



German Magnetic Water Solutions



pdfelement



The Power of MAGNETIC WATER

Authorized Dealer

Alfa Engineering Corporation

Delivering Engineering Solutions

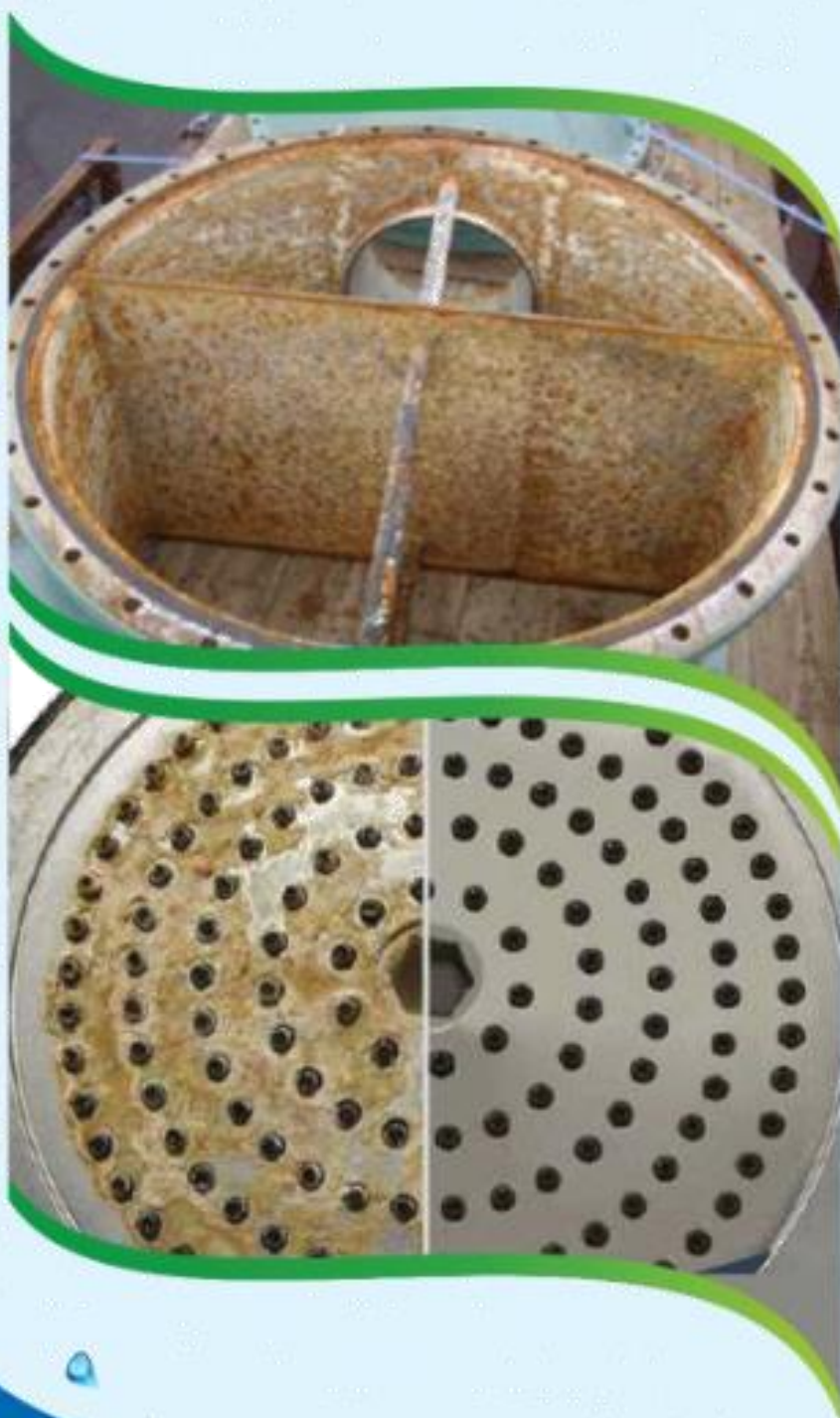




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HARD WATER ISSUES:

