

ZI-CHEM 1480 Steam Boiler Corrosion Inhibitor

HIGHLIGHTS

ZI-CHEM 1480 corrosion inhibitor is an essential component of the ZI-TECHASIA maintenance protection program of the boiler and after boiler systems.

ZI-CHEM 1480 corrosion inhibitor is used to control corrosion caused by carbon dioxide and oxygen in the afterboiler section of steam generating systems by forming a non-wettable, monomolecular film on metal surfaces. ZI-CHEM 1480 corrosion inhibitor is a stable water emulsion of octadecylamine, a filming-type amine.

TYPICAL PROPERTIES

- Appearance: White, homogenous liquid
- Specific gravity: 1.10 – 1.20
- pH @ 5% sol: 5.0 – 6.0
- Dilution: Uniform dispersion easily prepared
- Freeze point: 0°C

PRIMARY APPLICATIONS

ZI-CHEM 1480 corrosion inhibitor is not recommended for systems where more than 80% condensate is recovered for use as feedwater, because excessive recycling may occur.

Systems which have not been treated with a filming type steam and return line corrosion control inhibitor may contain old corrosion products. In its action in forming a protective film on metal surfaces,

ZI-CHEM 1480 corrosion inhibitor may loosen old corrosion products which will be transported with the steam and condensate. In these cases, a low starting dosage of ZI-CHEM 1480 corrosion inhibitor is applied and then the dosage is gradually increased in order to slowly remove old corrosion products. This is necessary in order to prevent the fouling of traps and valves, and the return of excessive amount of objectionable metal oxides to boilers. In severe cases, it may be necessary to direct condensate to waste until the condition clears up.

ZI-CHEM 1480 should be injected as a diluted solution only to the steam header after the boiler through a stainless steel injection assembly comprising a non-return valve and injection quill.

TESTING & CONTROL

As a general rule, a starting dosage of 4 to 8 ppm as product is applied. Taking into consideration information in the Application section, the dosage is increased by 2 ppm every two weeks or longer if necessary until 10 to 15 ppm as product is applied. Coupon type corrosion test specimens are then installed in the system to follow the progress of treatment in controlling corrosion. The dosage of ZI-CHEM 1480 corrosion inhibitor is adjusted to hold the general corrosion rate and pitting to a minimum.

FDA INFORMATION

ZI-CHEM 1480 corrosion inhibitor is FDA acceptable in accordance with 21 C.F.R., Part 173, Section 173.310-Boiler Water Additives

THE BENEFITS

- Avoid unscheduled shutdown due to corrosion problem in the steam and condensate systems.
- Extended equipment life.
- Suitable for food industries
- Easy handling due to its liquid form

COMMON APPLICATIONS

- Automotive industries
- Packaging facilities
- Pharmaceutical
- Food Industries
- Pulp & Paper processing
- Timber processing

PACKAGING

- 25L pails
- 220L drums
- 1000L IBC's or in bulk



FEEDING

ZI-CHEM 1480 corrosion inhibitor is prepared as a 5% or less dispersion using condensate by one of the methods described below.

METHOD A.

1. Transfer the required amount of ZI-CHEM 1480 corrosion inhibitor to a separate pail.
2. While stirring continuously, slowly add about one gallon of condensate (below 46°C) for each pound of ZI-CHEM 1480 corrosion inhibitor.
3. Fill the chemical solution tank almost to the normal level with condensate (below 46°C) and then while agitating slowly, add the prepared dispersion until a uniform mixture is obtained. Do not use high speed agitation because foaming may occur.

METHOD B

1. Partly fill the chemical solution tank with hot (77°C) condensate.
2. Using a slow speed agitation, slowly add the required dosage of ZI-CHEM 1480 corrosion inhibitor.
3. After all of the ZI-CHEM 1480 corrosion inhibitor is added, continue agitation and add cold condensate (below 46°C), until the tank is filled to the required level.

STORAGE

Store ZI-CHEM 1480 corrosion inhibitor in a dry location where the temperature does not exceed 37°C. Do not store in areas where the product will freeze