

Constantly clean roller oil – with no oil changes

Problem

Zapp Precision Metals Sweden AB was experiencing a problem with microscopic particle contamination of the lubricating oil in their fine steel wire production line.

The particles were extremely small, smaller than a micron, and no conventional oil filtering techniques were capable of removing them.

Instead, to maintain high product quality, the company had to replace all the oil in the fine wire production line every 12 weeks. This generated high costs for oil purchases and for disposal of used oil. The company also faced revenue losses due to scrapped products and production downtime for oil changes.

It was clear that Zapp needed a change, and that an integrated solution was the only way to move forward. One that was capable of removing particles at even a micron level in order to be truly effective.

Solution

Zapp decided to have an integrated Double Separation Technology (DST) system from SKF RecondOil installed on the fine wire production line.

With the DST system installed, the lubricating oil could be continuously cleaned, with contamination particles down to nano size captured and separated out.

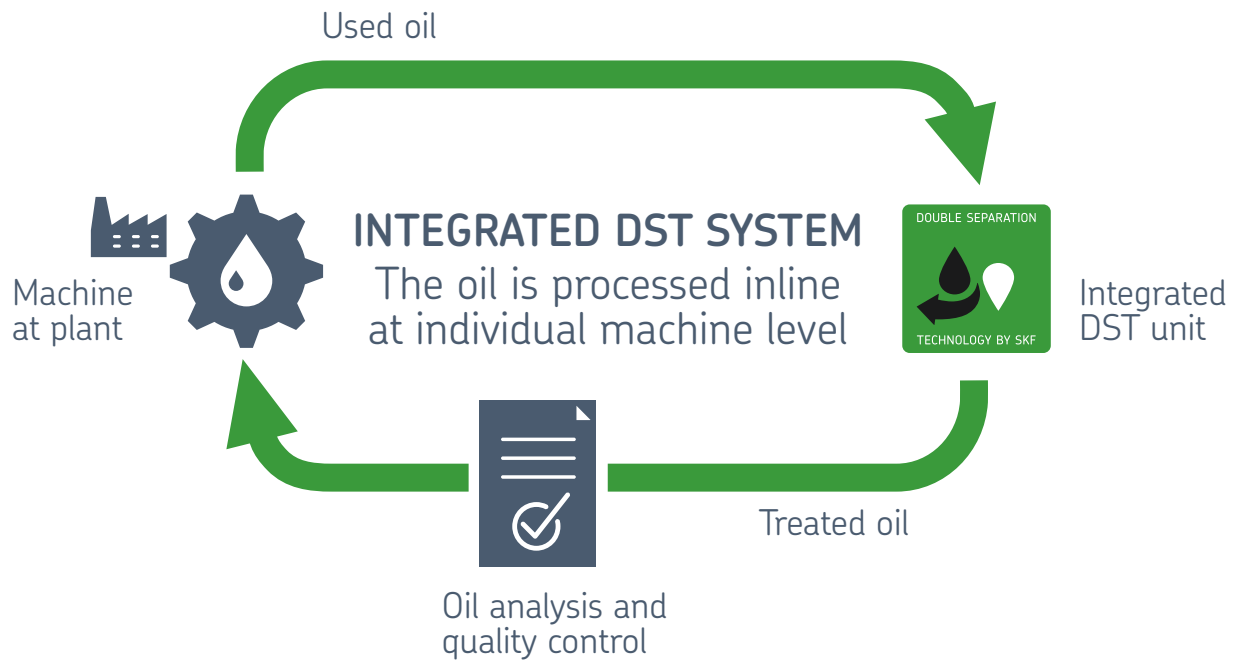
Around 4-5% of the oil in circulation was pulled out of circulation and regenerated at a time in the DST system. And since the oil was regenerated at a higher rate than the contaminants built up, over time, this resulted in constantly super-clean oil in circulation in the application.

Result

The company went from a 12-week oil-change cycle, to not having to replace the oil at all. To date, the steelmaker has:

- Avoided 30 oil changes – the same oil has been in circulation for around eight years
- Increased productivity by 25% – due to constantly super-clean oil and avoided downtime
- Reduced the need to scrap products of inferior quality by 80%
- Doubled service life for the wire drawing dies
- Eliminated carbon emissions and environmental impact of extracting, shipping, modifying and disposing of around 90 m³ of oil





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