

Tall Oil Acidulation optimisation with big data analytic

MODELS FOR HIGHER YIELD AND PRODUCTION RATE - VALUE ADDED FOR TALL OIL SOAP ACIDULATION WITH BIG DATA ANALYTIC

Pöyry brings visibility and optimises the tall oil process with digital solution based on the validated process data and the expertise of the tall oil process itself.

TYPICAL CUSTOMER CHALLENGES

Lack of a holistic view to tall oil production leads to inefficient process control, which in turn leads to reduced yield and poor quality.

- No visibility to production data
- No framework for production forecast
- No optimal process model for tall oil acidulation and production
- High impurities content reduces the yield
- Shorter production periods between cleaning reduce the total yearly volume

PÖYRY'S OPTIMISATION SOLUTION

With optimisation solution changes in process can always be seen beforehand and impacts can be tested.

By collecting data and adding additional needed measurements process data can be turned to knowledge using non-linear modelling. That knowledge brings visibility to process and guides the operation.

Output values - production rate and product density indicating product quality - are estimated based on new mathematical models.

Simulation either from database or with online data gives predictions to operators of the direction of the current operation.

By testing operational parameters without any incidents, solution helps in operational parameters setting.

IMPROVED PROCESS - MORE PRODUCTION

- Better visibility and improved control of the process
- More precise and improved yield and production rate
- Better control over raw material use
- Simulation option provides scenarios for different production models
- Reduced chemicals and utilities consumption, reduced cost
- Avoiding need for frequent cleaning by optimising the operation
- Cleaning optimisation, forecasting the cleaning to improve the production by 2 %

Read more about Tall Oil Acidulation and other Pöyry's Smart services:
www.poyry.com

PROJECT EXECUTION APPROACH

Assessment

- Analyse the process equipment and the current way of operating the process, and investigate data availability

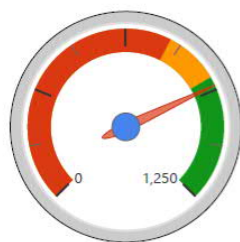
Implementation project

- Installing the additional measurements (if required)
- Connect site to Pöyry's AI platform and validate the data correctness
- Fine tune the model for customer plant

KEY OUTCOMES

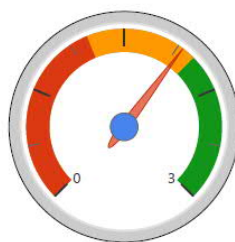
- Improved operational efficiency by maximized control
- Streamlined production process by parameters simulation options
- Reduced costs by reduced chemicals and utilities consumption
- Improved production by avoiding the need for frequent cleaning

TALL OIL DENSITY



925.20

TALL OIL FLOW RATE



1.91