Advanced TMP
Focus on energy savings and improved mechanical fibers
The challenge: enhanced fiber development with reduced energy consumption

Energy is a huge cost for TMP producers which can possibly limit the acceptance of mechanical grades in the future.

Yet, TMP production offers superior benefits in terms of yield and optical qualities – providing four times the surface per ton of wood for both publication papers and board grades compared to chemical pulp-based products.

The ANDRITZ solution: Advanced Thermo Mechanical Pulping (ATMP) technology

This high-intensity RTS refining of pretreated chips produces energy savings greater than 20% when compared to conventionally produced TMP pulps.

Applying a small amount of chemical treatment (e.g. sodium bisulfite) on fiberized chips at the primary refiner further reduces energy consumption and improves pulp quality (higher strength, higher brightness).

ATMP combines RTFibration, high-intensity RTS refining, and the right chemical treatment.

ATMP focuses on optimizing the process steps:
- Defibration – separating the fibers
- Fibrillation – creating the optimum bonding surfaces
- Pretreatment – precise chemical addition to the defibrated chips
- Primary refining – using high-intensity, energy-saving technology

The above process steps within the ATMP system are modular and can be configured for optimum performance in each unique TMP application.

ATMP improves tensile

ATMP provides significant improvements of pulp quality in particular for pine pulps.

Example: Tensile index can be improved by 10-15% compared to conventional pine TMP.
Advanced TMP
Energy-efficient technology

Benefits

- Energy savings from 300 – 800 kWh/admt
- Efficient production
- Better pulp quality
- Higher bonding strength
- Reduced shives
- Reduced extractives content
- Higher brightness (both bleached and unbleached)
- Applicable to a variety of softwood species
- Significant improvements on pine pulp properties
- Modular system – easy to retrofit
- Excellent economic payback

Energy savings
300-800 kWh/t

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