

The Hp revolution

Introduction:

The problem with lime scale is usually not defined as a health problem but is an economic problem. Metal pipes and heating elements are sensitive to lime scale which shortens the life of these products.

Hence the definition does not include health problems, but pipe blockages and burning of heating elements that prevent us from drinking, showering, working, and producing in water-dependent factories or damage as a result of pipe explosion due to scale cost us not only money but affect our mood and even our health.

Example of a water accessory without limescale and rust treatment



Another problem is the problem of growing bacteria in the filter housing
We produce a greenhouse for growing bacteria, most often growing bacteria of soil origin that are especially violent towards humans, animals, and vegetables / fruits.

Bacteria such as *Pseudomonas* pose a major risk as antibiotics are almost non-existent in ocular inflammation for example. An example of a water filter infected with the *pseudomonas* bacterium



Economic problem:

It is very easy to calculate the huge costs in accelerated wear of water pipes and connectors and it is much easier to calculate the costs of the heaters of the appliances and especially problems in water-dependent factories in the production processes hence the scale does cost us money and sometimes a lot of money.



Acceptable solutions to the solutions of the lime scale problems:

The solutions are simple solutions, when the correct economic calculation that the solution will not cost us more than the scale problem otherwise the solution is not economically viable and therefore not practical.

In all solutions there is a surgical intervention in the piping, i.e., opening the piping for the purpose of installing a water treatment device with all that entails, i.e., leaking from the piping and periodic treatment of accessories.

At present, conventional solutions are divided into three categories:

1) Chemicals (mainly phosphorous substances) that lower the pH of the water, constitute a strong acid that accompanies heavy metals



2) Ion exchange with the help of resins for adsorption of iron and calcium



3) Reverse osmosis that removes all dissolved substances from the water

Disadvantages of Solution 1: The chemicals come as a liquid or as a solid in bulk, high monetary cost, tinkering with shopping, storing and bringing material into the filter, the solution is partial and negligible, the water is rich in high levels of phosphorus and heavy metals and very expensive maintenance costs. That the haze will settle, and especially are usually unhealthy for the human body

Disadvantages of Solution 2: Comes in a sticky bulk and looks like sand, in this method the water loses light metals such as calcium and magnesium and there is an increase in sodium which is a health problem mainly in raising blood pressure, regular maintenance with concentrated salt water, sterile and hard to drink water

Disadvantages of Solutions 3: Comes as a filter inside a filter housing, very expensive maintenance cost, high water drainage of the process (waste of drinking water), sterile water is difficult to drink



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This fact is a problem because glass fibers that can fall into the water are a health problem for humans, animals and plants.

To every type of municipal water are added chemicals such as chlorine, ammonia and more, so these substances attack the plastic of the filter housing and expose the glass fibers

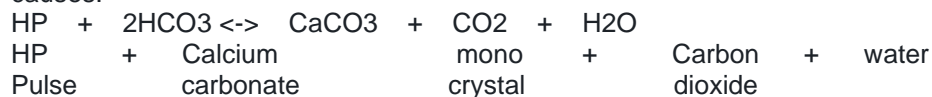
Therefore, dropping the glass fibers into the water can be a medical problem and usually without proper medical treatment.



The process of crystallization and rust formation

The basic condition for the formation of scale is the presence of metals such as calcium and / or magnesium and / or iron.

The main lime scale formation takes place when the water is heated, the water heating causes:



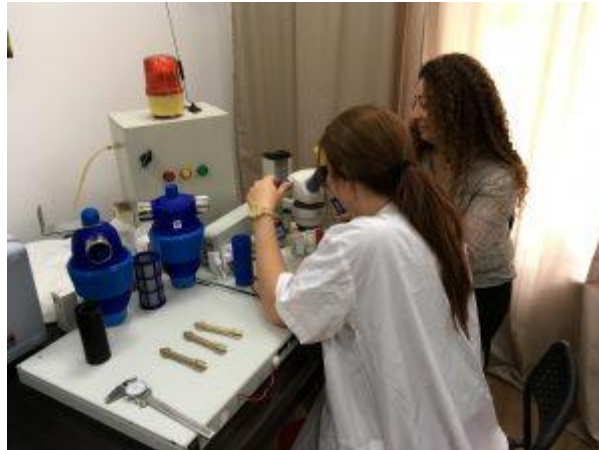
The shape of the electric wave



What are the benefits of not forming scale in water pipes?