- 🔹 Scaling of pipes and associated equipment. Cloudy marks and scaly stuff on shower head.
- 🔹 Scale formation on equipment, in boilers and Heat Exchangers, pipelines.
- 🔹 Spotting on dishes, shower doors, cars, motorbikes bathtubs, swimming pools.
- 🔹 Utility bills can increase due to accumulated scale in the water heater.
- 🔹 Redeposition of dirt and insoluble soaps on fabric being washed.
- 🔹 Reduced foaming and cleaning abilities of soaps and detergents.
- 🔹 Harsh minerals in hard water reduce the life of clothes.
- 🔹 Increased water heating costs because of scaling on heating coil in hot water systems.
- 🔹 Decrease in productivity, Increase maintenance, Salt build up in soils.
- 🔹 Salt deposits on the equipments. Blockage of Taps & Showers.
- 🔹 Dry hair and itchy skin after shower. Lime scale in Solar Heating Systems.
- 🔹 Maintenance on plumbing/equipments. Downtime of production due to maintenance.
- 🔹 Agriculture/ Plantation problems due to Salt & ion contents in water.



HARD WATER

SOFT WATER





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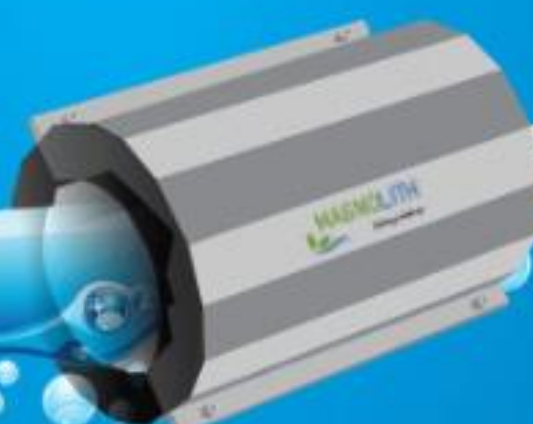
APPLICABLE AREAS AND GENERAL ADVANTAGES

- 💧 No chemicals or waste by-products. No electricity required.
- 💧 No maintenance or servicing required.
- 💧 Never needs replacing, No wear & tear.
- 💧 Different sizes to suit different pipe sizes.
- 💧 Little space required and safe.
- 💧 No resins needed, no regeneration.
- 💧 Easy to install & retains healthy minerals.
- 💧 No Salt required.
- 💧 Works without operator.
- 💧 Continuous flow without choking-Useful in multiple sectors.



