



Marine Catalyst For Residual Fuel

Technical Data Sheet

Combustion Improvement - provides for a more complete fuel burn which increases BTU output while using the same amount of fuel. Results are a reduction the amount of Carbon-In-Ash (CIA), Particulate Matter (PM), and carbon in the flue gas. Leading to reduced exhaust plume opacity, improved Electrostatic Precipitator (ESP) operation, and less backend deposits.

Corrosive Slag - During the combustion process Vanadium normally forms Vanadium Pentoxide (V_2O_5) which leads to the formation of liquid corrosive slag and catalyzes the oxidation of Sulfur Dioxide (SO_2) into Sulfur Trioxide (SO_3). When SO_3 mixes with moisture from the atmosphere or from leaking boiler tubes it forms corrosive sulfuric acid. Using [Technol Marine Catalyst For Residual Fuel](#) converts Vanadium into high melting point oxides of Vanadium trioxide (V_2O_3) and Vanadium tetroxide (V_2O_4). The presence of these lower oxides do not catalyze the oxidation of SO_2 into SO_3 , so less corrosive's are produced.

Reducing excess air in the system will allow you to further drive oxidation of Vanadium to its lower oxidative state (V_2O_3 and V_2O_4) without sacrificing combustion or efficiency. Sulfur forms SO_2 during combustion. SO_2 can be oxidized into SO_3 in the presents of V_2O_5 catalyts, which [Technol Marine Catalyst For Residual Fuel](#) also reduces. SO_3 reacts with water to form Sulfuric Acid

(H_2SO_4) which is very corrosive to metal surfaces. The active ingredient Iron (Mn) will convert the Iron Oxide $Fe(III)_2O_3$ to $Fe(II)_3O_4$ which will not catalyze SO_2 into SO_3 .

Reduced SO_3 results in a lower acid dew point. This prevents the formation of corrosive H_2SO_4 on air heaters, ESP and colder metal parts. The presence of free acid also results in sticky deposits which prevent efficient operation of back end equipment.

[Technol Marine Catalyst For Residual Fuel:](#)

- Increases fuel and boiler efficiency
- Cleans boiler heat transfer surfaces
- Reduced emissions & soot blowing
- Reduced atomizing steam
- Reduced cold-end deposits, corrosion.

APPLICATION INSTRUCTIONS:

Apply 1 gal. to 5,000 gal. of fuel before refueling to ensure proper mixing and distribution.

[Technol Marine Catalyst For Residual Fuel](#) is readily available in:

5-Gal. Closed-Head Steel Pails

54-Gal. Closed-Head Steel Drums

Skid-mounted 275- & 330-Gal. Tote Bins for industrial or bulk applications.