METAL WORKING INDUSTRY

CLEANING OF RETARDER SHAFTS

REQUIREMENTS

Retarder shafts or, more generally, workpieces requiring degreasing before further processing are made of various materials and in all conceivable dimensions.

Especially for units with slim inner diameters or large lengths, cleaning the inside of the body is a highly challenging task.

Retarder shafts with tempering oil

PREVIOUS TECHNIQUE

In this specific application, retarder shafts were produced on a contract basis. The manufacturing process of these shafts included, after the actual machining, a tempering in oil as well as a downstream blasting with steel balls. The tempering oil hardened when the shaft cooled down and bonded blasting material to it, especially in the internal thread of the hollow taper.

Further cleaning was not carried out, as all the methods tested so far - cold wash table, washing machine, ultrasound - had not produced satisfactory results.

This led to very costly complaints and, in individual cases, to the return of entire semi-trailers full of goods. This problem is completely "off the table" with the introduction of our technology.

OUR SOLUTION

The low-pressure hot cleaning process of ph-cleantec was the efficient and at the same time cost-effective solution. The high temperatures of up to 95°C dissolved the tempering oil. With the low pressure, the tempering oil as well as the steel balls were removed without any problems.

Nothing is damaged in the process, and the procedure can be used inside the workshop without harming people or the environment.

In a further step, the low-pressure hot cleaning was automated and integrated into the production process.

The process was thus a very efficient and cost-saving solution that was also environmentally and health-friendly. The risk of complaints was practically eliminated.

Manual internal cleaning of a blind hole in a retarder shaft - the process step can also be automated

YOUR ADVANTAGES

- Efficiency/quality: Fast and thorough cleaning of the tempering oil in specific cases or of greasy and oily contamination in general. With the right spray accessories, even cleaning inside a component is possible without problems.
- Automation: Easy integration into semi- or fully-automated production processes.
- No damage: No damage to sensitive parts thanks to low pressure.
- Mobility: On-site cleaning – devices are mobile and self-sufficient.
- Occupational safety and environmental protection, chemicals: No or very little chemicals are required; this protects the environment, increases occupational safety and reduces costs.
- Universal applicability of the hot cleaning devices: These can be used for maintenance and servicing or for cleaning machines and parts.
- Economics: Significantly less cleaning time, no or hardly any chemicals.
- Overall: Comparatively low investment and hardly any running costs, but high efficiency and excellent quality.

SEE ALSO

- Application report Complex castings (internal cleaning)
- Application report Tubes and shafts Wellen
- Application report Bore holes
- Video Lüttge Brass instruments (trumpet)