TC-260 GAS TURBINE FUEL ADDITIVE

(Vanadium Corrosion Inhibitor Additive)

1. INTRODUCTION

The purpose of this document is to provide instructions regarding the use of TianChen TC-260, an oil-soluble ultra-high alkali magnesium additive (hereinafter referred to as TC-260) to inhibit corrosion by the vanadium in fuel oil for gas turbine under high temperature.

TC-260 is an oil-soluble, turbine-quality, organo-magnesium fuel additive for gas turbine. TC-260 is made of magnesium hydroxide-based compounds modified by polymers. It has excellent physical and chemical properties with unique formulation and completely owns the right of knowledge. It can be easily dissolved in heavy fuel oil with any proportions. TC-260 can provide MgO to burn with V_2O_5 which is produced from heavy fuel oil injurant to form high-melting-point vanadium-magnesium compound by chemical combination to inhibit vanadium corrosion, and the compound turns into scattered ash flowing out with turbine exhaust gas.

The ratio of magnesium in TC-260 and vanadium in heavy fuel oil should be around 3~3.5 (Mg:V=3~3.5), or should be referred to the gas turbine instructions. The nickel in the heavy fuel oil must be calculated with vanadium for TC-260 dosage.

TC-260 is strictly manufactured according GE standard GEK28150B. It is stable on hydrolysis, oil-soluble, non-volatile and innocuous etc. It is generally applied to heavy duty gas turbine used in industrial, marine and utility applications.

2. TECHNICAL SPECIFICATION

Additive Type	Oil-soluble and oil-dispersed
Magnesium content	≥ 26%
Physical appearance	White viscous liquid
Density	1.4 ~ 1.5g/ml (20℃)
Viscosity	≤500mPa.s (40℃)
Flash Point	>65℃
Pour Point	<-10℃
Contaminants Na+K Ca Pb V	 ≤65mg/Kg ≤500mg/Kg ≤5mg/Kg ≤5mg/Kg

3. PACKING AND SHIPPING

TC-260 is an industrial chemical, packing and shipping should be accomplished in accordance with acceptable commercial practices for petroleum fractions type of product. Avoid visual fire and high temperature. Avoid contacting with skin and eyes. TC-260 can be pumped into tanks directly when ambient temperature is below 50℃, and it's not corrosive to carbon steel, stainless steel or aluminum. It can be stored for a long time in the original 200-Liter iron container without significant physical change. Packing can be treated with customized request when it doesn't impact the product quality or transportation. The transporting class: Petroleum fractions type of product.

TC-260 is stable in water, no hydrolysis, no agglomeration, effective storage period of one year. It may have stratification phenomenon after long-term storage, stir and mix thoroughly by machine before use, and it won't affect the product performance.