HARD WATER

SOFT WATER





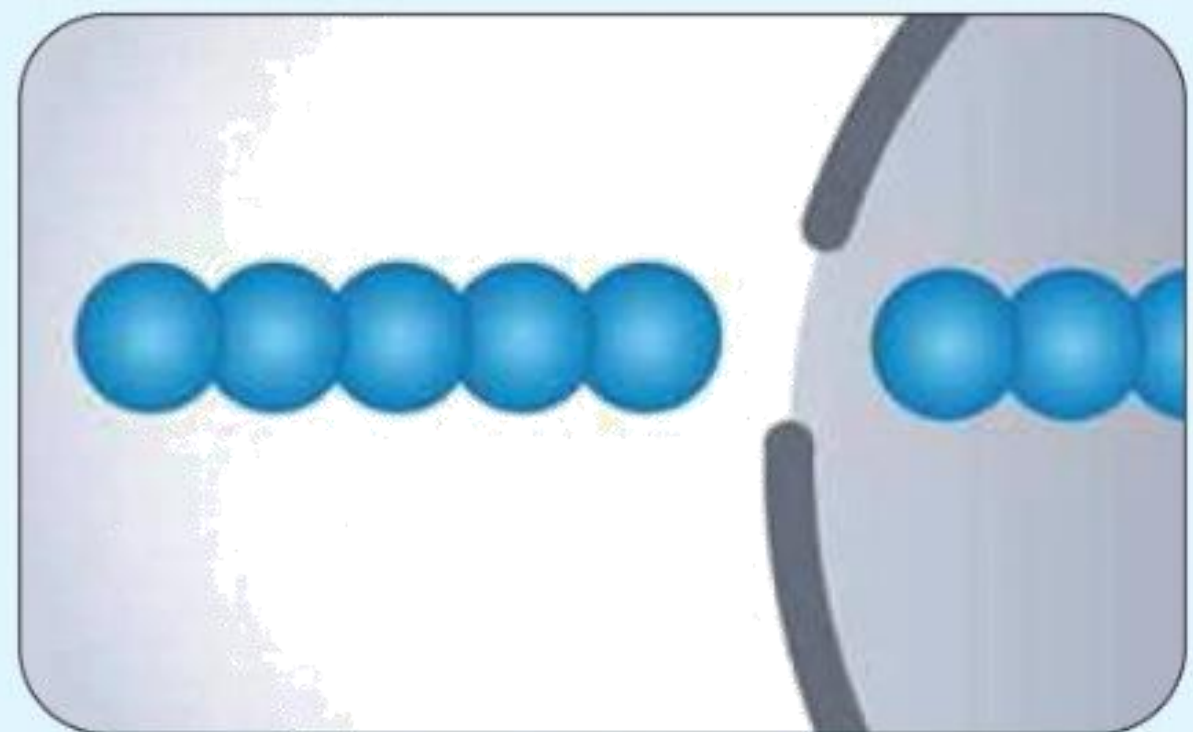
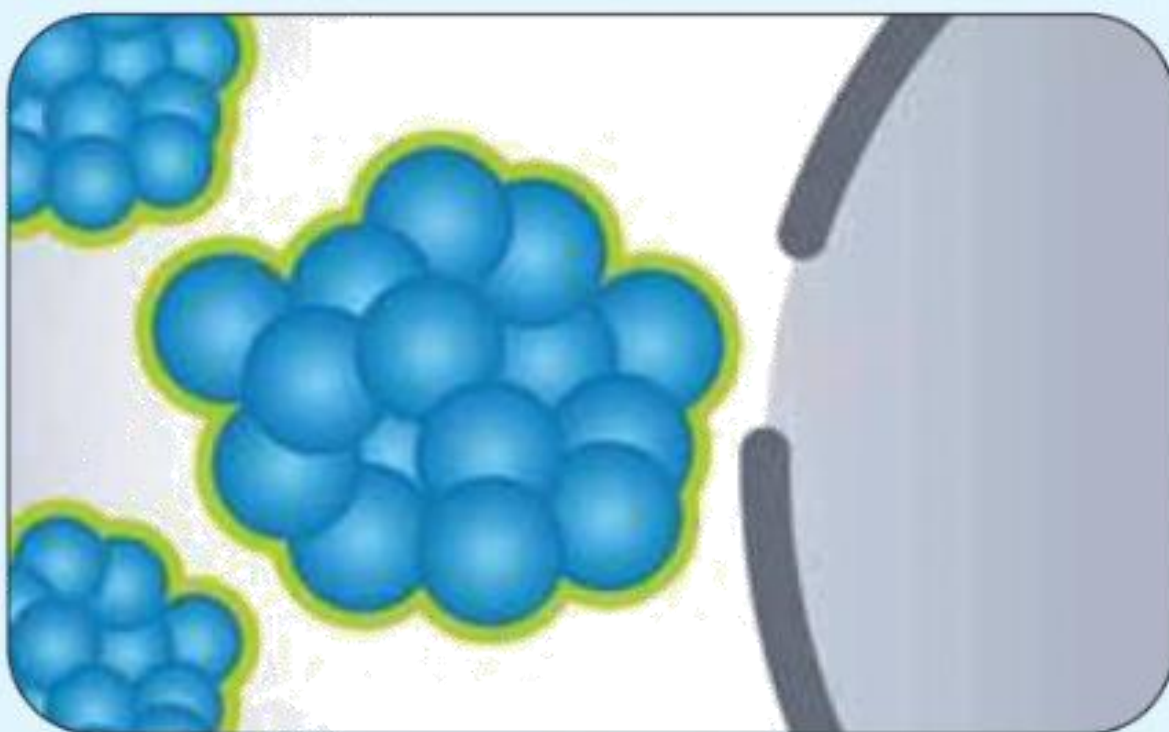
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Magnolith is a 100% environmental friendly, cost and energy effective way to treat water at the state of the art. It works by using a clever system of permanent magnets in a cascade style order.

HOW IT WORKS ?

The main effect is gained when water runs through the scope of Magnolith. The force of the magnets is rhythmically turned on and off. When the rhythm lies within the area of natural frequency of water clusters, resonance occurs that is, water clusters are opened.

- 💧 Magnolith is an extremely effective device for the magnetic conditioning of water. It improves the physical, chemical & biological nature of water.
- 💧 Magnolith energizes water. This re-vitalization is a very important factor in health care for all animal beings.
- 💧 Prevents and reduces furring and corrosion.
- 💧 Prevents and reduces any kind of scale build-up and slurry.
- 💧 Eliminates, reduces downtime, maintenance and cleaning costs.
- 💧 No external sources of energy.
- 💧 No chemicals.
- 💧 No energy costs.
- 💧 Simple installation.

