



PULP & PAPER

AdvaCon

ADVANCED CONDITION MONITORING
AND PROTECTION SYSTEM FOR REFINERS

AdvaCon continuously monitors structure-borne sound up to 100 kHz and is hence capable of highly selective and sensitive refiner plate protection and health monitoring of other rotating equipment, such as motors and gears. Multiple, high-resolution acceleration

sensors installed at standardized locations replace complex and manual measurements. The equipment's condition is continuously monitored, and measurements are available for operation and maintenance to ensure optimum and safe operation while

providing key information for planning shutdowns and repairs. AdvaCon is also used for dynamic zeroing of plates in single-disc refiners as well as in conical-disc machines for both flat and conical zones.

ANDRITZ

ENGINEERED SUCCESS

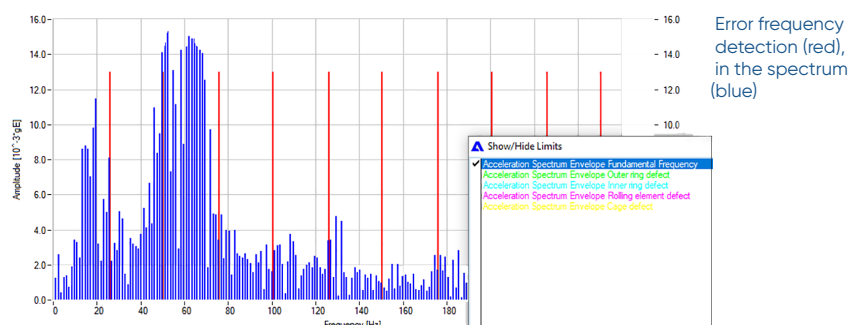
Automatic refiner plate protection and condition monitoring

| Machinery group | Model(s) | Original manufacturer |
|--|----------|-------------------------|
| HC refiners, LC refiners, motors/gears | All | ANDRITZ and competitors |

AdvaCon avoids plate clashes by continuously monitoring acceleration amplitude within a specific and adjustable frequency range relating to refiner plates. When AdvaCon senses a sudden signal increase above the moving average (accounting for plate wear), it immediately sends a digital signal to open refiner plates and avoid a catastrophic failure. Additionally, the dynamic zero of the plate gap can be set using accurate and specific data rather than relying on the inaccurate and outdated manual method of using headphones. Furthermore, AdvaCon monitors BPFIR*, BPFOR*, BSF* and CS* for the specific bearing types, allowing early problem detection. Maintenance

receives automatic email reports regarding imbalance, misalignment and looseness of rotating parts for proactive maintenance work planning. An integrated recording system stores data during start-up and shutdown conditions to permit advanced trouble-

shooting, passing through the various critical frequencies. The AdvaCon PC software also included is user-friendly and available online, thus making it the perfect tool for most of your rotating equipment, regardless of the manufacturers.



*Ball passing frequency for inner and outer race, ball spinning frequency, and cage speed

BENEFITS

- **Refiner plate protection:** early detection and prevention of plate clashes
- **Cost reductions:** avoid unplanned shutdowns and optimize preventive maintenance schedule
- **Health Monitoring Analysis:** advanced understanding of equipment and process
- **Automatic Health Condition report:** information on the bearing condition as well as imbalance, misalignment and looseness available at any time
- **Versatility:** up to 12 acceleration channels can be monitored simultaneously
- **Availability:** continuous vibration monitoring
- **Accuracy:** providing consistent and exact dynamic zeroing of plate gap
- **Damage/injury prevention:** early detection of failure and avoidance of catastrophic events

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