Tulevaisuuden tuotanto ja valmistus data-analytiikalla
Presenter

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Wood and Pulp Handling

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- 21 years in Valmet
- BSc, Mechanical Engineering, Satakunta University of Applied Sciences
- Areas of interest: Pulp Drying technology, Woodhandling technology, future solutions
Introduction to Valmet & Valmet Ulvila product portfolio

Valmet Industrial Internet – Dialogue with Data

VII Solutions - sample

Questions?
Introduction to Valmet & Valmet Ulvila product portfolio
Full scope offering for the pulp and paper industry

Technologies
1. Wood handling
2. Heat and power production
3. Chemical pulping
4. Chemical recovery
5. Pulp drying
6. Recycled fiber
7. Mechanical fiber
8. Stock preparation
9. Board and paper making
10. Tissue making

Automation
- Distributed Control System (DCS)
- Performance solutions
- Quality Control System (QCS)
- Profilers
- Analyzers and measurements
- Industrial internet solutions
- Automation services
- Process simulators
- Safety systems and solutions

Services
- Mill and plant improvements
- Spare and wear parts
- Paper machine clothing and filter fabrics
- Roll services
- Services for evaporation plants, power and recovery boilers
- Services for environmental equipment
Södra Cell Mörrum, Sweden

Woodhandling
Södra Cell, Värö

Woodhandling Start-up 2016 / 350 m$^3$/h SUB
Metsä Group’s Äänekoski, Finland

World largest Softwood pulp drying line. 2700 Adt/d, trim width 8,25m
Start-up 2017
Valmet Industrial Internet

Dialogue with data
Valmet Industrial Internet

Dialogue with data

1. Dialogue with data

2. Roadmap forward
Valmet industrial internet videos - 2 selected samples

- https://youtu.be/4y9VhCL6WPI (Valmet Industrial Internet - Meaningfull Dialogue with data)
- https://youtu.be/wjS_Qpk9FpU (Valmet - Field services future tools)
We want to become the most desired Industrial Internet partner for our customers

Valmet develops its Industrial Internet solutions building on the unique combination of process technology, services and automation.
Valmet Industrial Internet

Leveraging new data-driven opportunities

Company level data
- Business planning and fleet management

Mill and plant level data
- From ERP, MES and CMMS systems
- Production management and operations optimization

Process data
- From process automation system and measurements
- Process and quality controls into targeted setpoints

Dialogue with data
- Combining process and business data from different mill or plant systems
- Utilizing advanced analytics, artificial intelligence (AI) and our know-how to discover hidden improvement potential
- Using the findings in daily process and operations optimization

Results
- Reduced raw material & energy cost
- Improved end quality
- Reduced downtime
- Optimized maintenance
Continuous dialogue with data – way forward
Valmet Industrial Internet roadmap

Way forward through co-creation with customers

- Integrated customer portal and mobility
- Growing fleet of intelligent machines and more diagnostics embedded into processes
- Valmet Performance Center as a platform for digital services and big data analytics
- New contributing technologies
  - Mixed reality through Microsoft HoloLens
  - Location detection technologies
- Data driven applications and services through advanced analytics, machine learning and AI.
  - For reliability and performance improvement
- Advanced process controls for all process areas and mill wide optimization
- Vertical and horizontal integration through strong ecosystem of partners
Significant customer results
Advanced Bale Weight Control
For Pulp Drying Line

- **Service description**
  - Process data collection and analyze
  - Predictive controls set-up
  - Utilizing/combining existing process quality control systems
  - New technology offering
  - KPI monitoring through Valmet portal enabled
  - Specialist support

- **Benefits**
  - Even bale weights, even unit sizes – enabling automated bale storages
  - Increased availability
  - Improved quality