AMSTAR 888*
Thermal Spray Cladding

GE’s AmStar 888 Thermal Spray Cladding provides dependable and predictable waterwall protection in boilers where high temperature gaseous corrosion and/or erosion may occur.

Customer benefits
- Significantly reduces Equivalent Forced Outage Rate (EFOR)
- Dependable and predictable tube protection
- Quality applications regardless of scope
- Applied on site or in GE’s shop
- Measurable, scalable and repairable
- Applicable for any fuel type

Features
- Will not delaminate, crack or spall from the substrate
- Offers a range of thicknesses from 5 mils to > 100 mils
- Defect-free substrate coverage
- Designed for maintainability

Consistent and repeatable quality
GE’s Thermal Spray Division uses the High Velocity Continuous Combustion (HVCC) system for spray cladding applications. In the HVCC process, the consumable is completely atomized in a supersonic jet-stream giving the cladding beneficial properties. The robust process delivers consistent and repeatable quality and allows for applications to be made on site or in our shop.

Additionally, AmStar 888 will not fail at the substrate level. This unique characteristic allows GE to refurbish the cladding with virtually 100% success where mechanical damage has occurred. This negates the need to remove the cladding down to the substrate to maintain reliable tube protection.

AmStar 888 Cladding’s erosion and corrosion properties protect against multiple metal loss mechanisms.

Technology principles
AmStar 888 cladding is applied utilizing a patented alloy used exclusively by GE. AmStar 888 has been engineered to produce mechanical and metallurgical properties that result in lower residual stresses incurred during the application process. This allows the cladding to be applied at varying thickness levels (from 5 mils to greater than 100 mils where appropriate) as compared to other spray coatings which are typically limited to thicknesses less than 30 mils. It also eliminates the cracking and spalling associated with other thermal spray coatings.

Fume extraction
GE also offers portable Fume Extractor Units for use when a client’s ID Fan is not available.

Operations philosophy
GE’s staff of technicians are trained and certified in the application of AmStar 888 Cladding. They are available for emergency mobilization at any time of the year and can be set up on-site usually within 24—48 hours.
Powering your plant performance

AmStar 888 Cladding is another example of the GE commitment to provide products and services that extend equipment life cycle, improve availability and decrease the total cost of ownership.

Applications

AmStar 888 Claddings are being used successfully in the following boiler types to significantly reduce EFOR:

- pulverized coal boilers
- circulating fluidized bed boilers
- waste to energy boilers
- black liquor recovery boilers

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