vosges srl
Ionic Accelerator Department
Via Roma 133
36040 - TORRI DI QUARTESOLO -
VICENZA - ITALY

ph. +39 0444-387119 r.a.
mob. +39 327 824 8418
mail: estero@vosges-italia.it
http://www.vosges-italia.it

QUESTIONS AND ANSWERS

NEW ara®™
super magnetic
water treatment systems

1. Why do I need NEW ARA?

Your costs depend on the effectivenes of the heat-exchangers of your systems. Costs run increasingly because of the constant shortage of fuels. When you install our water treatment system, you will notice a better flow of the heat in boilers, cooling towers, condensers, steamers, household water-heaters, distillation systems etc., your fuel consumption will drop and your systems will work better, lengthening their use and improving your profit.

2. What can this device do?

It can prevent calcareous scale from deposit inside new pipes and at the same time it eliminates scale from old pipes, boilers, cooling towers, heat-exchangers and household water systems.

3. How does it work?

Thanks to the acceleration of suspended calcium carbonate particles, through a controlled high magnetic field, this device can triggered a reaction to avoid the crystallisation of these particles and their deposit, changing their characteristic features. The magnetised particles attract those of the calcareous scale, which is consequently eliminated.

4. How long will it take to eliminate calcareous scale?

This depends on many factors: on its type of hardness and temperature. Some devices have given a result just a few days after the installation, others after a few months. The result depends on the hardness of calcareous scale, on it composition, on the fluid conductivity and speed. The device doesn't cause damage but works slowly and gradually.

5. How can I correctly control the working of the device in a boiler?

Most of the time, it is enough to watch it. A constant control of T.D.S. will show the reaction and after having controlled the PPM (parts per million) concentration, the person in charge for the bolier will be able to decide whether or not eliminate these polluting compounds. The more you control the device, the more you will notice the amount of suspended particles and decide whether or not to reduce them. Little by little, calcareous scale will be removed and after having checked the drop of PPM, the T.D.S. (a device for measuring the number of suspended particles), will not reduce continuosly and constantly those particles. The removal of calcareous scale will improve the heat exchange, and reduce fuel consumption.

6. What kind of tests can I do to check the working of the device in an air conditioner?

You can control the temperature of the condenser that must be taken within 10/12 °F, seeing that the condenser increases its effectiveness into this limit. If you record the variations in temperature, you will notice that, after the installation, temperature will decrease on the top of the condenser, as well as in the oil. This difference in loading will produce several effects: 1) it will help you to save energy and money; 2) it lengthens the useful life of the system.

7. **What kind of tests can I do to check the working of the device in the industrial heat-exchangers?**

A lot of industry and building processing plants choose a medium type of heat-exchanger: the temperature of the mould, of the compressor, of the hydraulic oil, of the oil for the heat flowing and of the grease, all those functions are carried out by a medium type of heat-exchanger. Costs will be reduced and the device will control and improve the production.

8. **What kind of tests can I do to check the working of the device in the hot and cold household water systems?**

Drinking water must be pure: this is our main goal.
This device doesn't put polluting compounds into water. It must be installed at the cold water inlet. When you observe the emptying and the raising of the hot water line temperature, you will notice that it is done in lesser time; besides, controlling the T.D.S. near the cold water inlet, at a higher efficiency of the heat-exchanger will correspond the circulation of hot water in the farthest point of the system, meaning that calcareous scale has been gradually removed.
You will have to notice that the reduction of calcareous also in the tanks and the increase of the water flow all over the system. Looking at the cross-section of a pipe in the farthest point of the water system, you will notice how much calcareous scale has been removed.
Using this water in sterilizers, evaporators, boilers, heaters, dishwashers, etc. you will remark an evident difference in the maintenance of the equipments.

9. **In how many ways can I estimate the energy saving?**

In most of the cases, you will have to check the circulation of the water you use. When calcareous scale is removed, the water flow increases and the pressure of the engine on the pump decreases. You can estimate your money saving by measuring the amperage just after and before installation. The lower ampere loading multiplied by the voltage will give you the energy saving in watt.

10. **On what kind of water will be better to use the device?**

On water with a high PPM concentration, on hard water, brackish water and soft treated water.

11. **Is the device approved by insurance laboratories?**

It doesn't need to be approved because it uses only the energy produced by a powerful magnetic field (10.000 GAUSS), without using any kind of external energy.

12. **How much costs it?**

It costs less than a complete check-up of your system. You will benefit from the saving of energy, detergents and decalcifiers in one year.

13. **Which is the maximum distance from the point of installation where the device keeps its functioning?**

The device works rapidly if the point of installation is near. The more the system is clean, the better the device works. In a 1.500 meters long, recycle system, there has been installed one unit: after the installation, a considerable increase of the flow has been observed all over the system.

14. **Which size should be chosen?**

It depends on the section of the inlet pipe near the water meter.