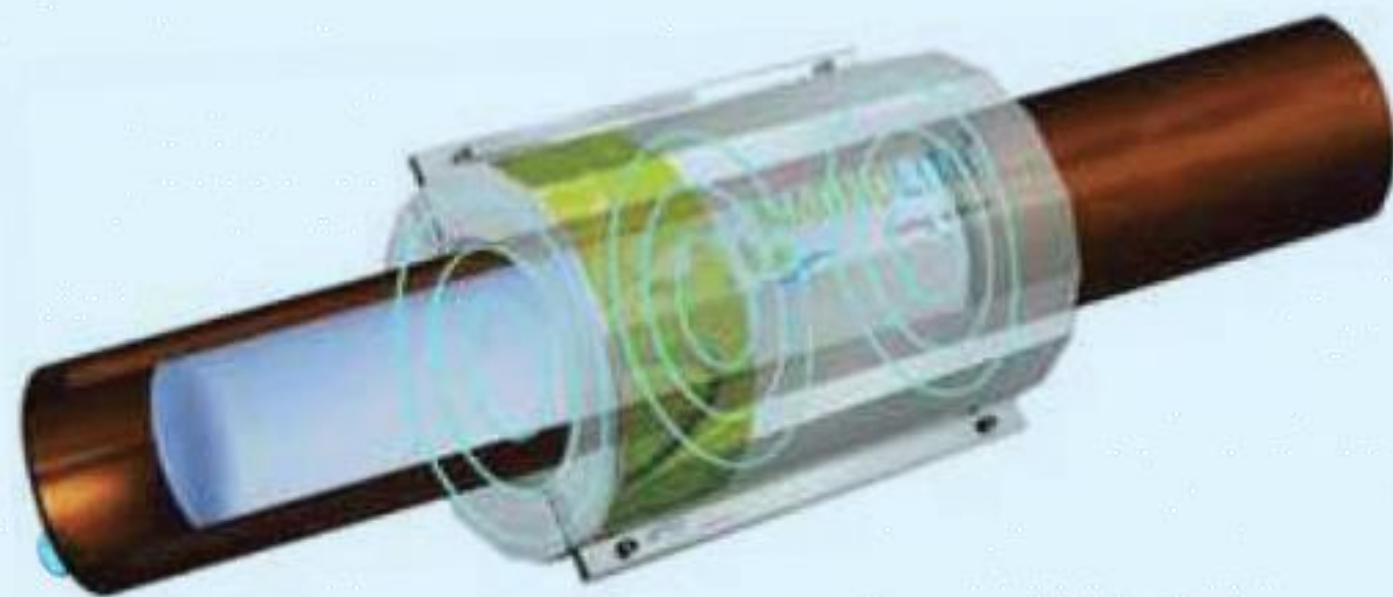
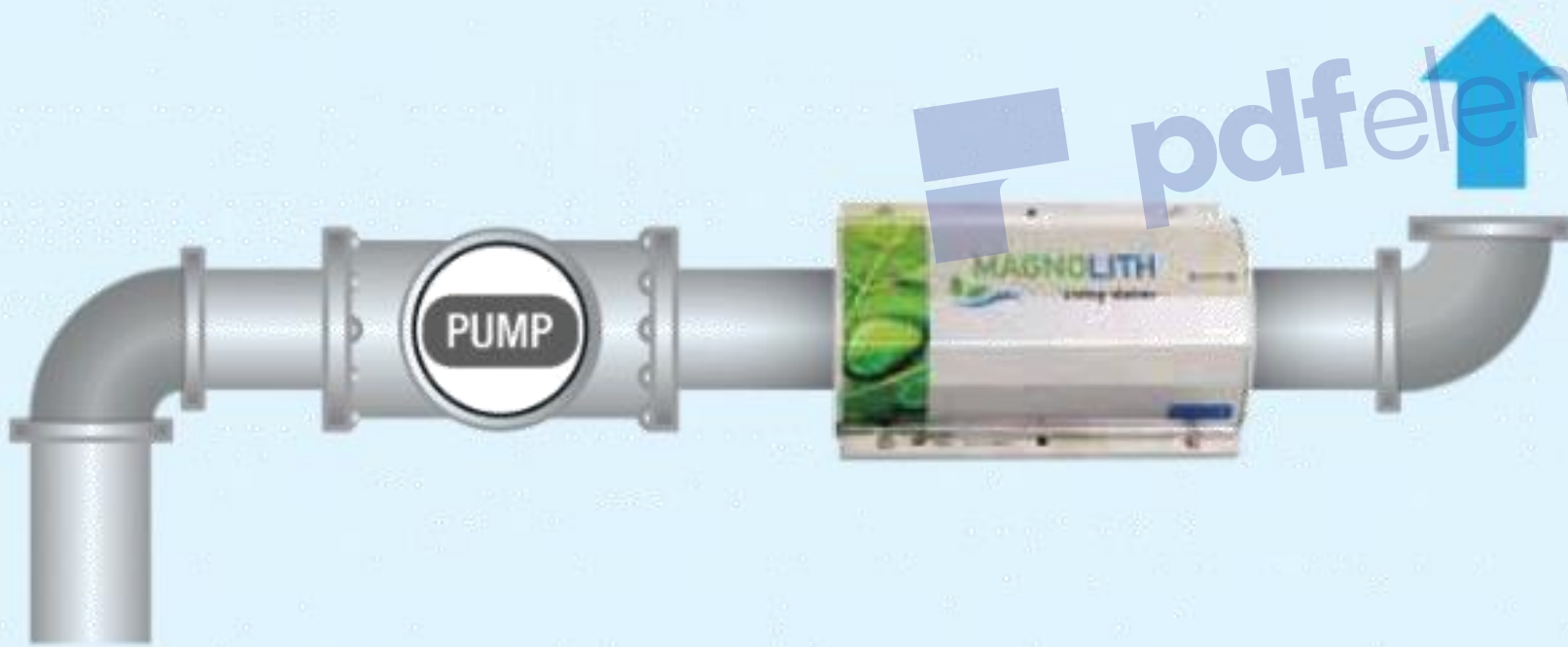




