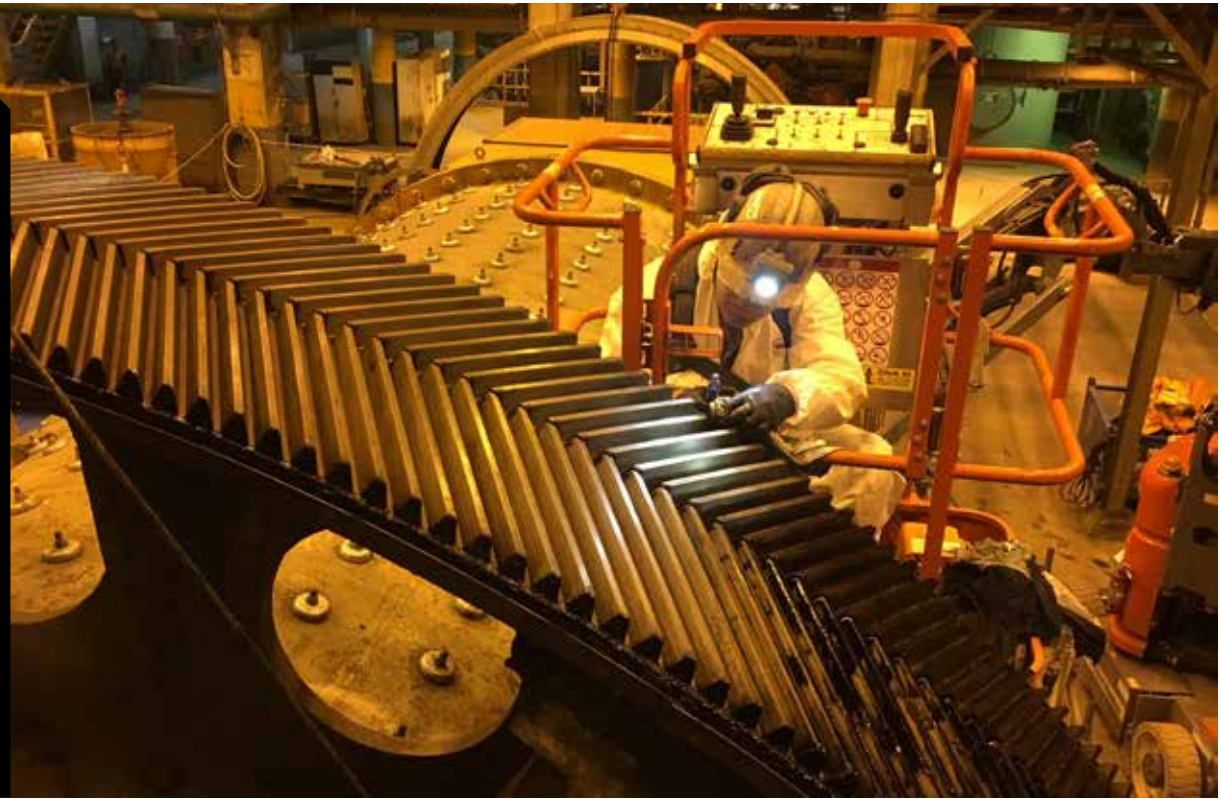


Metso

Gears and pinions

Complete inspection and evaluation

Detect the undetected. Discover potential issues before they turn into real problems



Your challenge:

Issues with pinion teeth can be hard to spot. Even worse, when left uncorrected, they can cause permanent damage to gears, pinion bearings and soleplates.

Metso solution:

1. Define inspection scope with experts, to focus on key areas
2. Thorough cleaning during operation, to gain greater visibility
3. Detailed physical and digital inspection by the OEM, uncovering potential damage
4. Full evaluation of results, providing insight for decision-making

Scoping process

- Metso will identify necessary inspection points, putting together a full inspection plan
- Experts consider history of operations as well as your specific equipment

Cleaning and flushing process during operation

- Gear and pinion sets are cleaned with specialized non-corrosive and non-hazardous solvents, allowing the mills to run at full load during cleaning
- Contamination and build-up is removed in under an hour
- Metso Field Service technicians take care of all details and carry out cleaning

Inspection process

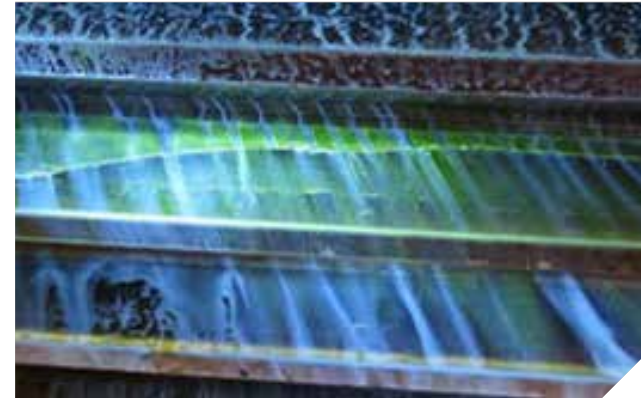
- Digital gear inspections utilize advanced electromagnetic technology to scan and record the gear tooth condition faster and with more accuracy than any other method available
- 100% of a vast area is covered within a single scan producing a digital footprint in high resolution to achieve accurate data on every defect of the girth gear
- Inspections are simpler and safer for hard-to-reach areas with up to 60% less downtime due to quicker inspections

Evaluation process

- Assessment and recommendations are made, determining if your gears and pinions are fit to run as-is or require repair, flipping or replacement
- If cracks are found, they are assessed, treated immediately and re-inspected
- The remaining safety in the gear is calculated and recommendations are made for



Visual inspection after cleaning uncovered a crack on a gear tooth



A full inspection using MPI detected a deeper crack



Once detected, cracks are assessed and treated immediately by OEM experts

Why Metso services?

- Metso's extensive expertise ensures no damage to gears and pinions during the cleaning process
- Experts are able to provide full service immediately, from assesment to treatment