

Smart Leakage Detector

Reliable, accurate and easy detection of all water leakages at the EAF

NEW!



Principles.

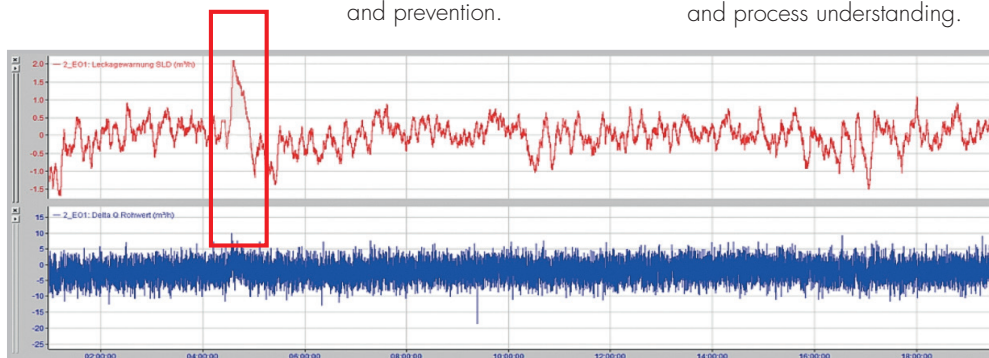
- Water leakage detection is an important safety topic, because cooling water infiltration in the EAF can cause catastrophic explosion.
- Small water leakages at the EAF are particularly dangerous; they can neither be detected visually in an easy way nor detected by conventional systems.
- The BSE Smart Leakage Detector is able to detect small water leakages (at Badische Stahlwerke down to 1,5 m³/h, 25 l/min) on a consistent basis and without maintenance.

Concept.

- Usage of high-precision flow meters measuring the cooling water in- and outlet line of the EAF shell and/or roof.
- Online analysing algorithm permanently controlling the cooling system.
- In case of a detected leakage sending of a signal to the furnace PLC and generating an alarm to the operator.
- Different alarms for various predefined leakage size.
- Database and trending tool for delay analysis and prevention.

Advantages.

- Reliable detection of small but dangerous water leakages (below the actual measurement accuracy of the flow meters).
- Integration into HMI system enables warning to the operator or forcing the EAF to stop.
- Early warning giving the operator a scope of actions to avoid catastrophic explosion and saving delay times.
- Increased safety and reduced risk of equipment damage.
- Very high availability.
- Improved delay analysis and process understanding.



Smart Leakage Detector (red graph) indicating a small water leakage, invisible with conventional flow meter signal (blue graph).

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