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MAGNOLITH PRODUCT LINE

Article	Pipe diameter	Flow rate / h	
M3 DSSI (V2014)	1,0" (Inch)	Min 97,3 US Gal – Max 713 US Gal	Min 0,3 m ³ – Max 2,7 m ³
M4 DSSI (V2014)	2,0" (Inch)	Min 634 US Gal – Max 2.435 US Gal	Min 2,4 m ³ – Max 13,0m ³
M6 DSSI (V2014)	3,0" (Inch)	Min 4.490 US Gal – Max 9.775 US Gal	Min 17,0m ³ – 37,0 m ³
M7 DSSI (V2014)	4,0" (Inch)	Min 9.247 US Gal – 17.700 US Gal	Min 35,0m ³ – 67,0m ³
M8 DSSI (V2014)	6,0" (Inch)	Min 17.180 US Gal – 39.690 US Gal	Min 65,0m ³ – 154,0m ³
M10 DSSI (V2015)	8,0" (Inch)	Min 37.750 US Gal – 85.100 US Gal	Min 150,0 m3 – 322,0 m3



HARD WATER

SOFT WATER





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APPLICABLE AREAS:

REVERSE OSMOSIS:

There are several applications where Reverse Osmosis (R.O) systems are employed, as there are other problems apart from hardness. RO systems remove the minerals from the raw water, but when hardness is present, there can be complications. Invariably, the RO membrane itself gets choked with scale and this makes it perform inefficiently. The life of the membrane is greatly reduced and requires constant replacement. This leads to increased maintenance costs and decreased efficiency.

When **MAGNOLITH** is fitted on the feeder line to the RO system, before the membrane, it has been observed that it greatly improves the life of the membrane. Thus it protects the RO system and improves its efficiency. It should be noted that RO systems are very expensive; therefore **MAGNOLITH** is an investment that protects the system.





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BOILERS & HEAT EXCHANGERS :

Any existing scale will be removed, and no further accumulation should occur. Greatly improved heat transfer means a reduction of fuel needed to heat water and cost reduction. Maintenance cost will also be reduced. The need for chemicals can be greatly reduced or eliminated with a result of additional cost savings and environmental benefits.

