

Steamate* NA0960

Condensate Treatment

- Controls corrosion of equipment and piping
- Minimizes deposition of corrosion products in boiler system
- Unique blend of amines provides cost effective system-wide protection, as well as excellent alkaline buffering capacity in the boiler water
- Optimal distribution characteristics for superior system coverage
- Contains the patented GE Diamine, the most effective neutralizer in the industry

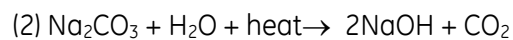
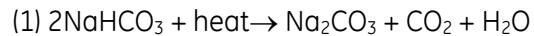
Description and Use

Steamate* NA0960 is a unique blend of neutralizing amines with selected stability and vaporization characteristics. When fed to the boiler, the amines in Steamate NA0960 volatilize with the steam and prevent corrosion by neutralizing carbonic acid in the condensate. The unique distribution characteristics of Steamate NA0960 provide controlled protection at points of initial condensation and at intermediate and extended areas of complex steam condensate system. This not only protects return system components, but also significantly reduces pickup of iron and copper corrosion products in the condensate, and their subsequent deposition in the boiler system.

Technology

Corrosion in steam condensate systems is frequently a problem. Carbon dioxide is the most common cause of corrosion.

The feedwater alkalinity is the chief source of carbon dioxide because bicarbonate and carbonate break down at elevated temperatures to form carbon dioxide gas. The reactions are as follows:



The first reaction is 100 percent complete; however, the decomposition shown in the second reaction proceeds to only about 80 percent completion.

At points of condensation, carbon dioxide dissolves in water to form carbonic acid. This depresses the pH and causes etching of the metal. The characteristic acidic corrosion shows up as thinning and grooving of the metal at and below the water level.

Distribution Ratio

The effectiveness of a neutralizing amine treatment depends on how well it is distributed throughout the steam condensate system. The amine must be present in the condensate to neutralize the carbon dioxide as it dissolves. The distribution ratio is a comparison of the amine concentration in the steam to the concentration in the condensate, and is a measure of its ability to enter the liquid phase.

Blending amines together makes it possible to take advantage of these properties and maximize the distribution of the amine treatment. The unique blend of amines in Steamate NA0960 provides a wide range of distribution ratios that results in superior protection throughout the condensate system.

Treatment and Feeding Requirements

Proper treatment levels for Steamate NA0960 depend on many factors particular to a given installation. Although the condensate pH is usually maintained in a noncorrosive, alkaline range above pH 8.0, the product should be used in accordance



LENNTECH

info@lenntech.com Tel. +31-152-610-900

www.lenntech.com Fax. +31-152-616-289

with control procedures that GE establishes for a specific application.

Steamate NA0960 should be mixed with high-quality water, preferably condensate or boiler make-up or feedwater to prepare a chemical feed solution of any convenient strength. The product is also compatible with most boiler water treatment formulations. However, when mixed with other boiler treatments, the combined solution strength should not exceed ten percent by weight.

Packaging Information

Steamate NA0960 is a liquid blend, available in a wide variety of customized containers and delivery methods. Contact your GE representative for details.

Storage

Store Steamate NA0960 at moderate temperatures and protect from freezing. If frozen, thaw completely and mix thoroughly prior to use.

Safety Precautions

A Material Safety Data Sheet containing detailed information about this product is available upon request.