

Testing Kalyxx IPS devices

Purpose of experiment:

Use of IPS Kalyxx (ionic polarization system) to protect and remove minerals - calcites in heating systems, boilers and other equipment in dynamic water supply systems, leading to a significant increase in lifetime of pipes, heating systems and equipment in general.

Equipment: IPS Industry DN50

from "SWISS AQUA Technologies A. G." Obereggerstrasse 50, 9442 Berneck, Switzerland "was for the purpose of the experiment was installed on the front plate heat exchanger in the resort LLC" ARDEN PALAC, in the Khmelnitsky region, in the village of Satanov, st. Resort 40.

Equipment: IPS Kalyxx G ½ was installed on the boiler water pipes. Installation date of both devices 12/11 2018

Research Methods:

IPS Industry DN50 equipment was installed in front of a hot water plate heat exchanger. Plate exchanger plates were free of mineral deposits prior to assay (Fig. 1). For the purpose of the test, the required flow rate of the device under test per 100 m³ of water volume was determined.

IPS Kalyxx G ½ was installed in room no. 1 in front of the boiler. The heater was pre-cleaned of mineral deposits (Fig 2), the initial weight of the heater was 660 grams. The same equipment was also installed boiler in room no. 2, the initial weight of the heater is 550 grams. The target volume of the water volume was set at 3.2 m³.

Research results:

On 15.05.2019, the plate heat exchanger was disassembled to check for mineral deposits on the plates. At the time of the inspection, 108 m³ passed from the start of the test

Small deposits of mucus were present on the heat exchanger plates, which can be easily removed with a cloth. There are no limescale deposits. (Fig 3)

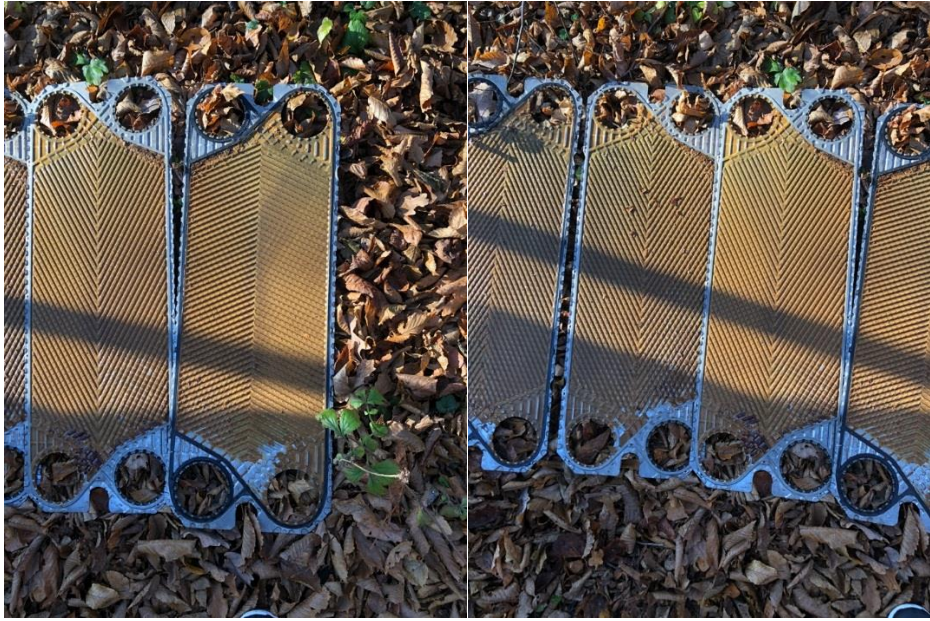
On May 15, 2019, the heater bodies were dismantled in rooms 1, 2. Boiler heaters where IPS equipment was used show the presence of small mineral deposit formations in the form of brittle particles that are easy to clean. The weight of the heater was increased by 40 grams and was 700 grams. It is important to set up only a small amount of incrustation on the boiler components - thermostat and hot water pipe. (Fig 4)

A comparative check of the boiler heater was also used, where the IPS Kalyxx was not used (1.8 m³ water volume.) The heater contains hard mineral formations that are difficult to clean. The weight of the heater was increased by 150 grams and was 700 grams. In this boiler, the thermostat and the water pipe have considerable deposits. (Fig 5)

Conclusion:

Based on the experiment, we can say:

The use of Kalyxx IPS in heating, boiler and other equipment systems in dynamic water supply systems points to a significant protective effect against scale formation.



Heat exchanger plates before test 12.11.2018



Fig. 1 Heat exchanger plates cleaned and ready for test 12.11.2018

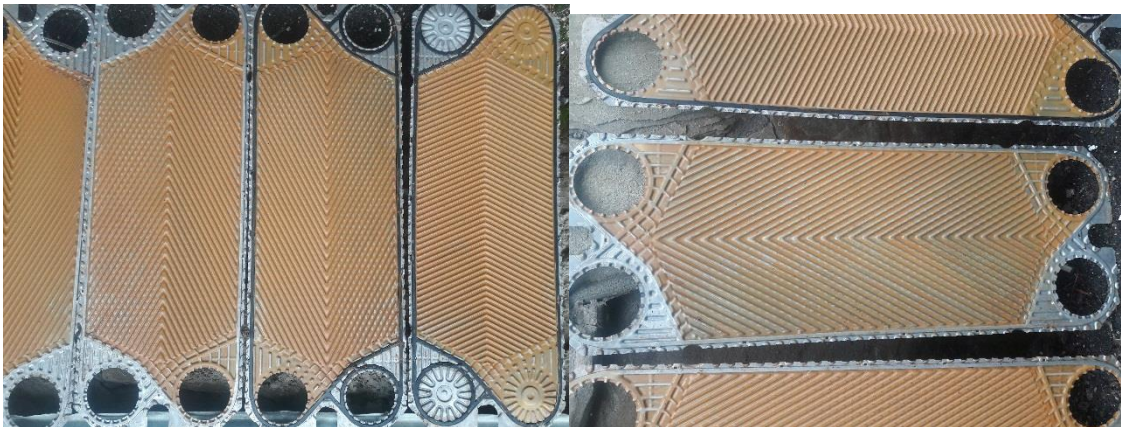


Fig. 3 Exchanger plates after test(108 m³) 15.05.2019



Fig. 2 Bojler heating coil before and after cleaning



Fig. 5 Bojler heating coil without treatment (1,8 m³) 15.05.2019



Obr. 4 Bojler heating coil with IPS Kalyxx (3,2 m³) 15.05.2019