Hard water also contributes to inefficient and costly operation of water-using appliances. Heated hard water forms a scale of calcium and magnesium minerals (lime scale deposits) that can contribute to the inefficient operation or failure of water-using appliances. Pipes can become clogged with scale that reduces water flow and ultimately requires pipe replacement. Lime scale has been known to increase energy bills by up to 25%. Huge saving in chemicals and labor maintenance. Reduces scale, formation on boiler fire tubes, condensation tank, pumps, pipes and valves. Extends equipments life and lower energy cost.

Lime scale deposition in heat exchanger tubes and surface of the tube reduce efficiency by almost 7-8 % .As efficiency decreases energy wastage increases. Magnolith water conditioner removes scale deposition on condenser and chiller tubes. It is direct effect on energy saving. It does not affect the galvanized coating tubes.



EFFLUENT TREATMENT PLANTS :

Magnolith Water Conditioner play key role in Effluent Treatment Plants. It enhances the processes carried out at various stages during the treatment. When water passes through magnetic field . This charge lowering the surface tension creates greater solubility of minerals in water, thus reducing the crystallization process. The processed water is softer water, which is statically charged and rich in Electrons. The softer water can dissolve scum lines, help to stabilize PH, kill algae and microorganisms, release stains and odors, improves water solubility, reduce corrosion of metal parts in the system and retain acceptable water hardness. Waste Water is used water. It is rich in suspended solids, biodegradable organics, pathogens (viruses, bacteria), nutrients, refractory organics, heavy metals. There are various processes involved in waste water treatment: Screening, Sedimentation, Grit Chamber, Activated Sludge Process, Trickling Filter, Flocculation, Aeration, Anaerobic treatment, Neutralization, Oxidation treatment, Solvent Extraction etc. The installation of Magnolith Water Conditioner brings the following changes in various streams of treatment:

- Flocculation: In this process the solid matter settles more rapidly therefore less use of chemical flocculants.
- pH: pH level is reduced throughout the waste water system thus less use of chemicals to stabilize PH.
- Rotating Biological Contractors (RBC): The RBC increase the bacterial activity due to more availability of oxygen. Static Screen: Static Screen becomes free of hard scale deposits thus less use of chemicals to remove scales therefore more effective in collecting solid waste.
- Aeration: BOD can be controlled as availability or oxygen increase due to presence of additional oxygen in charged water therefore reaction will take less time.





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COOLING TOWERS/CHILLERS/ CONDENSERS/AIR HANDLERS:

The common problems faced by cooling tower industries are scale and algae formation and corrosion. We have to use different chemicals to control the above three factors.

Installation of MAGNOLITH water conditioners is the permanent solution for protecting the pipelines from scale formation, corrosion and algae formation. The need for chemicals can be eliminated with a result of additional cost savings and environmental benefits. As MAGNOLITH fluid conditioners removes existing scales and Algae and prevents further formation of scale, the life of cooling towers will be extended and the maintenance cost will also be reduced. Magnolith Water conditioner save biocide chemicals, water usage, labor and maintenance.

It reduce scale buildup, biofilm, bacteria, corrosion and algae blooms.

It will reduces make up water, resulting in huge water saving. Increase life of equipments and it will also lower energy costs by about 17 %. It will allow cooling towers to run at higher cycles of concentration. It extends the life span of cooling tower.

FOOD & BEVERAGES :

Magnolith reduces scale build up in boilers, steamers, dish washers. The essential elements & minerals are not removed and remain in water so as to give fuller taste in the beverages and the food. Improves solubility and hence tastes of the food.





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POULTRY/ CATTLE FARMS/ DAIRY FARMING:

Birds drinking magnetically treated water had an increase in their bone formation process as well as improved blood morphology.

A decrease by 2-3 times of death rates. Increase of mass (weight gain increases by 5-7%). Increase egg-laying qualities by 10%, Also the quality of meat is improved.

Magnetically treated water reduces the firmness of the udder & effectively makes easier to milk.

Dairy animals that drink magnetically treated water also show signs of enhanced disease resistance.

Dairy animals that drink magnetically treated water show drastically decreased amount of bacteria in milk. Allows digestive system of animals to function with maximum efficiency

AGRICULTURE :

Nutrients applied are dissolved and also made available for plants to take up at fine root zones. The bottom line results are dramatic, maximum hydration with healthy water and higher uptake of minerals results in greater yields, larger and better produce, earlier maturation, longer shelf life, and healthier plants. Magnolith reduces the surface tension in the water making it more soluble. Chemicals and fertilizers are more efficient in soluble water. Avoid choking of sprinklers for better irrigation. Reduction of seed germination time, increasing of productivity, enriching taste.

