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The invention relates to the processes for reducing the water hardness, caused by the calcium and magnesium salts and may be used for preventing the scale formation.

Summary of the invention consists in that the process includes treatment of the water in the flow on the action of the low-frequency field of magnetic waves moreover the water is subjected to the additional stabilization treatment by magnetic liquefaction carried out at the vibratory random motion of the spherical particles of barium hexaferrite, magnetized to saturation in the variable electromagnetic field with the induction value of 0,05...0,08 Tl, with subsequent passage and filtration thereof through inert materials filler, and separation of the fine-dispersive suspension. The process for magnetic treatment is carried out at the field frequency of 50…70 kHz and the water flow speed of 2…4 m/min.

The proposed process is realized by a device including a generator 11 with microprocessor of low-frequency radiation, an emitter 7 with insulator and a pipe-line 2 with circulating water. Novelty consists in that the device additionally contains a cylindrical tank-expander 14, made of two parts with different diameter. The upper part of the tank-expander 14 is separated from the lower part by a net 15 and filled with the filler 16. The lower part 17 of a smaller diameter, onto the outside of which there is placed a solenoid 18, is filled with spherical magnetic charge 20 and joined with the overflow pipe 22, coaxially placed into the tank-expander. The upper part of the overflow pipe 22 contains a distribution system 23 for irrigation of the filler 16 and water outlet into the separator 25. The emitter 7 is made of dielectric foil 8 in the form of unclosing cylinder.

Claims: 4
Fig.: 2