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1. What is Dosing of Silicate

Using silicate, often in the form of alkali silicate (Na_2SiO_3), as corrosion inhibitor is often used in Europe, either alone or in combination with Katolysis.

When silicate is dosed, a quick precipitation will take place at the places in the system where corrosion is active. This will immediately stop active corrosion. Furthermore, it has the advantage that red-coloured water is very quickly eliminated. The disadvantage is the relatively poor ability to attach to metal surfaces. This is the reason why dosing of silicate can only be recommended in combination with Katolysis.

The effect is based on Na_2SiO_3 in an acid to neutral environment reacting and forming a gel, which will gradually change to a glassy consistency, which can seal up smaller holes in pipes. An active corrosion is characterised by acid areas, and silicate will therefore particularly be seen in areas with corrosion.

2. How to dose silicate

2.1 Katolysis plant

The Katolysis plant is adjusted as usual, according to consumption, and controlled by a water meter.

2.2 Dosing of silicate

Dosing of silicate is done by means of an adjustable dosing pump on the cold water line.

Controlled by a water meter, a dosing of 20 mg silicate/litre is added.

The permitted dosing amount is 40 mg sodium silicate/litre, but we will try with the smaller amount.

2.3 Duration

Under normal conditions, there is up to three months of dosing.

2.4 Safety

Na_2SiO_3 is a strong base and the safety precautions and safeguards for strong alkali must be kept.

2.5 Servicing

2.5.1 Cleaning of Nozzle

Silicate has a tendency to block the dosing nozzle, which therefore has to be cleaned regularly. It is recommended to clean the nozzle at least once a week.