Of course, the first advantage is scale-free water that produces economic and psychological damage, in addition to preventing colonies from accumulating bacteria, viruses and greenery within the water pipes

Laboratory experiments and the stages in product development in Tipa tech laboratories



The basic rule of any development department is to gather information and conduct a market survey using methods that already exist and do not belong to the three conservative methods. In a coffee test we conducted we identified a clear need for a new method even though on the face of it there are many manufacturers in the world that use a magnet or electromagnet to achieve the goal.

Final conclusions

For the development, we set up a laboratory with 10 current generators that provided a constant current for several waveforms. For a water pipe of constant and known difficulty, this water was tested in real time by spraying on a metal surface for the purpose of finding the weight difference of the scale in the examination of the incident.

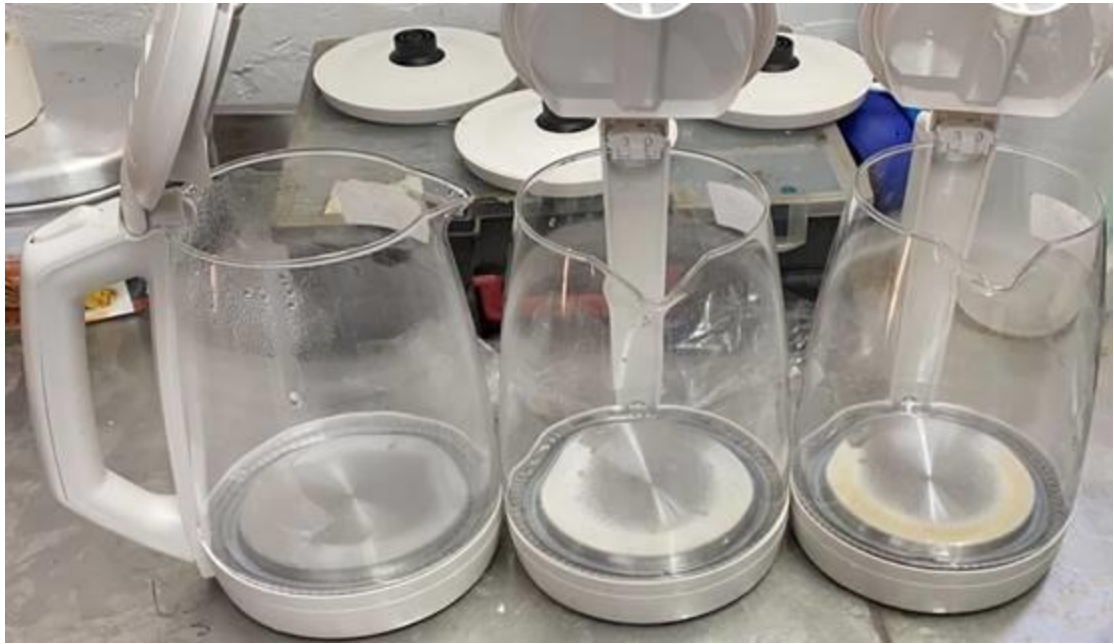
After obtaining results that appeared for at least three events we conducted the same experiment in a different stream. The conclusion we reached pushed us to produce a product with a constant voltage, and an accurate current, and in evidence this device gives the best results of all the devices tested.

An excellent example is the use of an insulated copper coil, while in other products it is customary to wrap 5 meters of copper coil, we have a 120-meter copper coil.



