

RCF Tissue

Deinking systems for tissue



The challenge:

Using recycled fibers for high-quality tissue

As a result of the continuous developments in technologies for processing recovered paper, the range of paper grades that can be produced successfully using these technologies is expanding – also to include sanitary papers.

In tissue production, requirements of the final product depend very much on the prevailing market conditions. However, the quality of the recovered paper available also has a considerable influence on the configuration of the deinking plant.

Depending on the impurities to be removed and the cleanness required in the final product, the plant concepts used may have more loops, or more simplified concepts may have only one water loop.

A simplified deinking system got advantages with regard to investment, energy, and to chemical and operation costs. However, a significantly more expensive raw material is required to produce the same final pulp quality as a more complex system.

Technological challenges

Dealing with mainly woodfree paper furnish, like mixed and sorted office waste, white or colored ledger, or coated books, the pulps for high-grade tissue need to meet the following quality requirements:

- Final brightness level in the range of 76-80% ISO
- Dirt speck target levels in the area of 8-30 mm²/m²
- Sticky removal efficiencies of 96-98%
- Final ash content below 3.5%

The process must allow for wide variations in furnish quality. The fibers, fillers, and additives must be balanced to suit the tissue machine's characteristics and end user requirements. A tailored approach to deinked pulp production is the answer.

Tailored to your needs

The size and design speed of a tissue machine directly influence the capacity of the related deinking system, whereas the quality of the furnish and the end product determine the overall system configuration.

ANDRITZ can design small-capacity deinking lines as well as deinking systems to feed modern, high-speed tissue machines.

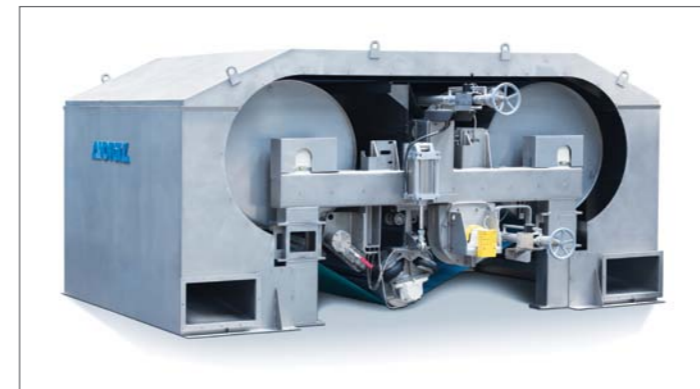
The ANDRITZ RCF Tissue systems ensure minimized operating costs by using highly efficient key components with highest availability and low maintenance requirements, leaving only a small ecological footprint. Whatever concept is applied, the investment and operating costs for a desired production range must be balanced.

The solution:

