framatome

# In-Situ Valve Metallography and Material Assessment

## Investigation of valve seats and hard-facings

### Rapid and non-destructive examination for the evaluation of the current state of valve seats

## Challenge

You want to obtain comprehensive knowledge about the current state of valve seats and hard-facings for the definition of:

- Sound operating conditions
- Necessary mid- and long-term maintenance actions
- Repair or replacement actions?

You are challenged with:

- Lack of information about your valve seats
- Cost- and time-intensive replacements or repair actions
- The areas of interest cannot be examined by conventional methods because of dose rates and / or limited accessibility
- Quality assurance after repairs?

## Solution

We develop tools and technologies to examine the current state of valve seats by non-destructive methods.

The following examinations can be performed directly on site:

- Determination of hard-facing / buffering thickness
- Visualization of weld build-up hardness (indicator for important material properties)
- Chemical composition at the surface of the hard-facing
- Geometrical details of the whole seat
- Characterization and assessment of defects.

Investigation of a valve inaccessible with conventional methods

## Customer benefits

- Optimization of maintenance, repair, replacement actions regarding time and budget
- Rapid and non-destructive method
- Short response time through examination of the results directly on site

**Your performance**
is **our** everyday **commitment**

## Technical information

Key features:

- Rapid execution
- Non-destructive approach
- In-situ capabilities realized by replica techniques
- 360° of the circumference of the valve seat can be examined
- Detailed information concerning the current state and the integrity of valve seats
- Also applicable for High Dose Rate Valve
- All materials and wide range of valve type covered
- Competent back-office support for the on-site teams to provide guidance and expertise on measures to be taken

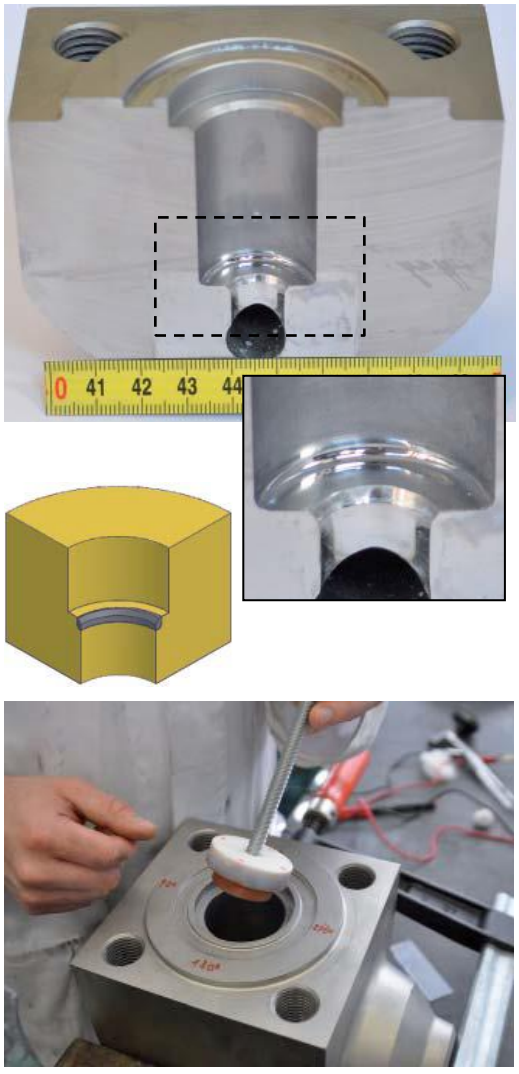
The materials laboratory and its on-site methods are accredited according to DIN EN ISO/IEC 17025:2018 *)

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-21039-03-00

*) the accreditation is valid only for the scope as listed in appendix of certificate D-PL-21039-03-00 and in list of test methods:

https://www.dakks.de/de/akkreditierte-stellen-suche.html;

https://www.framatome.com/EN/customer-1668/certificates-and-accreditations.html




Investigation of small valves with special replica tools

## References

- Germany
- Finland
- Sweden
- Switzerland

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