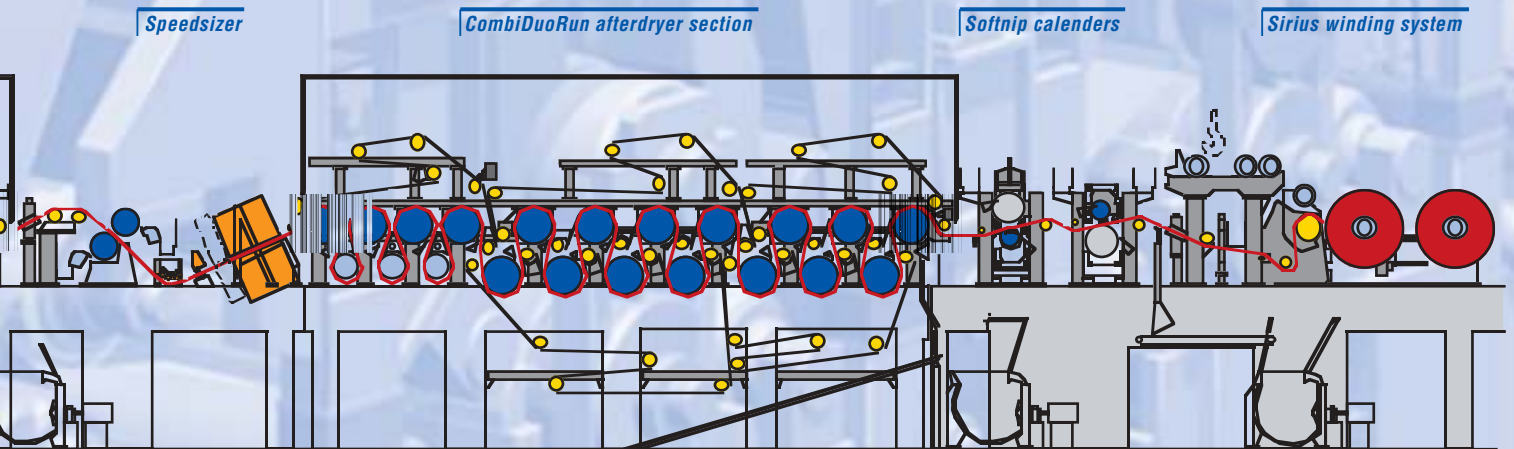
and Porto. The new mill was officially opened by President General Ramalho Eanes on October 18, 1984.

This pulp mill was Portugal's most important industrial project during the eighties, and its output of 400,000 t.p.a. is still the highest in the country.

The Lavos site near Figueira da Foz covers 170 hectares, leaving plenty of room for putting the company's long-standing



View of the new PM 2 building.



expansion plans into effect. Accordingly, a new paper machine started up in May 1991 which produces some 270,000 t.p.a. of wood-free copying and offset printing papers. After more than two years of technical discussions and negotiations, Soporcel (now renamed Sociedade Portuguesa de Papel) finally signed a contract with VSPT on January 19, 1999 for delivery of the new PM 2. Startup is scheduled for around mid-2000, thus realizing the original plan for

integrating pulp and paper production on the Lavos site.

The VSPT scope of supply covers stock preparation refiners for the eucalyptus pulp, screenes for the approach flow section, the complete paper machine with controls, and the process control and status monitoring system. The scope of supply also includes two roll winders with complete roll packaging and transport system.

Technical data of the new PM 2

Wire width 9,350 mm

Web width on reel 8,650 mm

Max. winding diameter 3,500 mm

Design speed 1,700 m/min

Max. drive speed 1,700 m/min

Production capacity 400,000 tonnes p.a.

Paper grades: wood-free writing and printing, 60 - 100 g/m²

Design basis weight: 80 g/m²

Startup: third quarter 2000



Voith Sulzer Paper Technology is thus supplying this customer with a state-of-the-art production line incorporating the latest technology in graphical paper production.

This will be the world's first fine paper machine to operate at speeds as high as 1,700 m/min. And to celebrate the new millennium, it will hold the European record for graphical paper production capacity.

Main components

MasterJet

This headbox with ModuleJet and Profilmatic M (to be updated to Profilmatic MQ) offers the following benefits:

- Optimum basis weight cross-profile
- Optimum fibre orientation profile
- Optimum formation.

DuoFormer TQ

This gap former is based on the roll blade principle with D unit, a formation concept which ensures:

- good retention thanks to initial sheet formation on the forming roll
- high quality formation thanks to pulsations in the D unit
- symmetrical sheet formation (anisotropy).

Tandem-NipcoFlex

Press section with two double-felted shoe presses. This concept brings the following advantages:

- Symmetrical drainage top and bottom
- Gentle drainage for volume preservation
- High dry content at high speeds (reduced risk of brakes)
- Draw-free transfer to the dryer section.

TopDuoRun predryer section

All drying cylinders are at the top, with vacuum rolls below for web stabilization.

Advantages:

- Closed run from press section to Speedsizer
- Reduced cross-machine web shrinkage
- Less breakes
- Ropeless tail threading

Speedsizer

For surface application of starch with profiled applicator rods.

Advantages:

- Uniform volumetric starch application
- Thermal stability of applicator beams to ensure good profiles right from the start
- Improved Fibron vacuum tail transfer (VTT) system
- Optimal web run over AirTurn, with contact-free air drying

- IR dryers can be retrofitted for future application of pigments and coating colours.

2 soft-nip calenders

with zone-regulated Nipcorect rolls and heated thermorolls for correcting surface roughness and thickness.

Tasks:

- Equal 2-sided surface roughness correction to the prescribed values
- Volume preserving calendering by thermorolls at prescribed temperatures
- Good cross-machine profiles of roughness and volume thanks to Nipcorect technology.

Sirius winding system

with two center drives, for constant contact line-force irrespective of the reel spool movement.

Advantages:

- Good winding quality up to the largest diameters
- Line force independent of reel spool movement
- Line force control unaffected by paper roll weight
- No lateral sheet deviation during winding
- No air intake into the nip.