15. **How long it will take to have it?**

Normally it takes 10 days. All sizes up to the 3" flanged one are always available in our stores. If you require larger sizes it will take 25/30 days.

16. **Who can install it?**

A hydraulic.

17. **NEW ARA a water softener? Or can it substitute this one?**

No, it doesn't eliminate salts, but it makes water wetter and foamier only because tension has changed.

18. **Has water to flow through the device?**

The effectiveness depends on the flow volume, but it decreases if there is an open bypass. NEW ARA has to be installed so that all the water of the system flows through the device.

19. **Which flow is needed to set the device in motion?**

All the volume of water which flows in the pipe system is magnetically treated; water flowing on the calcareous surface eliminates the calcareous scale. The problem cannot be solved by filling up the tanks.

20. **What does occour to the device when the water flow stops?**

Nothing, when the water flow stops, also the device stops working.

21. **What does occour to the pipes after the elimination of the calcareous scale?**

It can happen that calcium closes a leak; this means that pipes could leak after the water treatment; otherwise you will have a clean pipe system.

22. **What happens to the removed calcareous scale?**

In a water flowing system calcium carbonate flows away, while in a closed cycle system it deposits in a collecting well where it can be removed by hand.

23. **Can calcium carbonate form again after the system cleaning?**

Yes, if you remove the device; on the contrary, if you keep it the system remains always clean.

24. **Is it polluting?**

The natural compounds of water cannot be contaminated by our device, particulary in the hot and cold household water systems.

25. **What happens to the chemical products in the cooling towers?**

Calcium carbonate is no longer a problem; all you need is to treat the tower by means of the device.

26. **How can it be installed in the tower?**

Thanks to an automatic system, in order to avoid periodic checks.

27. **Which kind of pressure can be used?**

Devices are made of chromed brass, aluminium and stainless steel die-casting, and are tested at a working pressure of 30 atm., 150°C temperature, 2mt/sec top speed.

28. **Can I use a higher pressure?**

Yes, if you require it in the device order.

29. **Which pressure reduction can I have?**

The reduction is relatively low during the cleaning phase, there will not be any other reduction when the flow will become normal again.

30. **Can it eliminate rust?**

Yes, but only partially. Only the dissolved particles of rust mixed with others can be removed. The device will not eliminate rust from a pipe in bad conditions because it is not fitted for this use.

31. **What happens to the pH?**

Tests have shown that inside boilers, the pH settles between 8.0 and 8.3 depending on the conditions of the water in the system.

32. **Which kind of effects the device can have on salt water?**

Its effectiveness depends on the fluid conductivity; the salt water systems are more conductive and the reaction is considerable. The best possible challenge will be given by ships which use salt water in their heat-exchangers or sea drilling platforms, cruisers, tugs, drags etc.

33. Which kind of effects the device can have on potable water?

The tast of water depends on the mineral, metal and suspended salts it contains. When their amount chenges we can taste them better, water will be more flavoured and wet.

34. Which sizes are available?

Standard sizes are 1/2", 3/4", 1", 1"1/4, 1"1/2, 2", 2" flanged, 3" flanged and 4" flanged in stainless steel. All larger sizes could be manufactured by placing a specific order.

35. What about the magnetic danger?

It is possible if you dismantle the device, because the internal material has to be handled with care. NEW ARA is manufactured so that it cannot broke down and is not dangerous.

36. What about its assembling?

It can be installed horizontally or vertically without any particular position.

37. Can I compare its cost to that of the decalcifiers I use?

Seeing that you will not use any of these chemical products, its cost per year will surely be lower.

38. If is it true, how can I justify its purchase?

The saving of money will be given by:

1. **the prevention on production decrease - the system will not stop any longer;**
2. **the effectiveness of the hot and cold water production, of the heat-exchangers and of others equipments will return to the one declared by the manufacturers, there will be energy and oil saving;**
3. **the new effectiveness, because the flow becomes normal again;**
4. **the longer useful life of equipments will avoid their replacement;**
5. **the water flow will become normal again, requiring a reduce maintenance; the job will be more satisfying for your workers as well as you will have no more problems.**

39. Why this device is said to work better than others?

Its effectiveness is proved by physical laws, the device works on the suspended particles and on the low molecules of water. Its effectiveness depends on the problem it has to solve: the more is the problem, the better it works. It is self-supplied, self-controlled, it doesn't need maintenance, it doesn't polute and can be used with soft or salt water. Its working is based on physical laws and avoid calcareous deposit.

40. What cannot this device do?

It is not a miracle-machine, you cannot have results today if you installed it yesterday. Its effectiveness depends on the calcareous amount and improves with the time.

41. Once installed, will the problems dispappear?

Yes, but you will have to check the device accordingly to the instructions already mentioned.

42. It sounds unlikely!

But it is true, there are letters and evidences to confirm it.

43. Is it necessary to install an oxygenator in the drinking water systems?

No, it isn't.