

# Fibria, Brazil

Pöyry was contracted by Fibria for the implementation of an eucalyptus bleached kraft pulp mill in Brazil.

## BACKGROUND

The greenfield mill was designed to be the largest single line pulp mills in the world, with a production capacity of 1.300.000 t/a. Pöyry had responsibility for developing and setting up the mill, working in close co-operation with the client from the early conceptual phase until start-up.

Pöyry was assigned a complete EPCM contract and was involved in contracting the main EPC packages for mill installation, supplying the balance of plant, infrastructure and turbo generators. Pöyry's tasks throughout the project covered purchase support, cost control, logistics, communication, risk and safety management as well as taking care of environmental matters. Furthermore, onsite and offsite services, contract administration and documentation of the project were included.

This is one of the largest assignments in Pöyry's history.

*"We hired Pöyry to take care of the trust fund and they turned our investment into a fully operational plant", Jose Luciano Penido, Chairman of the Board of Directors, Fibria.*

## CHALLENGES

A project of this magnitude faces substantial industrial logistics responsibilities.

A wide variety of tasks and timing challenges, all the way from human resources and accommodation to IT had to be solved. Altogether, the project involved approximately 220 suppliers and at peak time some 10 000 workers where on site. The final documentation consisted of over 78 000 documents.

## SUCCESS FACTORS

Taking care of such substantial projects seldom happens without unexpected challenges. Flexibility is the key in

handling these situations without disruption in schedule or quality. Pöyry's professional skills and wide experience ensure complete understanding of client needs, so that they are fully understood beyond the technical issues. When such a large number of people are involved, successfully managed social issues become essential.

*"Transparency of the flat project team ethic means a clear and consistent focus on team goals. Honesty and openness builds trust and commitment and that leads to successfully meeting the schedules and quality. The customer knows that when Pöyry says 'we will deliver' they can trust this promise."*

**Marcel W M Moreno, Pöyry Brazil,** points out.

## SOLUTIONS

Pöyry used its engineering tools for risk and document management and was thus able to manage the challenges seamlessly, utilising the company's comprehensive experience and expertise.

*"Engineers and technicians are professionals with strong opinions. The best solutions are reached in co-operation, working as a team."* says **Marcel W M Moreno, Pöyry, Brazil.**

Pöyry works on this kind of demanding projects with a strong team and uncontested commitment to quality and ethic. Everybody has a defined role with reporting responsibilities.

In this project, Pöyry dealt with 28 main subcontractors and handled altogether 2750 local purchase orders.





## RESULTS

The project was implemented in 24 months and the mill started up one month ahead of schedule. It reached and even exceeded all its production targets and is in fact the first plant to produce 1 million tons of pulp in less than a year (337 days).

The client is naturally looking for the best return on their investment. The Fibria mill uses state-of-the-art technology and modern processes. These allow less raw materials, such as chemicals, to be used in production. Efficiency in forests and wood transport and the economies of scale of the whole operations - all of these consequently reduce costs per produced pulp ton.

Pöyry's **Marcel W M Moreno** remembers the professional pride at the start-up phase of the Fibria plant.

*"The team was at its best, working seamlessly together towards a common goal. The established trust among the team members made this remarkable achievement possible."*

The project was based on the concepts of eco-design, using cleaner production processes, guaranteeing a pleasant and safe working environment.

The Três Lagoas mill is self-sufficient in energy, using biomass from eucalyptus and black liquor in the industrial process.

## TECHNICAL DETAILS

### DESIGN CAPACITY

3800 ADt/d

### 3 WOOD HANDLING LINE

2 x 280 m<sup>3</sup>sub/h (debarking) +  
1 x 375 m<sup>3</sup>sub/h

### BLEACHING SEQUENCE

A/D-EoP-D1-P

### DRYING MACHINE

3450 ADt/d, 9.3 m twin wire former

### RECOVERY BOILER

5300 tDS/d

### CAUSTICIZING PLANT

12100 m<sup>3</sup>WL/d

### LIME KILN WITH LMD

960 t lime /d

### BIOMASS BOILER

120 t steam/h

### TURBO GENERATORS

2 x 85 MW

### WATER TREATMENT

6400 m<sup>3</sup>/h

### EFFLUENT TREATMENT

5750 m<sup>3</sup>/h

### CHEMICAL PLANT (EKA, OVER-THE FENCE)

53 t ClO<sub>3</sub>/d

### PAPER MACHINE (INTERNATIONAL PAPER)

200 000 t/a u/c fine paper

Pöyry is an international consulting and engineering company. We serve clients globally across the energy and industrial sectors and locally in our core markets. We deliver strategic advisory and engineering services, underpinned by strong project implementation capability and expertise. Our focus sectors are power generation, transmission & distribution, forest industry, chemicals & biorefining, mining & metals, transportation, water and real estate sectors. Pöyry has an extensive local office network employing about 6500 experts.



Engineering balanced sustainability™

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