

A unique collaboration leads to the industry's new benchmark

IP Pensacola: That's the way to do it

“We all win, or we all lose.” Is there a better way to put together the spirit of a common project of great magnitude? In this case, the challenge was raised by International Paper's Pensacola mill. But how to get there – let the story begin...

It's nearly impossible to find anyone who doesn't know International Paper based in Memphis, Tennessee, USA. IP is a major player: the largest forest company in the world. It has been the premier producer of paper and board since the acquisition of Weyerhaeuser containerboard, packaging and recycling business. Today, IP operates 23 pulp, paper and packaging mills in North America and one in Mexico. In 2007, the company delivered more than 12 million tons of paper to the market.

However, the North American paper industry has gone through hard times, and the changing market demands leave no one unaffected. Streamlining the business had become essential. For IP, this means concentrating on

two production areas: uncoated papers and industrial/consumer packaging.

Full involvement in every level

A typical paper machine project involves meetings after meetings, quotations and updates, test runs, visits to reference sites, and the list goes on. The possible suppliers compete head-to-head, and in the end, one of them wins the deal.

The numerous discussions involving purchaser and supplier might sometimes run hot, since the opinions are not always the same. Naturally, everybody plays for his own team following their own targets; it takes time to come to an agreement satisfying all participants.

PM 5 produces lightweight kraftliner with a quality exceeding all expectations.

The IP Pensacola rebuild, however, was anything but typical. Just a few months after the first project meeting, IP chose Voith Paper to carry out the project for the PM 5. Voith Paper was chosen to be not only the supplier, but also a real partner in a mega-scale initiative.

First, IP and Voith Paper signed a pre-engineering contract, which was soon followed by an order for the PM 5 rebuild. In time, IP realized the benefits of a single source supplier and brought in other Voith Paper divisions – such as Fabrics, Fiber Systems and Rolls – to the project. Consequently, Voith Paper became IP's all-inclusive supplier. Right in the beginning, an in-depth alignment session was organized for the core project team to show the correct way. During the project ex-

Machine description of PM 5

Wire width:	9,640 mm (380 inches)
Production:	500,000 short t/year
Product:	high-quality kraftliner from virgin fiber
Basis weight range:	112 - 176 g/m ² (23 – 36 lbs/MSF)
Design speed:	1,128 m/min (3,700 feet/min)
Start-up:	September 22, 2007

Main scope

Supplied by all divisions of Voith Paper, Board and Packaging, as the leading partner

- Three pressure screens, HydroMix and upgrade of existing equipment
- TopFormer F, two MasterJet F headboxes, ModuleJet dilution water control
- DuoCentri NipcoFlex shoe press
- Dryer section upgrade
- New roll covers and coatings
- Complete upgrade of existing winder
- Several quality enhancement tools for lightweight grades, like DuoShake unit and EdgeModule for headbox
- Control and automation package with engineering services
- PM clothing including QualiFlex press sleeves

ecution, frequent meetings took place where everyone whose job function was affected by the PM 5 conversion was included. IP involved all different levels. The whole staff was fully engaged in order to be able to identify with the new product. Complete training across the machine was provided to everybody.

On top of that, every three months, a stakeholders' meeting was conducted, keeping the top management of IP and key suppliers involved and fully informed.

Even the distance over the Atlantic did not create problems during the project execution. Additionally to face-to-face meetings, conference calls and web meetings were used efficiently. Thanks to the utilization

of modern communication tools, the seven-hour time difference was working for the project!

FEL as project structure

IP chose Front-End Loading for the handling of project development. FEL is a systematic stage gate concept to develop major capital projects, where the customer, the engineering company and the supplier work all together as one team.

Front-End Loading includes rough planning and design already in the early stage of a project lifecycle. There is a solid rationale for this approach: In the beginning, the ability to influence changes in design is relatively high and the cost to make

those alterations is relatively low. Even though FEL requires more time and money in the beginning, these costs are minor compared to the expenses and efforts saved in not having to make changes at a later stage.

IP is experienced in the FEL field, and Voith Paper is no greenhorn, either. Together, the companies had already completed one project, using the FEL concept with success.

