

CLEANING THE INSIDE OF TUBES AND SHAFTS

REQUIREMENTS

Tubes and shafts or generally workpieces with the need for degreasing before further processing are manufactured from diverse materials and in all conceivable dimensions.

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

In practice, it is usually important to remove chips, oils and cooling lubricants as well as drawing grease from the machining process without leaving any residue. After cleaning, the workpieces are either measured, mounted or surface treated.

PREVIOUS TECHNIQUE

Usually, such workpieces are cleaned with a high-pressure cleaner or with chemicals containing solvents. Both techniques are considered unreliable and not suitable for the workshop. The high-pressure cleaner also requires special environmental conditions and the process as such is definitely not resource-efficient.

OUR SOLUTION

The low-pressure hot cleaning process of the ph-cleantec offers an efficient and at the same time cost-effective alternative. The low pressure of between 3 and 7.5 or 3 and 14 bar is sufficient to flush out tubes and shafts without any problems. Due to the high temperatures of up to 95°C, contamination even in internal threads is dissolved and transported away.

Nothing is damaged and the process can be used in the workshop without harming people or the environment. In most cases, there is no need for (expensive and environmentally harmful) chemicals, as the cleaning effect is achieved through the high temperatures.



Cleaning the inside of a deep blind hole in a shaft



Internal cleaning of a deep blind hole in a shaft - detail

With normal lances, tubes up to 2m long can be cleaned internally, with telescopic lances even up to 7m long pipes can be cleaned from one side; if cleaning can be done from both ends, the range is doubled.

Of course, the method is also suitable for the external cleaning of shafts and pipes. Here, the units of our 2000 series are often used, which have sufficient flushing capacity to clean pipes and shafts with three nozzles of 120° each.

YOUR ADVANTAGES

- Efficiency/quality: Fast and thorough cleaning, especially of greasy and oily dirt. With the right spray accessories, also problem-free cleaning of long pipes - with telescopic lance up to 14m. Simultaneous cleaning inside and outside possible without any problems.
- Automation: Easy integration into semi- or fully-automated production processes.
- No damage: No damage to sensitive parts thanks to low pressure.
- Mobility: Cleaning on site - units are mobile and generally self-sufficient.
- Occupational safety and environmental protection, chemicals: No or very low usage of chemicals required; this protects the environment, increases occupational safety and reduces costs.
- Universal applicability of the hot cleaning units: Devices 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.



Cleaning the outside of a heavily contaminated glass tube – before



Cleaning the inside of the glass tube 1 minute later – finishing touches

SEE ALSO:

- Application report: Cleaning of complex castings
- Application report: Retarder shafts
- Video: Cleaning of brass (musical) instruments



Cleaning the inside of a tube, example trumpet – see video on cleaning brass instruments



Cleaning the inside of a tube, example trumpet – here with flexible nozzle