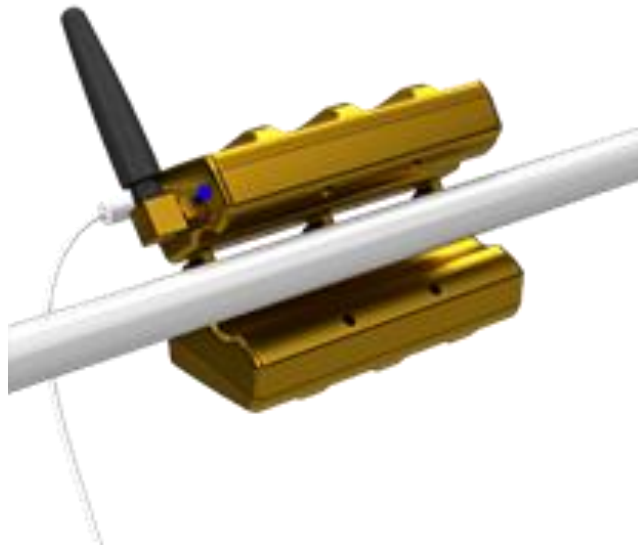
The final test

Right flask - The lime scale result using traditional wire-wrap water treatment conditioners
Middle flask- The lime scale results of regular tap water
Left flask- The lime scale results of the HP unit.

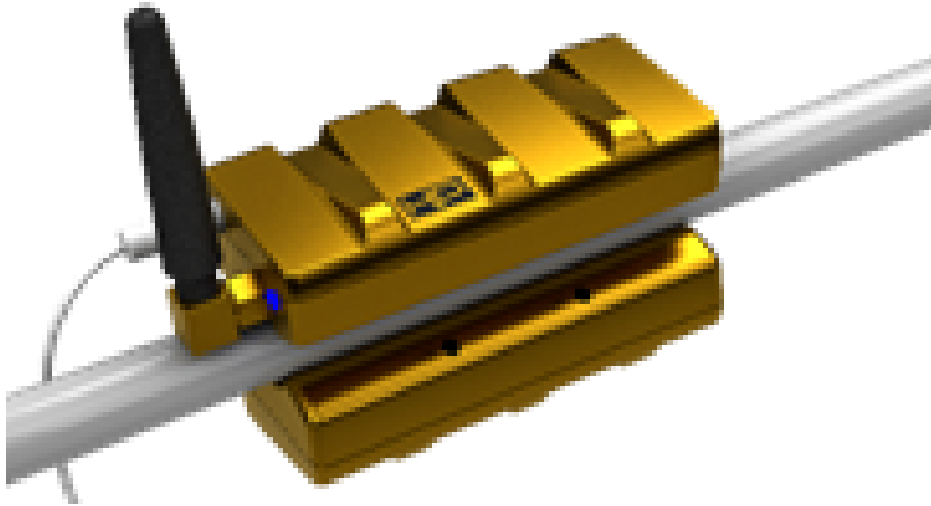


The final product

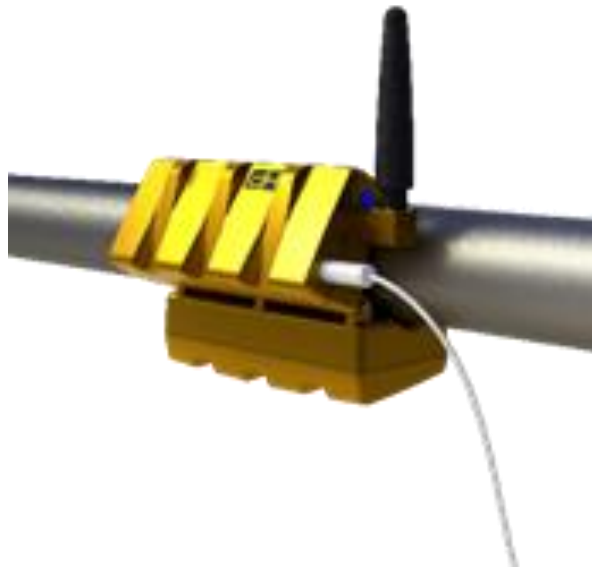
Installation options
up to "1



Connect to "2 (need 2 devices)



Connect up to "3 (need 4 devices)



Connect on the wall



The final test of the central lab of the health department in Israel



Conclusion: The HP Solid State Water Conditioner meets expectations and gives the best ratio of money investment and receiving value

