Extra Reactive Multigraded Multidimensional

C-LON-PS

BOILER WATER TREATMENT CHEMICAL

CHEMISTRY OF WATER QUALITY AND ITS IMPURITIES

Water quality varies with location and seasons, water in the form of rain absorbs gases from the air as it fall to the ground and seeps downward in the ground, because water is universal solvent, so it picks up and dissolves more chemicals and minerals. By the time when this water is pumped up contains lot of salts, dissolved gases, organic and inorganic compounds, therefore, untreated water is never pure. So, water to be used in boiler should be prior treated and must in quality as per recommended limits of its contents.



Problems Caused By Untreated Water If Used In Boilers

1. Scale And Deposits

When water is turned into steam, the minerals previously dissolved in the water are left behind and deposit a scale on the hot boiler surfaces. This scale, mostly calcium and magnesium is an excellent insulator and slows the transfer of heat to the water. Sometimes other minerals like, silicates and iron can also cause of deposits to form, as iron comes from corrosive steam condensate returning lines. When boiler surfaces are covered with scale, heat normally absorbed by the water goes up the stack instead, and the tube metal temperature rises to the point of failure.



Problems Caused, Other Than Scale, By Untreated Water

2. Corrosion (Condensate Corrosion)

If alkalinity is present in feedwater in the form of bicarbonate (HCO_3^-) and carbonate (CO_3^-) when enters in the boiler, it breaks down to forms carbon dioxide (CO_2) this carbon dioxide travels with the steam throughout condensate system and condenses, it forms carbonic acid (H_2CO_3) it leads reduction in pH and causes corrosion.



Corrosion (Gases Factor And Other)

Dissolved gases like oxygen, carbon dioxide along with electrochemical reaction leads to corrosion of boiler metal.

$Fe + O_2 + H_2 O \longrightarrow$	Fe(OH) ₃	:	OXYGEN CORROSION
$Fe + CO_2 + H_2O \longrightarrow$	FeCO ₃	:	CARBON DIOXIDE CORROSION
$Fe + H_2O \longrightarrow$	$Fe(OH)_3 + H_2$:	ELECTROCHEMICAL ATTACK

3. Fouling

Fouling occurs when restriction develops in piping and equipment passages, creating inefficient water flow.

4. Foaming

Very high concentrations of soluble or insoluble solids in boiler water will cause foaming. Specific substances such as alkalis, oils, fats, greases and certain types of organic matter and suspended solids causes foaming.

5. Carryover

Boiler water carryover is the contamination of steam with boiler water solids. There are several common causes of boiler water carryover. Bubbles form on the surface of the boiler water and leave with the steam. This foaming can be compared to the stable foam of soap suds.

6. pH Level

pH is the level of acidity and alkalinity of water and boiler needs specific limits of pH.

7. Embrittlement (Caustic)

Embrittlement is the partial or complete loss of a material's ductility due to imbalance alkalinity and others.







Description OF C-LON-PS

C-LON-PS is a formulation designed for the internal treatment of feed water used in boilers. It contains a corrosion inhibitor, an anti scalant and a sludge conditioner. C-LON-PS is formulated for the treatment of boilers using hard and soft water.

Prevents and Removes Deposition

A powerful anti scalant prevents calcium, magnesium and iron deposition and also helps in the removal of existing scale up to some extent.

Controls pH and Corrosion

C-LON-PS maintains steady levels of pH of feed water. C-LON-PS contains a corrosion inhibitor which reduces fouling due to iron hydroxides, pitting and tube failures.

Saves Energy

Due to anti scalant and dispersant actions of C-LON-PS boiler remains clean, this helps to maintain peak heat transfer efficiency reducing energy losses.

Application

In order to ensure maximum efficiency, our experienced technical staffs, after careful and systematic study of plant and boiler equipment, make recommendations for optimum dosages for operating conditions and requirements. However, general dosage of C-LON-PS is 40-55 ppm.

Availability

C-LON-PS is available in various grades for multiple applications. Custom made and specific grade C-LON-PS is also available to suit for a specific utility. Available in both powder and liquid form.







Whatever be the Equipment

- Boilers
- And in all system where scale formation takes place.

Additionals

For specific applications oxygen scavengers, sludge conditioners, pH boosters (either low or high) are also recommended additionally.



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CLEAN CHEM & ENGINEERS AN ISO 9001:2015 CERTIFIED COMPANY

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