



Valmet Paper Lab in India

TNPL, Tamil Nadu Newsprint and
Papers Limited



TNPL

- TNPL (Tamil Nadu Newsprint and Papers Limited) mill in Kagithapuram
- New PM3 has production capacity of 155,000 t/y of pigment printing paper for multi-colour high-end applications
- Maker of bagasse based eco-friendly paper

Project target



- Cut the manpower
- Significantly reduce the time for testing and adjusting the operation, which had been one and half to two hours
- Integrate new PM3 to laboratory testing

Solution

- Metso Paper Lab was set up next to the pope reel of PM 3 and serves also existing nearby PM 1 and PM 2 with the help of an automated sample conveying system
- The system, invented by the TNPL team, extracts samples via a controlled vacuum and sends them in capsules along a small pipeline to the Paper Lab

The data are generated in a very short time for each reel. The response time is reduced and corrections are taken immediately.

Mr. M. Rathnasami
Assistant general



A tool for continuous performance improvement

- The output of all three paper machines can be checked in less than half an hour
- Reduced variations in the production process caused by different operators
- Installation and training programme for the employees took only one week
- Possibility to quickly retrace a specific complaint of a mill's customer thanks to the abundance of process data

We are now able to
measure tensile stiffness orientation across the width,
and this enables us to get uniform paper from both sides.





Valmet Paper Lab



Valmet Paper Lab

Optimized heavy-duty package

At-Line: Freedom to move next to the line for real-time communications and faster results.

Off-line: Or enjoy greater productivity right in your lab based on 25 years of leading experience.

Standards: Proven modules comply with all paper industry standards and norms.

Productivity: Highest productivity through automated testing.

Scalability: Testing system made of a tailored platform plus the widest range of standard modules to test over 400 properties.



Widest range of modules

- Burst Module
- Tear
- Tensile
- Tensile Stiffness Orientation
- Smoothness-2 Bendtsen
- Smoothness-2 Parker Print Surf
- Smoothness-2 Sheffield
- Smoothness-2 Bekk
- Smoothness-2/Porosity-Oken
- Porosity Bendtsen
- Porosity Gurley
- Porosity Sheffield
- UV Color Diffuse

- Gloss-2 TAPPI 75°
- Gloss-2 DIN 45°
- Gloss-2 DIN 75°
- Caliper
- Basis Weight module
- Formation
- Multi-Filler
- Moisture
- Compression Strength module
- Paper Bending Stiffness module
- Board Bending Stiffness module
- Blackening
- Scarredness

Widest range of applications in paper and board

Valmet Paper Lab is suitable for:

- Linerboards and fluting
- Folding boxboard and wallpapers
- Newsprint and SC papers
- Printing and writing papers (LWC, MWC etc.)
- Fine papers
- Packaging and wrapping papers
- Various special papers and paperboards
- Applicable also in pilot and research plants

Benefits for the paper and board maker

- Higher performance through automated testing
- Increased testing frequency, accuracy and repeatability
- Compliance with ISO 9000 and other standards
- Low life cycle costs
- Superior scalability – grows with customer needs
- Ergonomic and safe to use
- Easy and fast maintenance

Quality management on the production floor

- Process optimization through quick and reliable results
- Machine operator can manage the quality of every reel
- Test every reel for 100% customer compliance
- Quality spot checks of individual rolls
- CD profile verifications



Quality management in laboratory

- More flexibility in sample testing
 - Testing times, frequency, special measurements,
 - sample sizes and testing programs for several machines
- Stable testing environment
- Research and pilot testing
- Customer sample testing
- Calibration and verification of at-line and on-line measurements
- Efficient utilization of testing labor
 - Routine tests automated





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