THIN-FILM EVAPORATOR, RIZHAO, CHINA

A new thin-film evaporator in an investment project in Rizhao, China required exceptional insulation and guaranteed personnel protection. A thin-film evaporator is used to separate difficult-to-handle products. This method uses indirect heat transfer and mechanical agitation to evaporate a thin layer of flowing substance under controlled conditions.

This tank encounters an outside temperature of 122°F (50°C) and an inside max temperature of 320°F (160°C). These extreme temperatures combined with environmental conditions made this an essential job for extraordinary insulation and heat protection.

The base of this thin-film evaporator tank was coated in Tnemec's Series 1224 Epoxoline WB. This primer is an advanced generation, water-based epoxy coating that is low odor, low VOC, and specially formulated with corrosion-inhibitive properties for the long-term protection of steel substrates.

For the necessary insulation, Series 975 Aerolon was applied to the tank next. This revolutionary formulation by Tnemec was designed for exceptionally low thermal conductivity, resulting in improved resistance to high temperatures compared to traditional insulation. Series 975 contains a microporous composite particle that provides many features and benefits, including excellent heat and mechanical stability, non-combustibility, and high hydrophobicity to combat environmental conditions.

The final component for this project was Tnemec's Series 1028T Enduratone. This water-based top coat is a low VOC, High Dispersion Pure acrylic polymer coating that provides excellent long-term protection in both interior and exterior exposures.

PROJECT INFORMATION

Location
Rizhao, China

Completion Date
2021

Owner
Evonik

(above) These photos respectively portray the application process of Tnemec's primer coating, Series 1224 Epoxoline WB, and the final outcome of the tank before going into operation.

FEATURED PRODUCTS

Series 1224 Epoxoline WB
Series 975 Aerolon
Series 1028T Enduratone

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