



THIN COATINGS WITH TOUGH METALLURGICAL BONDING

Why using FuseClad?

Ashes and salts that deposit on boiler tubes create an insulation layer that decreases the boiler's thermal performance. In order to keep the heat transfer optimum, soot blowers are often used to regularly remove these deposits in critical areas. These cleaning devices can use water, steam, grits or shock waves. In the first three cases, the slag removal usually produces severe localised corrosion-erosion wear of the boiler tubes.

FuseClad 89 protects tubes subjected to soot blower wears in waste-to-energy boilers while FuseClad 17 performs well against general erosion in coal boilers.

The FuseClad coated tubes do not need any boiler tube shells (usually installed to protect against soot blower wear) which leads to an increase of the heat transfer.

FuseClad 53 is the best solution against corrosion in waste-to-energy or biomass boilers when erosion is limited.



What is FuseClad?

FuseClad specially designed alloys are applied by our Castolin Eutectic Spray & Fuse process in which powder is sprayed over the surface and then fused by an oxyfuel torch. These very dense coatings have a thickness below 1 mm and are metallurgically bonded to the substrate without dilution. They are mainly produced in our workshops but can also be applied on site on limited areas.

These coatings comply with the European standard ISO 15614-7 which covers the specification and qualification of welding procedures for metallic materials in pressurised vessels. Castolin Eutectic had obtained all the regulatory authorisations for applying these coatings in waste-to-energy, coal or biomass boilers.

Applications

- 🌱 Superheater panels
- 🌱 Supporting tubes
- 🌱 Open-pass tubes
- 🌱 Injection nozzles



fuseclad 89 (formerly 8995CH)

Waste-to-energy: solution for corrosion-erosion

A corrosion resistant nickel based coating containing a homogeneous dispersion of hard phases which stabilises the oxide layer when it is submitted to the repetitive impacts caused by soot blowers. Excellent resistance to the corrosion-erosion wear in waste-to-energy boilers.

Hardness:.....725 HV₃₀
Maximum steam temperature:.....350 °C



fuseclad 53 (formerly 53606)

Waste-to-energy: solution for severe corrosion

A Castolin Eutectic patented nickel based alloy having a high molybdenum content that increases significantly its corrosion resistance to harsh environments such as those found in waste-to-energy boilers. Especially suited for boiler tubes that have a limited exposure to erosion

Hardness:.....610 HV₃₀
Maximum steam temperature:.....370 °C



fuseclad 17 (formerly 17535)

Coal: solution for erosion

A nickel based alloy which has a high chromium content to combat any kind of corrosion in coal-fired boiler environments. Especially designed to resist against soot blowers in coal boilers.

Hardness:.....400 HV₃₀
Maximum steam temperature:.....550 °C

