



Development of a new solution for treatment of open hot water systems for consumption

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### Abstract

**An Israeli SME that provides solutions for the industrial, commercial, civilian and agricultural sectors has designed and developed a new product for treatment of open hot water systems for consumption. The product can solve damage of scale, corrosion, and bio-life forms, to protect equipment typical to these systems, including hot water, heat exchangers, pumps, faucets, end devices such as shower heads and regulating valves. The company seeks a partner for cooperation**

### Description

An Israeli engineering company has developed a technology which enables water treatment by engineering means while generating substantial financial savings for the user and recycling of water, without environmental nuisances and without the use of chemicals.

The water flows from a central water system into the new developed facility ("Green Machine"), where a natural reaction of controlled generation of scale and corrosion compounds takes place. The treated water returns "clean" to the water systems without the potential of scale deposit in the water system. The scale accumulated in the Green Machine is removed, enabling continuous and efficient water treatment. The product based on a mathematical algorithm in the field of chemical engineering for the production of a process unit composed of a reactor and "green" residues. This technology prevents the water to expose to chemicals at all and does not cause the production of toxic or prohibited waste. The process unit is tailored to any customer specifications.

The technology is a complete techno-economic substitute for existing technologies, including chemical additives, acids, flocculants, water improvement systems such as softeners, reverse osmosis (RO) systems, etc. The technology is implemented in the industrial, commercial, civilian and agricultural sectors

### Innovations and advantages of the offer

Innovative aspects

- Not fighting natural processes such as scale deposit in RO systems.
- Encouraging natural reactions to take place in the water treatment units.
- Once those reactions are taking place in the units the water system remains without corrosion or scale problems.

Main advantages

1. Techno economical advantage:

- a. The yield of the RO system increases up to 15%
- b. The production cost reduces up to 30%

2. No effluent is created

3. Non hazard chemicals are being used.

4. Therefore the treatment is environmental friendly

5. The system is designed on sustainable green chemistry and engineering

### Current and Potential Domain of Application

homes, hotels, public service, industry, agricultural sectors

### For further information (including IPR status)

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