ANDRITZ MDF Spiral Refining Plates
Lower energy consumption and improved fibre quality
The challenge: Reduce the energy costs and optimise the fibre quality

MDF manufacturers are simultaneously faced with constantly rising competitive pressure and declining availability of the types of wood they need to make products of continuously improving quality, in order to prevail in the market. In this regard, efficient use of the entire defibration system is crucial to keeping energy costs at a competitively low level.

The ANDRITZ MDF Spiral Design

Until the introduction of the innovative ANDRITZ MDF Spiral design, all models had straight bars with cutting angles that varied depending on the current position of the fibres on the refining plate. Although refining plates with bars such as these have an average cutting angle of 30° between rotor and stator, for example, typically there is fluctuation in the range of 15° to 40°, though.

These varying cutting angles result in an inconsistent supply of raw material and continued tearing of the fibre layer. Consequently, the fibres are treated differently depending on their position on the plate. Only with the unique logarithmic ANDRITZ MDF Spiral refining plate design do the cutting angles of the bars remain constant between rotor and stator – throughout the entire refining zone.

Thus, the refining energy that is input is used much more efficiently for uniform fibre manufacturing.

Left: Conventional parallel design
Above: ANDRITZ MDF Spiral design

The Two-Zone ANDRITZ Spiral Technology

Thanks to the open design of the Two-Zone technology, all of the benefits of the ANDRITZ Spiral technology can also be attained in systems with increased throughput. This is primarily due to the greater channel widths in the infeed area of the refining zone.

In order to still maintain the outstanding fibre quality of the ANDRITZ Spiral technology, however, the number of bars in the outer zone are increased. Consequently, the cutting length that is necessary to produce superb fibre quality is reached in the outer area.

ANDRITZ MDF Spiral refining plates are available for refiners of all manufacturers.

Advantages:

■ Energy savings
■ Better fibre quality
■ Less shives and fines
■ Higher refiner availability
■ Increased fibre production capacity
■ Customised plate design
**ANDRITZ MDF Spiral design:** Constant cutting angle of 30°

**Conventional design:** Inconsistent cutting angle
Production safety, reduction of energy costs and consistently high quality are the demands placed on MDF manufacturers around the world.

In order for you to also master these challenges, we at ANDRITZ offer you experts who will audit your refining facilities for cost-effectiveness and efficiency.

Service is very important at ANDRITZ. We offer custom-tailored refining plate designs to satisfy your requirements for lowering energy costs, improving fibre quality and minimizing glue consumption through greater fibre lengths. Our refining technology helps to reduce steam loss in refining systems. Process optimisation helps you to keep your productivity and quality standards at the highest level. Our experts will develop concepts for you so you can operate your refining systems more economically.

After a meticulous analysis of the refining process, we advise you on how to reduce the energy consumption for manufacturing your MDF product while increasing fibre quality.

Service:

- Customised plate design
- Process related alloy selection
- Short delivery times for emergency situations
- Lab analysis of fibre samples
- Process optimisation