LaCam® Torpedo

Possibility of a system overview

Container

- cooling, water distribution
- allocation of compressed air
- electrical cabinet, personal computer, operation terminal

Measurement engineering, mechanism

- laser measuring head
- laser beam, sensors
- emergency drive
- signaling

2. possibility of a system overview

The insight into the container

- Cooling, water distribution, distribution of pressered air, E-cabinet, PC

Setup: Measuring position

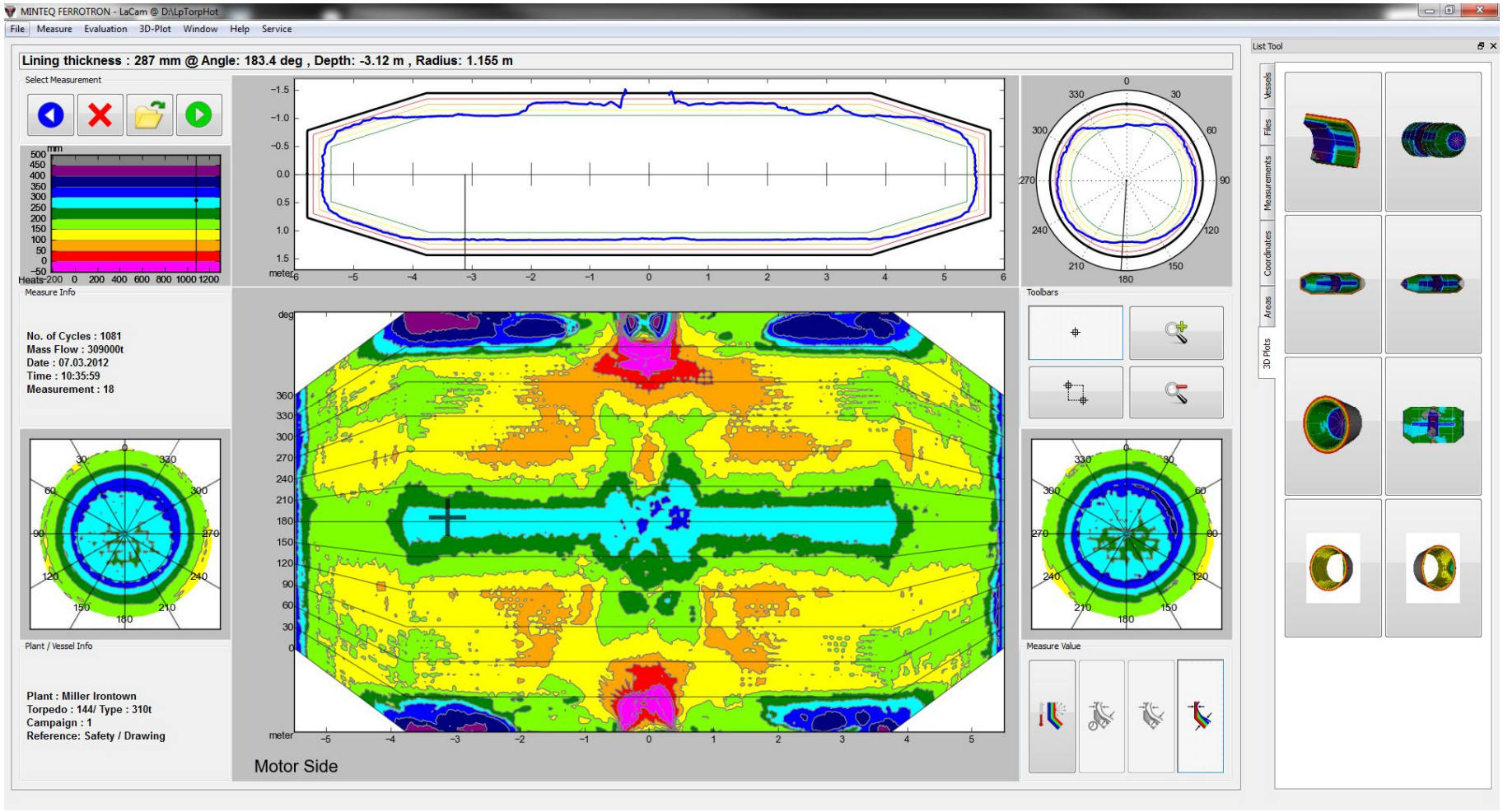
Stand-by position

Position 1: Position scan

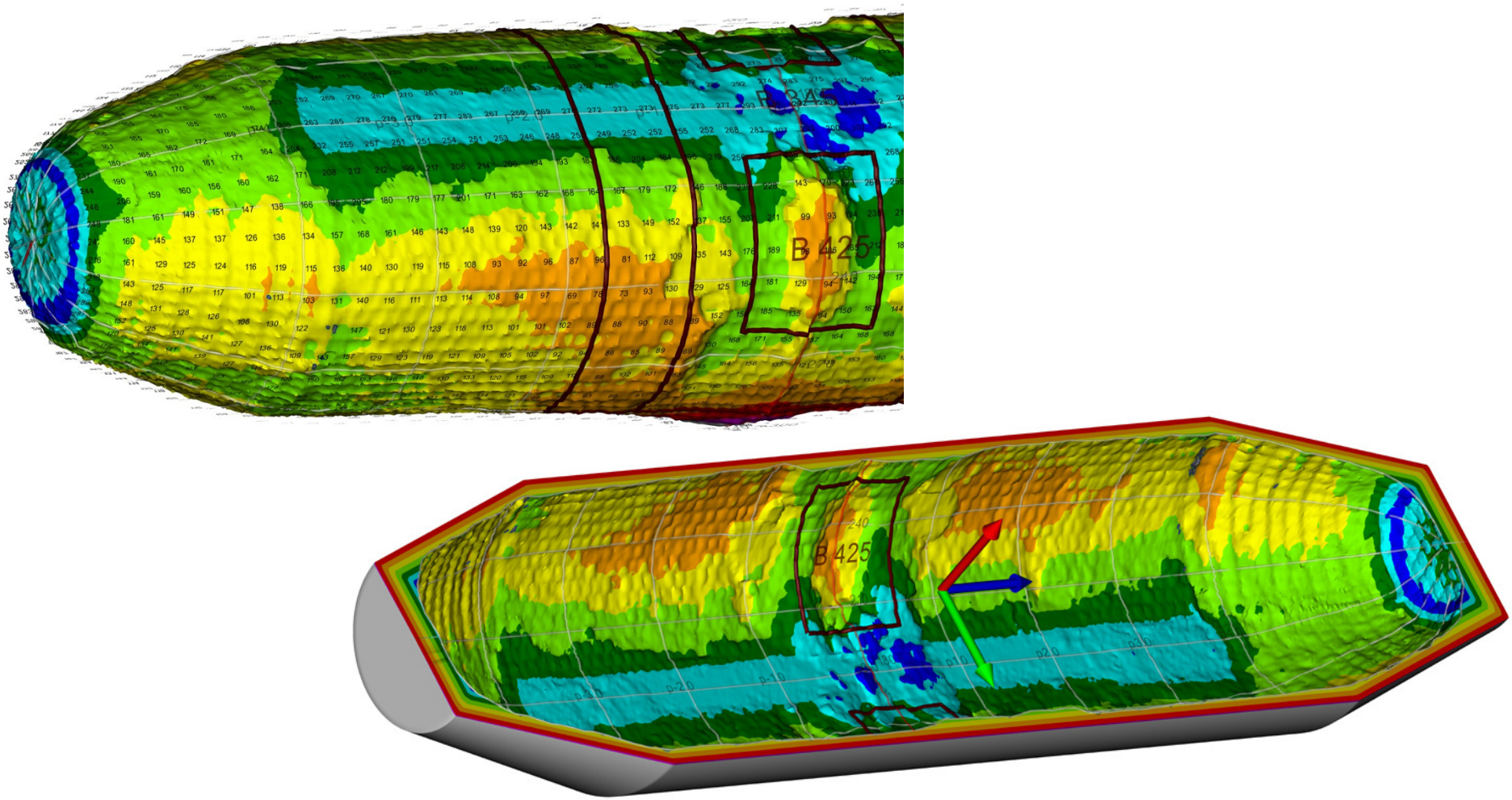
Position 2: Mouth scan

Position 3: Wear measurement

Powerful 3D-graphics allows viewing the refractory lining from all perspectives - **G**raphical **U**ser **I**nterface



Powerful 3D-graphics allows viewing the refractory lining from all perspectives - Graphical **U**ser **I**nterface