The advantages of using magnetic water for irrigating crops are as follows:

- Vegetation period can decrease up to 15-20 days, therefore the crops ripe up to 15-20 days earlier and crops production increases from 15% up to 100%.
- Plant disease rates dramatically decrease. Blockages in drippers and micro-spray irrigation Salts in irrigation water affecting crop performance and soil health
- Development of first fruit, Better quality & bigger fruits 33% reduction in inferior grade fruit growth. Increase in quantity of fruits grown
- Time of collecting the harvest, Reduce the salinity of soil and increase it fertility
- Development of root system.





German Magnetic Water Solutions

HOTEL & RESORTS, SWIMMING POOLS, LAUNDRY :

- 🔹 Noticeably softer water gained while water passing through Magnolith.
 - 🔹 Water characteristics are changed. Less Plumbing maintenance required
 - 🔹 Noticeable improvement in the quality of swimming pool water.
 - 🔹 Reduces use of chemicals (Chlorine), disinfecting expenses are reduced.
 - 🔹 Lesser cleaning agents are needed. Decreased cleaning maintenance.
 - 🔹 Washing and showering with energized water has special feeling of wellness.
 - 🔹 Good lather of soaps & Shampoos. No salinity on Taps and Showers.
 - 🔹 Reduces scaling in pipes and showerheads. Reduces residue on shower screens, floors and walls. Softer water is known to benefit skin and hair.
 - 🔹 Enhances efficiency of water for cooking and cleaning. Improves the taste of food and beverages.
 - 🔹 Cuts detergent use dramatically by increasing dissolvability. Reduces discharge of chemicals into the environment. Reduces scale buildup in your appliances for longer life.
 - 🔹 Existing scum lines will be easier to clean.
 - 🔹 Your pump & associated equipment will be protected, extending their life & saving your money.
 - 🔹 Pool water will be cleaner and more sparkling. Swimmers will experience less red eye.
- Reduce Surface tension, Viscosity, Density, Conductivity and slightly enhancing pH.



Appreciation

March 03, 2016
 To: Al AHDALDAWY EST.
 Magnolith Drinking Water
 Subject: Water Treatment Magnolith
 Dear Sir,
 Greetings from Golden Tulp Al Nasrakh Hotel.
 I am sending you a letter to show the comparison of the test result of our domestic water before and after fixing the water Magnolith device made in Germany.

BEFORE
 Date: 10-11-2015

Analysis	Unit	HD-07-A
PH	Mg/l	5.40
ALK	Mg/l	83
COO	Mg/l	1543
SS	Mg/l	306

AFTER
 Date: 08-02-2016

Analysis	Unit	HD-07-A
PH	Mg/l	7.10
ALK	Mg/l	94
COO	Mg/l	1100
SS	Mg/l	340

After fixing this device, we found a positive and better result on our physical check.

Sincerely Yours,
 Ahmed Mobarok Al Jahan
 General Manager
 Golden Tulp Al Nasrakh

Date: 04/04/2016

To my concern

We have to inform you the MAGNOLITH line at our hotel "doubletree by Hilton Dh" We have been monitoring the resolved day result in PH & ppm.

Also it's satisfying our Guests in water quality Also is reducing our laundry chemicals application

ENG: ATEF Hussain

Ref. No. _____ Date: _____

To
 Sajid Shaikh
 German Magnetic Water Solutions P. Ltd Mumbai
 As a professional Chemical Engineer & Consultant, we would like to give our feedback for the Magnolith Water Conditioner.

Date: 10/09/2017

1) INDUSTRIAL:
 a) Existing scale from heat exchangers is removed and new scaling is prohibited.
 b) Existing corrosion and furring is prevented.
 c) Iron content is reduced.
 d) Process water is stabilized.
 e) Usage of chemical is reduced.
 f) Eliminated, reduced downtime, maintenance and cleaning cost.

2) AGRICULTURE FARM:
 a) Vegetation period decreased by 20days
 b) Crop production increased by 25%
 c) Reduced fertilizer usage.
 d) Reduced pesticide and herbicide usage.

