Tall oil - unlock your Bioeconomy potential

UTILISING THE PULP PRODUCTION BI-PRODUCT FOR COMMERCIAL USE AND IMPROVING OPERATIONAL EFFICIENCIES

Did you know that a pulp mill with a production capacity of 500,000 ADt/a could achieve 5-7 MEUR/a in revenue by separating the tall oil from the pulping process? Are you making the most of tall oil value?

THE REGULATORY NUDGE
Thanks to renewable energy regulations, the interest towards tall oil as a biofuel feedstock is increasing. From a pulp manufacturer’s perspective, tall oil is becoming more and more lucrative as the price of crude tall oil increases.

Based on pulp production growth forecasts up to 2030, an additional 300,000 ADt/a of crude tall oil could enter the market.

These capacity expansions would help supply the growing demand for crude tall oil and would mark significant growth opportunities for tall oil applications.

CLIENT ISSUES
Pulp mills are constantly faced with needs to improve the efficiency of their operations. The need to maintain the primary processes at an optimal level.

If his context, tall oil plays an important part. Tall oil can be produced by first separating ‘tall oil soap’ from the ‘black liquor’ that is formed in the pulping process. The tall oil soap can then be reacted with acid to produce ‘crude tall oil’.

Pulp mills can burn the black liquor to generate heat and electricity but this is often not efficient as soap removes some capacity of burning the black liquor. Thus, it makes sense for the mills to separate the soap from black liquor.

Whether it makes sense to produce tall oil from the separated soap depends on two key factors:

1. the local market environment and demand for biofuel feedstock
2. the scale of pulp production

When the softwood pulp production capacity is roughly 100,000 ADt/a or more, tall oil separation for commercial purposes is usually more profitable than the alternative use of soap.

TALL OIL BUSINESS CASE
Investment in a new tall oil plant is a feasible option both for mills with too small or outdated tall oil plants as well as for mills without an existing plant.

- Typical payback time for a new tall oil plant: 1-5 years
- Typical payback time for an updated tall oil plant with a 25% increase in production: 2-5 years

YOUR TRUSTED PARTNER
Over the past 30 years Pöyry has delivered more than a third of the world’s tall oil plants and helped clients improve their processes in order to drive growth.

PÖYRY’S TALL OIL SERVICES – COMPLETE SERVICE PORTFOLIO ACROSS THE VALUE CHAIN

- Business case analyses and strategies, market insights
- Resource and technology strategies, plant implementation
- Operational support and performance improvement

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