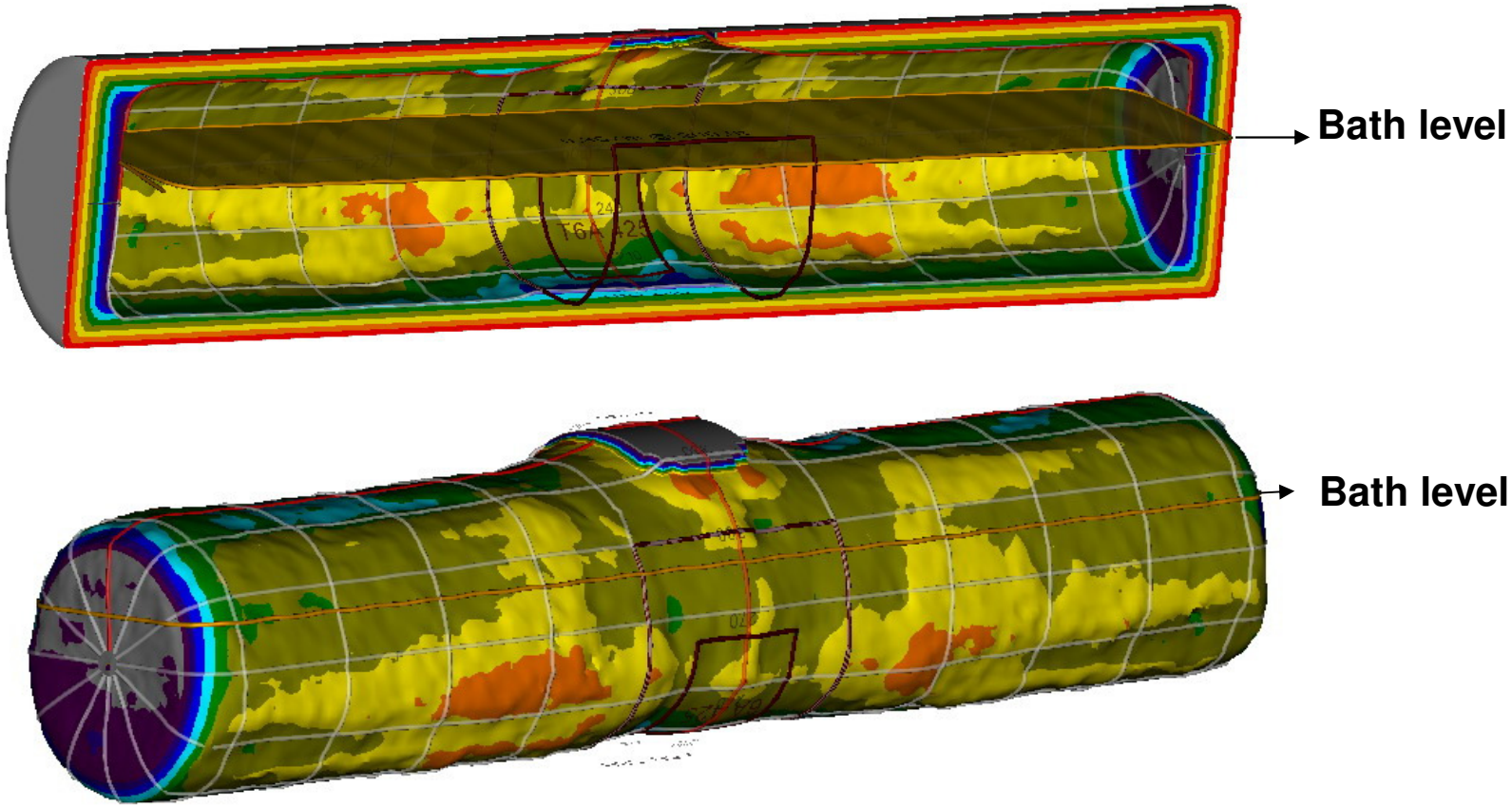


Technical Highlights

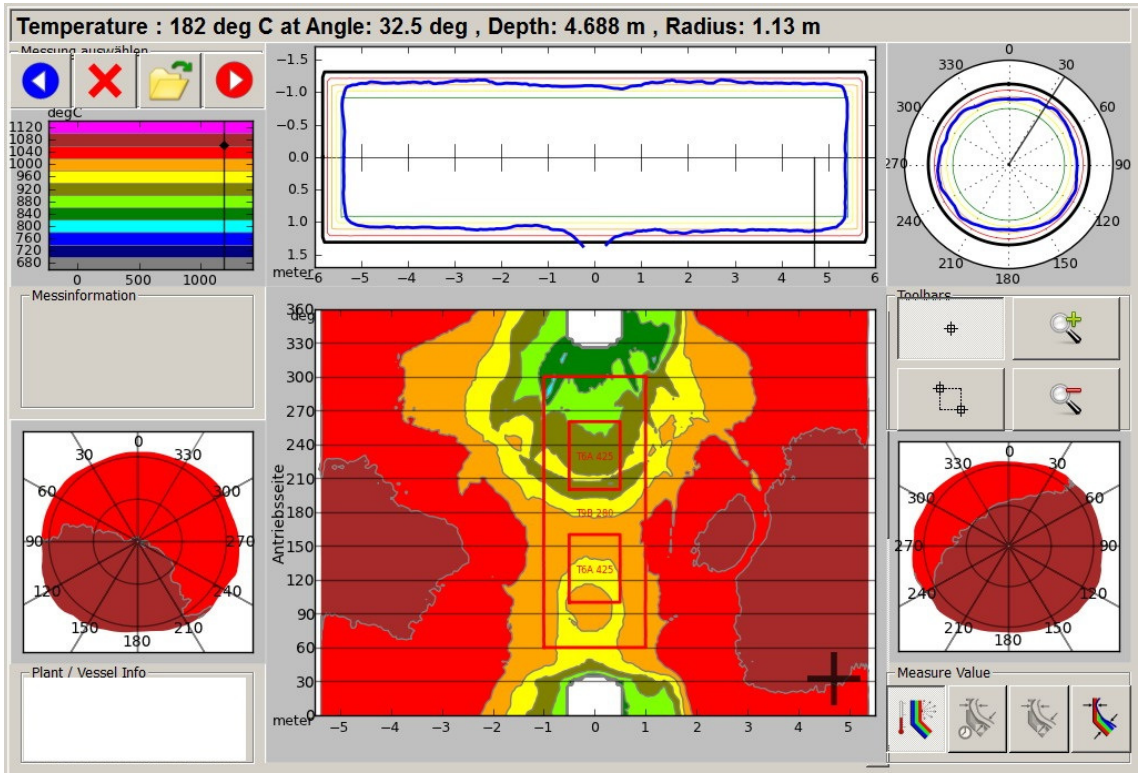
Scanning frequency:	3.6 million points per full scan
Accuracy:	≤ 5 mm
Total measurement time including evaluation:	less than 3 minutes

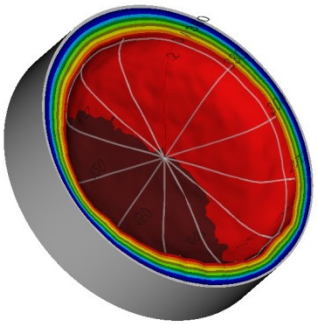
- All relevant information on one page
- Any user action will show the requested data in all plots simultaneously
- Powerful 3D-graphics allows viewing the refractory lining from all perspectives – thickness indicated by colour
- New developed coaxial compact laser scanner
- Powerful cooling system for extreme heat protection
- Industrial PC for data collection and data processing
- Connection to customer´s level 2 system
- Fully automated mechanical manipulator designed to fit into customer´s location