3) POULTRY FARMING:
 a) Death rates decreased
 b) Weight gain increased 6%
 c) Increased egg-laying qualities by 8%

4) DAIRY FARMING:
 a) Enhanced disease resistance.
 b) Reduced the firmness of udder effectively which makes it easier to milk.

5) LAUNDRY:
 a) Reduced discharge of chemicals into the environment.
 b) Reduced scale buildup in appliances which will have further longer life.
 c) Reduced detergent use by 50%.

To
 Mr. Sajid Shaikh
 Zonal Head - Western India
 German Magnetic Water Solutions P.Ltd
 Mumbai

We are thankful to you and German Magnetic Water Solutions for providing the state of the art Magnetic Water conditioner especially use for removing the scales due to hard water.

Magnolith is a product from Germany that is known for its engineering expertise and research. We believe when it comes to sustainable water solutions for a wide variety of applications, Magnolith is the answer.

We have installed Magnolith size 2 inch on inlet Water line of Air compressor Head for almost 20 Days and observed following things:

1. Very easily, hard scaling from head has been removed and it is surprising to see otherwise after chemical cleaning also we have to do brushing to remove the scaling.
2. Earlier Compressed air temperature is more than 220 Degree C and after fixing of Magnolith and its successful performance, now we getting temp of Compressed air is 140-150.
3. Due to reduction in temperature because of No scaling, performance is very much improved.
4. Reduced Maintenance cost of Air compressor i.e. discharge valve function smoothly without maintenance, no gasket replacement frequently and so on.
5. Reduced load of cooling the compressed air on after cooler.
6. Moisture separate performance improved.
7. Air dryer working efficiency also improved.

Magnolith has absolutely no operating expenses (opex); there is no need for use of any power or chemicals for its operations. There is no need for any operator intervention thus making the product very pocket friendly for all users. It not only prevents scale formations but also removes existing scales inside piping / utility systems. Apart from working to soften water Magnolith also works towards betterment of utility equipment, increases its productivity and we can gain the desired output.

We wish GMWS team great success to achieve their vision and troubleshoot the industrial and other scaling problems by such great invention.

Regards,
 (Vishal Vaidya)
 Head - Engineering
 Wockhardt Limited, Kadaiya, Daman.

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 www.wockhardt.com • CN: L2432069759951C120220

AMERICAN INTERNATIONAL SCHOOL CHENNAI

Date: 22.07.16

CERTIFICATE OF APPRECIATION FOR MAGNOLITH

We are pleased to offer our recommendation for Magnolith Water conditioner, which was installed at our premise by German Magnetic Water Solutions (India) in the month of May 2016 on a no cost no commitment basis by the company.

This is a 100% ecofriendly and chemical free device that does not require any power source & it is designed and made in Germany, working on principles of magnetic fields.

We got it installed for Landscape, Swimming pool & washroom areas and have been fully satisfied by the result.

Below is the summary of the improvements observed in view of using Magnolith-

Landscape - Before Magnolith, the cutting period for grass was 30 to 35 days and we were consuming lot of water to keep our field lush and green. The result of Magnolith is that not only the grass is growing faster & much greener, but also has led to much less consumption of the water. Now the grass is being cut in 20 to 25 days. Apart from this our water sprinklers are not getting clogged anymore due to hard water scaling. The existing scaling has got removed and there is no new scale formation.

Swimming Pool - We have always had hard water issue in the swimming pool due to scaling, which required lot of chemicals and maintenance. Also the hard water was a major cause for dry skin and hair. Magnolith has taken care of scaling and maintenance cost and time has drastically reduced. The water has become soft and more clearer and the same has been experienced by our swimmers.

Wash area - Always had scaling problem on the taps, shower heads and tiles of the wash area and lot of chemicals were used to keep it clean and running. Foaming of soap/lather was difficult and washing it took lot more water. All these issues has been taken care by Magnolith. Apart from this big change has been noticed on the water Deyers. The water is getting heated up much faster which is leading to much lesser consumption of power.

The use of magnolith has lead to cost and time savings along with making our water treatment process environment friendly. We recommend this device for usage in all establishments.

Sincerely,
 ILANDQVAN
 Manager - Facilities & Maintenance
 American International School - Chennai

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and less water absorption. This is reduced the pores in the concrete. Laying higher foods with less stress at failure conditions is slightly more than that of is less as compared to NMW. compressive strength than the

Ghujawar
 10/08/2017



Authorized Dealer : ALFA ENGINEERING SOLUTIONS

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