Complete deinking systems for all tissue grades



▲ SelectaFlot SFL flotation system



▲ SpeedWasher SW de-ashing unit

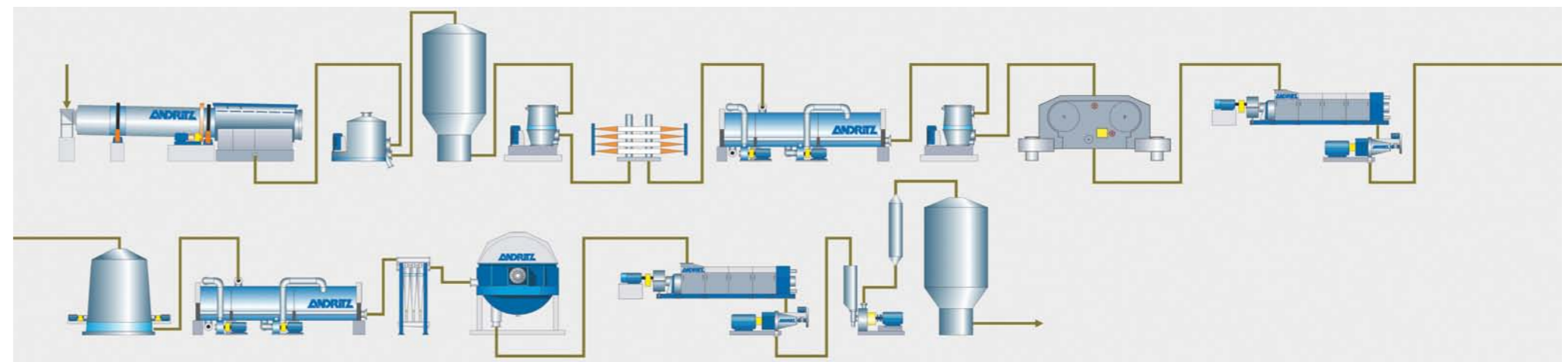
Benefits

- Innovative machine concepts utilizing effective cleaning and flotation units for best final product quality and maximum cleanness
- One- or two-stage bleaching systems based on lowest bleaching chemical charges
- Configuration of optimum number of screening stages for maximum sticky elimination
- Incorporation of selective ash separation equipment to provide tissue softness
- Ecologically friendly processes with minimum impact on the environment

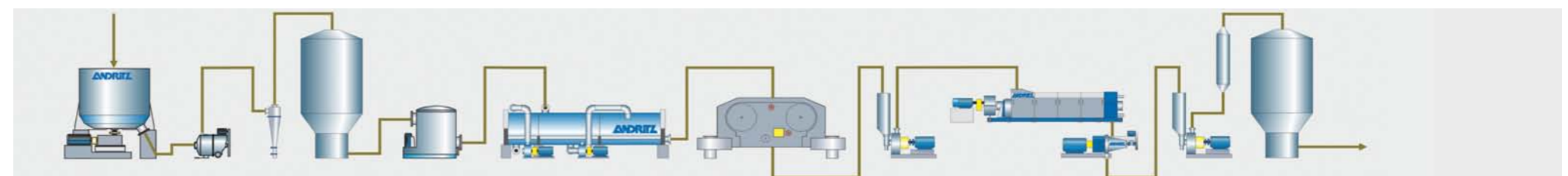
Process stages for different deinking plant concepts

	2-loop deinking system	Simplified deinking system
1 st loop	Pulper feeding	Pulper feeding
	Pulper	Pulper
	HD cleaning	HD cleaning
	MC slot screening	MC slot screening
	Flotation	Flotation
	LC cleaning	
	LC slot screening	
	Washing	Washing
	Dewatering	Dewatering
	Dispersing	Dispersing
	Bleaching	Bleaching
2 nd loop	Flotation	
	LC cleaning	
	Thickening	
	Dewatering	
	Dispersing	
	Post-bleaching	

2-loop deinking system



Simplified deinking system



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Equipment and process know-how applied

Innovative key components

By developing components for each process step, ANDRITZ continuously develops its understanding of how individual equipment performs most efficiently within the entire tissue production system.

- Continuous pulping using the FibreFlow Drum FFD – gentle pulping at highest consistency
- Fine slot screening with ModuScreen A and F – maximum sticky elimination
- Cleaning by AhlCleaner TC133 – efficient removal of small debris
- Flotation with SelectaFlot SFL – providing highest brightness at lowest fiber loss
- Dispersing using the CompaDis CDI – optimized dispersing and bleaching to save chemicals at low power consumption
- De-ashing with SpeedWasher SW – efficient and selective ash removal

Engineering competence

ANDRITZ is one of the leading suppliers of complete systems for deinked pulp as a valuable raw material for various paper applications – from pulping to storage, including sludge and reject treatment.

ANDRITZ's in-depth process know-how is complemented by a broad range of engineering services, from basic/detail plant and process engineering, 3D planning, to electrical and control engineering, DCS programming, and factory acceptance tests. Additional project support packages range from basic project management to erection work supervision, start-up and commissioning, to complete turnkey responsibilities. ANDRITZ project managers and technical personnel can draw on many years of international experience.

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