

Coatings for Maritime Techniques:

Internal Coating of Electric Dehydrator for Offshore Drilling Platform LuFeng 7-2 / South China Sea

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For the durable protection of the electric dehydrator, the main product requirements were high-grade chemical resistance, temperature stability and pressure resistance. Properties, which our premium system "Ceramic-Polymer SF/LF-ARAMCO-APCS-2i,28,117" completely and durably fulfills.



For the new built offshore drilling platform LuFeng 7-2 an electric dehydrator was coated internally with our premium coating „Ceramic-Polymer SF/LF-ARAMCO-APCS-2i,28,117“.

Our product Ceramic-Polymer SF/LF-ARAMCO-APCS-2i,28,117 was tested extensively by research laboratories of „Saudi Aramco“ and was approved for application in accordance with their demanding requirements of the standards APCS-2i, APCS-28 and APCS-117 (Engineering Standards 2010, SAES-H-001; Coating Selection and Application, Requirements for Industrial Plants and Equipment).



Technical Information:

Project: Internal coating of an electric dehydrator
Medium: Crude oil
Design pressure: 0.75 MPa, test pressure 0.94 MPa
Operating temperature: 140°C
Design temperature: ca. 232 m²
Completion: April 2014
Coating product:
„Ceramic-Polymer SF/LF-ARAMCO-APCS-2i,28,117“

Specific aspects for the achieved approval were e.g. the excellent chemical resistance at high operating temperatures up to 150°C and the extreme pressure resistance, which was proven by autoclave-tests with explosive decompressions.



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Our Product:

- Ceramic-Polymer SF/LF-ARAMCO-APCS-2i,28,117

Surface Preparation and Application of the Coating

The heavy corroded dehydrator before blasting and coating. Internal electrode components and pipe fittings were dismantled and treated separately.

The tank was cleaned with high pressure water jet to remove all contaminations, then it was sandblasted thoroughly according to standard SSPC-SP10. Afterwards the surface was visually inspected; it shows a roughness profile of 50-100 µm. Additional tests to determine the concentration of soluble salts (Bresle method) were conducted. They met all requirements.

Our product Ceramic-Polymer SF/LF-ARAMCO-APCS-2i,28,117 was applied by airless spraying in 2 layers of 400 µm each to achieve the required thickness of 800 µm. After full curing the total coating thickness was accurately measured and the surface was inspected with an electronic spark detector (Holiday tester, high voltage 5 kV). No pinholes were detected, the coating material showed a smooth surface. Thereafter, weld joints and supporting points of the holders inside the tank were additionally coated by brush.

For final completion the coated inlet pipelines and electrode components were reinstalled.



**Are you searching for a
pressure and temperature resistant coating?
Would you like to achieve long and maintenance-free
operation times of your tanks?
The Ceramic Polymer corrosion experts will gladly
assist you!**