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Brennereitechnologie

Polyphosphatschleuse

- polyphosphate lock for phosphatization of cooling water -

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Technical informations and instructions for use

General instructions:

The use of non-softened water for cooling purposes in the distilling apparatus results in the formation of water or boiler scale. The cause of these lime and gypsum deposits is calcium and magnesium salts, which are dissolved in cold water but precipitate when heated and lead to calcification of the pipes and the heat exchanger surfaces in the cooler and dephlegmator.

This in turn results in reduced cooling effect, higher cooling water demand and above all in insufficient condensation of heavy volatile distillate components in the dephlegmator. The results are low-alcohol, unclean distillates and reduced yields of sensory impeccable alcohol.

In extreme cases, the cooling system is completely blocked.

Polyphosphate softening:

Polyphosphate treatment consists of a complexation of the salts dissolved in hard water ("water hardeners", i. e. calcium, magnesium, iron and manganese salts) by sodium polyphosphates. The complexed hardeners remain completely in solution when the cooling water is subsequently heated up to about 75°C; the effect decreases with rising temperatures. Existing water scale dissolves over time when overflowed with phosphatised water.

The polyphosphate lock:

The polyphosphate lock enables automatic cooling water phosphating in the flow-through process. It is installed in front of the cooler in the cold water pipe. The lock consists of a cartridge container and a cartridge filled with hardly water-soluble polyphosphate crystals. The hard water flowing through the lock absorbs the smallest amounts of polyphosphate, which develops the desired complexing effect and thus protects the following heat exchanger surfaces and pipelines from calcification.



Technical data of the lock:

Height: ca. 35 cm

Outer-Ø: 13 cm

Ports: 2 x 3/4" internal thread brass

max. operating pressure: 6 bar

Filling quantity: approx. 1 kg Polyphosphate crystals

Installation and maintenance:

An easy-to-understand, detailed installation and maintenance manual is included with the product.

Indications for the polyphosphate cartridge:

The 1 kg polyphosphate filling contained in the new unit is sufficient for phosphating about 50 cbm of water. Since the cartridge container can be unscrewed without any problems when the water faucet is shut off and the cartridge can be removed and opened, the polyphosphate filling can easily be completed by oneself.

Important note:

Phosphated water is not suitable for drinking or blending purposes in distillate dilution or liqueur preparation. On the one hand, drinking water phosphating by means of a lock is inadmissible due to the inaccurate dosage, on the other hand, polyphosphate dissolved in water would cause turbidity when blended with alcohol itself.

Scope of delivery:

Polyphosphat lock
incl. 1 kg Polyphosphate
filling, hook wrench and
mounting material for wall
mounting (No. 6530)

For Reordering:

Mikrophos-Polyphosphate
1,5 kg Can (No. 6532)

Determination of water hardness:

DUROVAL-quick test for
approx. 50 determinations (No. 6500)