

Sustainable Energy Management

Program

□ 24th of May:

1- Energy in the different section of the Papermaking: (1h) 10h00-11h00 Manninen

Key point of energy consumption in Papermaking, Specific Energy Consumption, Energy Saving Potential, Energy Strategy to go further.

2- The different Energy Generations Options: Classical and new Development: Siemens (1h30) 11h15-12h30

Steam turbine, No co-generation, Gas Turbine, Gaz and steam Turbine, Gaz Steam and extra condensing Turbine. Best Option to save Energy

3- Understand the Overall Energy Balance in Papermaking: Simulation/pinch. Manninen (2h15)13h30-15h45

Energy Balance take in account: Heat Recovery, Steam & Condensate, Process Water, Refining Vacuum, electrical drives, waste water Treatment...

4-Effect of Water Reduction on energy Savings:

How water reduction impact on Energy Saving, Process Water Impact, Waste Water Best Management to save Energy

Manninen, 16h00-17h00 (1h00)

□ 25th of May:

5- Manage your vacuum System to gain Energy 9h00-11h00 Cutes Europe

Different type of vacuum devices, Focus on the Water Ring Pumps; Optimisation of the vacuum level to save Energy by new technics, Line design and optimal exploitation parameters with existing pumps. Practical Examples and Best Practise

6- New Approach and New Techniques for Efficient Vacuum-Turbo Blower Paper Run 11h30-12h30 et 13h30-14h30

Techniques to optimise vacuum on the PM: Ecoflow: Principle and practical cases. New system Turbo Blower: New approach, How to reduce electricity bill of 50% vacuum and Practical cases. How to make quick ROI on Energy Saving.

7- Modern Press Felt to save Energy Paper Run 14h30-15h30

Felt function, raw material, Felt design and Conditioning

8- Best Operating setting in Refining: : Jobien 16h00-17h00

Type of Refiner, blades, Operating setting, Measurement and Monitoring to reduce Energy.

□ 26th May:

9- Overview of Energy Savings in Drying Section: Energy Savings

Possibility in Drying Section: Where to concentrate if we want to save Energy. Energy Saving by Steam and Condensate systems organization or rebuild (with real Practical Examples). Ventilation System, Goal, Pocket Ventilation, New Development What to measure in this section to evaluate Energy Consumption and take decision.

Thermopap, 9h00-11h00

10- Controlling Point in Hood and Heat Recovery System: Dew

Point (Definition and Control), Hood Air System examples: Role, different Hood Concept, Air Balance, Supply/Exhaust Characteristic. Heat Flow Balance, Operating Set-up to reduce Energy Consumption. Energy Gain Simulation with Software Jobien, Energy Balance in Drying 11h15-12h30; Jobien 13h30-14h30

11- Gain Energy in Electrical Drives by Optimisation: R-McKinney 14H30-15H00

Control Motor speed, use high efficient motors, motor arrangement dimensionning, mechanical drives by electrical drives, use variable speed drives

12-Best Practice in Pumping to Gain Energy 15h15-17h00, R McKinney

Measure, Monitor, Analyse and adopt best pumping solution's to reach sustainable energy saving. Special concern about Fan pump as well is included.

Sustainable Energy Management
Training Course in Papermaking

•The course is based on a lot of interactions between participants and experts lecturers. You will have the opportunity to expose your interest and to gain solution thank's to the experts. Illustrations and Practical cases are shown during the courses that warranty the success of the training and fulfill the objectives.

• Minor change in the program are possible