The Pensacola FEL project consisted of five phases. The first one was the execution of a complete business analysis. Four aspects were always top of mind in all stages – strategy, cost reduction, regulatory and maintenance – so that all possible consequences were taken into account.



The moment of truth: After several weeks downtime PM 5 will soon run again.

The second phase concentrated on technical aspects. A preliminary machine design was defined. The partnership between IP and Voith Paper gained momentum.

After business and technical issues, the focus was set on an execution analysis. Project plan, implementation strategies, balances – all that and much more – were completed in the third phase. The detailed concept for the rebuild was now developed together, based on IP's product specification and the capital investment proposal took form.

After the go-ahead, an implementation phase followed. This fourth phase included permit, procurement, construction, training and commissioning, for example.

Finally, in the fifth phase, PM 5 started up. IP executed the go-to-market plan and began the operation as well

as optimization. Moreover, the project did not finish with the start-up of the paper machine. An evaluation comparing actual performance to project objectives and a transfer of the lessons learned during the process were also carried out.

Quality beyond all expectations

Converting an existing copy paper machine to produce completely different grades involves many uncertainties. Starting from the pulp mill through stock preparation, all machine sections and functions must be carefully inspected and upgraded.

In the end, the only point that matters is whether the product quality meets the project specifications and market demands.

At Pensacola, the result is more than positive. The achieved strength

properties and basis weight profiles are at the high end of the market. In addition, the PM 5 is, without any exaggeration, one of the world's fastest kraftliner machines.

These results could not have been achieved without the hard work of all team members. The customer, the equipment supplier, the engineering company and the construction company did all their very best to achieve the project targets.

Voith Paper is convinced that International Paper is on the same successful path that SAICA charted several years ago. As is widely known, the Spanish SAICA was the first one to produce lightweight corrugating medium from 100% recycled fiber and is considered to be the industry's benchmark in the medium and test-liner market. With its Pensacola PM 5 producing lightweight kraftliner from 100% virgin fiber, nothing prevents

IP from achieving the same in its own area.

Collaboration – How to walk the talk

If one word could describe the Pensacola project, it would be “collaboration.” The importance of this word may be diminished because of overuse, but at Pensacola, it has true meaning. A real cooperation developed between all team members, and this was evident at

every phase of the project. IP paid constant attention to the team spirit, especially in the hottest project phases. Even when the team encountered challenges with conflicting opinions, consensus was quickly reached because everyone was truly on the same team and working toward a shared goal.

The whole team can be proud of the result. The 12-month ramp-up curve was cut down to one third of the original project plan, and

Pensacola produced saleable paper from the start! The rebuild of PM 5 has a fairy tale ending – the paper-maker, the end customers, the supplier – everybody is happy. That’s the way it should be.

Contact



Erwin Holzinger
erwin.holzinger@voith.com



“Voith did a very good job in this very challenging role.”

Todd Crutcher, Investment Manager, Intenational Paper's Pensacola mill, USA

twogether: At the beginning of the project, you decided to choose Voith Paper to be your single source supplier. What were your exact expectations, and how were they fulfilled?

Crutcher: The close coordination of all the components (e.g. equipment, machine clothing, roll covers) needed in the machine rebuild was an important factor. The supplier had to work with the mill production, project engineering, maintenance teams and the construction company to ensure that the finished product was perfect – in every way. This expectation was crucial to the success of the Pensacola rebuild. Voith did a very good job in this very challenging role.

twogether: Collaboration and team spirit – how did you succeed to walk the talk?

Crutcher: It wasn't easy! I give a great deal of credit to the leadership of the key groups participating in the project: engineering, construction and our mill partner. The overriding principle was always to drive to the best solution through clear, honest communication of the issues. Success was only measured by the Team's results. It was never okay to have a win/lose situation. I am proud of this result!

twogether: How would you describe the quality of the end product and its current position in the global market?

Crutcher: Pensacola is clearly a global market leader in container-board production, and the machine has remarkable capabilities.

twogether: What are your expectations concerning the market development for (lightweight) kraftliner?

Crutcher: There is no limit to further development of lightweight kraftliner from Pensacola. Our customers like the product, and the mill teams are becoming more proficient at making the optimum use of the new technology installed.