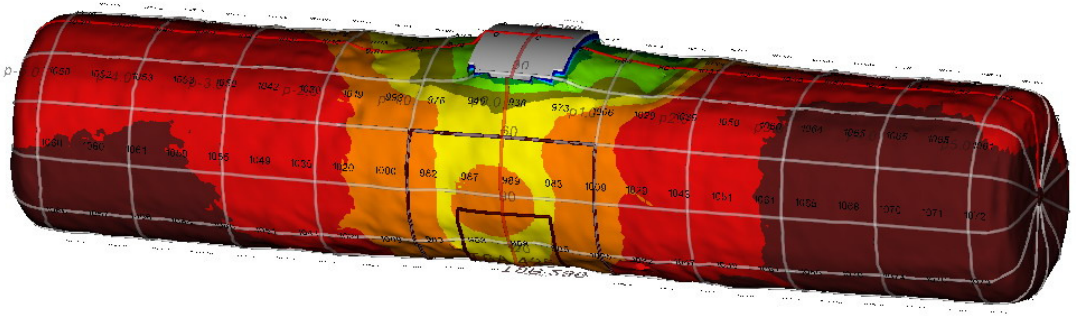
Bath level evaluation in 3D



Temperature evaluation in 3D

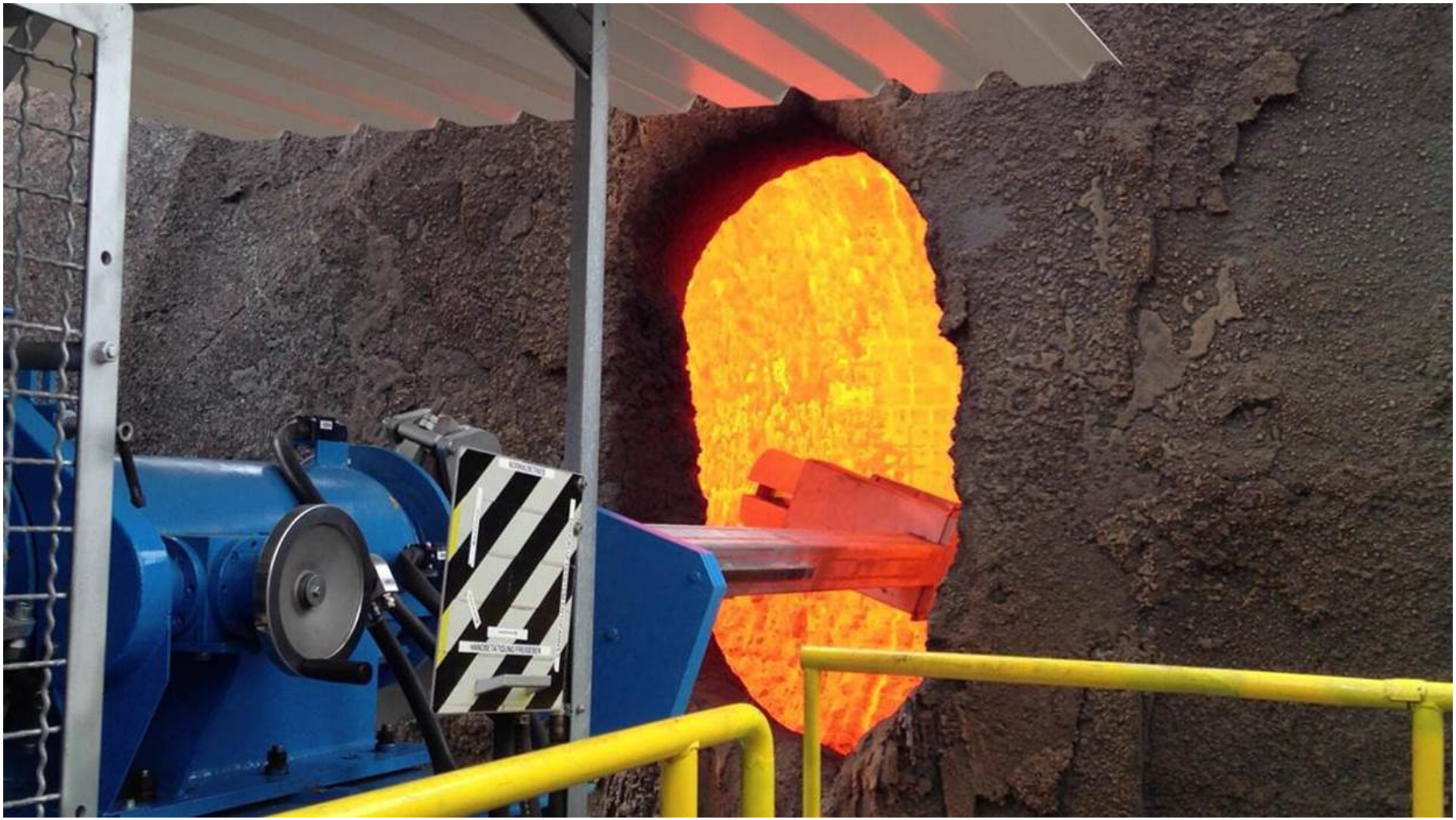






LaCam® 3D scanner head immersed into the center of a hot torpedo ladle. The advanced cooling system protects the head from the 1000°C (1832°F) hot environment.

LaCam® Torpedo 3D profile measurement for refractory lining thickness in hot torpedo ladles



LaCam® Torpedo 3D profile measurement for refractory lining thickness in hot torpedo ladles

Benefits:

- Safety
- Significant increase in availability and efficiency
  - No need for time and energy consuming cold inspections
  - Gain of information for more efficient ladle logistics
- Extension of ladle refractory lifetime