

# Corrosion protection for boilers

## Onsite automated weld overlay

### Maximizing operational availability and performance

Improving boiler performance and reliability is an ongoing challenge for boiler operations maintenance teams. Sulzer's weld overlay solutions are designed to enhance the service life of our client's assets, reducing failures and improving operational availability.

In addition to our shop cladding facility we provide onsite weld overlay services to our global client base, protecting boilers and components from corrosion and erosion by applying our weld overlay solutions, often in harsh and challenging environments.

With continued focus on safety, quality and ever demanding schedules, our highly skilled teams have executed numerous projects on waste-to-energy and biomass plants, reducing maintenance costs by providing an effective boiler protection.



Picture 2: Onsite overlay in progress



Picture 1: Automatic weld overlay

### Onsite weld overlay services

We offer an extensive portfolio of weld overlay services for boilers:

- Automated weld overlay on new or worn carbon steel tubes
- Automated weld overlay on existing worn cladding
- Automatic and semi-automatic weld overlay of headers and screen tubes
- Carbon build-up of existing membrane wall and tubes
- Inspection and repair service for existing weld overlay

### Project evaluation and planning

Sulzer conducts comprehensive project preparation and planning on all of its projects in cooperation with our customers, to achieve highest safety and quality standards.

### Surface preparation

Sulzer's high quality weld overlay service is designed to achieve our client's specifications and QA standards while working safely. An important step in this process is surface preparation to SA3, NACE No.1 / SSPC-SP5 standards.

### NDT and inspection services

Our level II and/or level III QA Inspectors will provide a comprehensive report for existing overlay to establish scope requirements or on the completion of a weld overlay project.

### CladFuse™ weld overlay process

CladFuse is an effective and commercially viable protection for boiler components against base material thinning caused by corrosion and erosion. It provides long term protection for membrane wall and tubes, avoiding and preventing future costly unplanned outages and replacements.

Key features of the CladFuse weld overlay process are:

- Vertical down and overhead welding positions
- Predetermined weld bead pattern
- 50% overlap of beads
- >2mm weld overlay thickness
- High material deposition
- Controllable and consistent parameters
- Continuity of beads
- Minimum iron content

### Qualifications

We hold a comprehensive range of welding certifications, including ASME, National Board, and European, permitting us to provide a complete range of welding services covering your needs.



ISO 9001 and ISO 3834-2 certification, adherence to AD 2000-Merkblatt HPO standard and guideline assures our customers of a quality service.

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## Sulzer's comprehensive weld overlay offerings

Sulzer is offering a wide range of automated weld overlay services for both customer sites and in our fabrication facilities including:

- Nozzle ID welding
- Tower and vessel overlay
- Coker drum overlay
- Boiler membrane wall panels
- Boiler tube overlay
- Pipes and fittings
- CRA pipeline ID overlay welding

Typical applications:

- Towers and vessels
- Reactors
- Separators
- Coker drums
- Heat exchangers
- Digesters
- Coal-fired boilers
- Waste to Energy boilers
- Biomass boilers
- Furnaces
- Storage tanks
- And more

## Global capability

Sulzer has a global network that is well placed, equipped and experienced to service our customers in any needs and requirements

Our facilities are located around the world with service facilities in:

- USA
- Canada
- Mexico
- Brazil
- UK
- Germany
- Saudi Arabia
- India
- Thailand
- Singapore
- China
- Australia

Each service facility has the capabilities to meet the demand of the local market, supported by the skills and expertise of the complete service organization including Sulzer's vast network of engineers and technical experts.

Mobilizing from our facilities we have the ability and proven track record to execute projects at any location around the world.