Boilers

Flexible treatment programs for steam generators & heating systems.

Steam is required in nearly all sectors of the industry – for different purposes. For instance as process steam, or as heating steam supplied to industrial clients and households, or to drive turbines for the generation of electricity. In order to ensure the high efficiency of steam boilers, optimal treatment of the boiler water is essential. System disturbances caused by boiler scale, corrosion, local overheating or carryover into the steam reduce the operational safety and may cause substantial economic losses. Kurita therefore provides innovative technologies to prevent scale and corrosion in the entire boiler system, including the feed water tank, boiler, steam and condensate systems.

We offer a complete treatment program for a wide range of applications:

- Steam boilers
- Closed water systems
- Industrial and district heating systems

What kind of specialty products does Kurita provide?

- **Cetamine®**: Innovative and comprehensive technology based on film-forming amines to prevent corrosion and deposits in boiler systems. Cetamine® also meets the requirements of special applications like kosher food production.
- **Ferrolix®:** Traditional treatment program designed to prevent corrosion and deposits in all types of boiler systems. The products are available as single components or as complete, all-in-one systems.
- **Kurinpower A-6060:** Non-toxic oxygen scavenger formulated to replace the use of hydrazine which is no longer permitted due to its toxicity.

Why choose Kurita?

- To avoid material damage
- To ensure optimal heat exchange without local overheating
- To minimize potential plant breakdowns
- To prevent overheating and, in the case of carryover, risk of deposits on the turbine blades
- To ensure the long service life of your systems

Do you need support? Our qualified experts will be glad to advice you **personally and individually.**

Cetamine technology.

Cetamine® is an innovative and comprehensive technology for boiler water treatment. It is based on film-forming amines that form a hydrophobic layer adsorbed on metal surfaces all over the system. Cetamine® builds a continuous barrier between water and metal, thus preventing corrosion without affecting the heat transfer. Cetamine® stands for state-of-the-art water treatment. This new technology provides an easy way to control the whole system – with just one product.

Oxygen scavengers.

Even small quantities of dissolved oxygen in the boiler water may cause corrosion in the feed water lines, the boiler as well as the steam and condensate systems. A complete removal by mechanical deaeration is not possible. Kurita oxygen scavengers for feedwater treatment that remove the remaining dissolved oxygen with the help of efficient volatile and non-volatile oxygen scavengers, some of which are also suitable for use in the food industry.

Scale inhibitors / boiler scale prevention.

The formation of scaling in the boiler and especially on the heating tubes reduces the efficiency of boilers and presents a serious safety risk. Even thin layers of calcium carbonate or other mineral scales can considerably reduce the heat transfer of the heating tubes. This results either in a clearly higher energy consumption for the steam production or in an insufficient quantity of steam generated for the downstream equipment and users. Thicker layers of mineral scales may even cause a deformation or complete bursting of the tubes due to overheating – an extremely dangerous situation for the staff.

To prevent these critical problems, Kurita offers phosphate- and polymer-based scale inhibitors. Potential scale-forming ions in the water are bound, dispersed and then removed from the boiler by blowdown. This prevents scale formation in the boiler and on the heating tubes.

Alkalization of feed water, steam and condensate.

Corrosion in the downstream boiler equipment is mainly caused by condensed carbon dioxide. CO_2 in its liquid phase forms carbonic acid, which – by dissociation – reduces the pH value of the condensate. The result: corrosion. Kurita offers a complete range of neutralizing amines for application in low, medium and high pressure boilers to prevent this form of corrosion in the steam and condensate lines. Kurita also provides special multi-component products that are able to neutralize the carbonic acid formed in the steam and condensate system.

Based on our experience and with the help of our experts, we develop tailored solutions to meet your individual requirements. **We gladly provide personal advice.**