

FINEAMIN 15

POLYMERS & POLYAMINES-BASED CORROSION & SCALE INHIBITOR FOR STEWING & BOILING OUT STEAM BOILERS, AS ALTERNATIVE TO RISKY CHEMICAL CLEANINGS

ADVANTAGES

- Risk-free substitution for caustic soda / acid chemical cleaning
- Combination of ecologically harmless components in one solution
- Ecologically and toxicologically harmless, bio-degradable
- Highly efficient dispersion and removal agent for existing deposits
- Prevention of calcium carbonate and other mineral salts deposits
- Anticorrosion protection by surface-active film-forming polyamines
- Improvement of magnetite layer, increased heat transfer, less tube failures
- Alkalinization of the whole water-steam circuit

MODE OF ACTION

FINEAMIN 15 is a special combination of surface active, alkalinizing polyamines and polyacrylates, used in stewing and boiling out steam boilers, an environmentally compliant product meant to replace dangerous acid and caustic soda chemical cleanings. Existing corrosion products and deposits from old boilers as well as grease, oil, mill scale and ferric oxides found in new boilers are easily dispersed and gently removed. Along with the boiling out, long term use of film-forming FINEAMIN 15 chemical gives the advantage of online cleaning and reduces the need for chemical cleaning at many utilities, extending the period between cleanings by years or totally canceling them.

ENVIRONMENTAL COMPATIBILITY

FINEAMIN 15 has been independently tested and confirmed as ecologically and toxicologically harmless by medical and hygiene institutes. Surface-active polyamines get adsorbed to the waste water sludge flocs where they get degraded biologically. To meet the disposal conditions of the local authorities, normally, the boiler water treated with FINEAMIN needs only to be neutralized regarding the pH value. Afterwards, it can be discharged to the municipal waste water system.

APPLICATION AND DOSING

FINEAMIN 15 is generally injected as a diluted solution, during the filling process. This can be done by using a dosing pump or directly into the steam drum before closing the boiler. During the process, the boiler can be bled off in regular intervals. For additional make up water, product has to be added respectively (maintenance dosage). Therefore, a dosing pump is recommended (see procedure).

| 1st boiling | | 1st boiling | | blow-out | |
|---------------------------------|-----------------------------|---------------------------------|-----------------------------|-----------------------------------|-------------------------------|
| initial dosing | maintenance dosing | initial dosing | maintenance dosing | initial dosing | maintenance dosing |
| 2ltr/m ³ boiler vol. | 1ltr/m ³ make-up | 1ltr/m ³ boiler vol. | 1ltr/m ³ make-up | 0.5ltr/m ³ boiler vol. | 0.5ltr/m ³ make-up |

DELIVERY

FINEAMIN 15 is delivered as liquid solution in drums of 30 kg, 60 kg or 210 kg. For major customers, the product is available in standard containers of 1000 kg. In closed drums, with an ambient temperature range from -5°C to 45°C, it can be stored for up to 5 years.

PROPERTIES AND INFORMATION

PHYSICAL

| | | | |
|----------------------------|----------------|----------------------------|---------------------------|
| Form: | Liquid | Boiling point/range: | 100°C |
| Colour: | Colourless | Density at 20°C: | 1+/-0.1 g/cm ³ |
| Odour: | Characteristic | pH-value at 20°C: | +/-1.5 |
| Odour threshold: | nd | Vapour density: | nd |
| Melting point/range: | -10°C | Evaporation rate: | nd |

ECOLOGICAL

| | |
|--------------------------------------|-----------------------------------|
| Aquatic toxicity: | no relevant information available |
| Persistence and degradability: | 70% biodegradable |

THE FINEAMIN PRODUCTS FAMILY



FOR BOILERS / STEAM GENERATORS CLOSED LOOP COOLING OR HEATING

| PRODUCT NAME | ACTIVE INGREDIENTS | TYPICAL USES |
|------------------|--|--|
| FINEAMIN 06 | Polyamines & polymers | General boiler treatment, power plants <120 bars, refineries |
| FINEAMIN 06C | Polyamines & polymers, concentrated | Refineries, industrial processes |
| FINEAMIN 06 SCAV | Polyamines, polymers, oxygen scavenger | Same as FINEAMIN 06. Used for high oxygen levels in feed water |
| FINEAMIN SCAV 35 | Oxygen scavenger amines | Oxygen reduction < 120bars |
| FINEAMIN 90 | Polyamines | Power plants > 120 bars |
| FINEAMIN 24 | Polymers | Maintain high pH |
| FINEAMIN 39 | Polyamines, polymers | General boiler treatment |
| FINEAMIN 29 | Polyamines, polymers, copper inhibitor | Closed cooling with copper |

Available packaging, CP9 pallets: 30kg drum / 28 in pallet - 60kg drum / 8 in pallet - 210kg drum / 4 in pallet - 1'000kg IBC / 1 in pallet

FOR OPEN COOLING

| PRODUCT NAME | ACTIVE INGREDIENTS | TYPICAL USES |
|----------------------------|--|-------------------------------|
| FINEAMIN 47 | Film-forming amines, polymers | Corrosion and scale inhibitor |
| FINEAMIN 91 | Polycarboxylic acid, phosphonic acid | Corrosion and scale inhibitor |
| FINEAMIN 92 | Polycarboxylic acid, phosphonic acid, zinc | Corrosion and scale inhibitor |
| FINEAMIN 95T | Environmentally friendly phosphates | Corrosion and scale inhibitor |
| FINEAMIN 81 | Co-polymers | High-stress dispersant |
| FINEAMIN FINALGA ME | Isothiazoline | Biocide |
| FINEAMIN FINALGA 25 | Quaternary ammonium | Biocide |
| FINEAMIN Biodispersant BOD | | Biocide |

Available packaging, CP9 pallets: 30kg drum / 28 in pallet - 60kg drum / 8 in pallet - 210kg drum / 4 in pallet - 1'000kg IBC / 1 in pallet



HYDROPHOBIC FILM FORMING POLYAMINES

