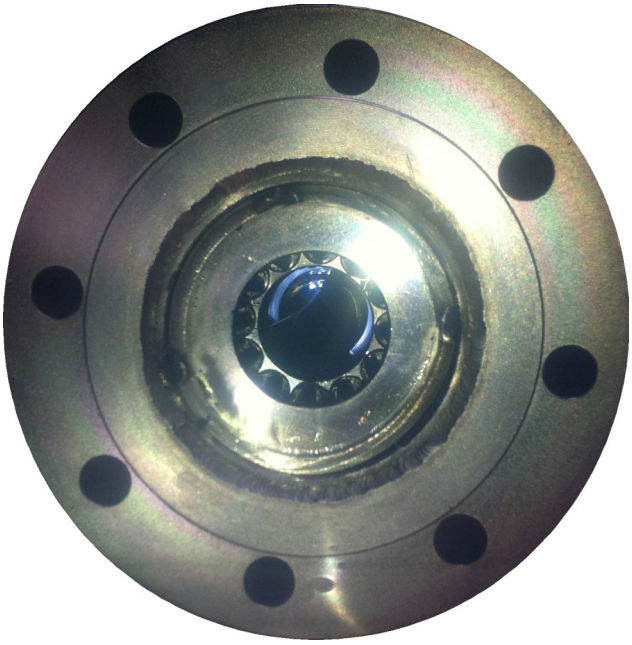
MagCat®

THE ULTIMATE NON CHEMICAL HARD WATER TREATMENT SOLUTION



The latest development from Fluid Dynamics

Environment friendly water treatment where traditional methods have failed.

Prevention is better than cure.

MagCat can not only replace existing treatment methods such as chemical or CO2 dosing but also remove the exisiting scale that has formed inside pipelines or vital process equipment.

Unrivalled experience in industrial and large pipe line treatment

Its nearly 40 years since Fluid Dynamics developed its first non chemical water treatment product to combat calcium carbonate scaling. Whilst the market was slow to embrace the idea that a simple principle could prevent what was a complex and costly problem today its a different story.

Environmental pressures and the drive to reduce cost has seen some of the largest companies across the world install equipment manufactured by Fluid Dynamics, establishing us as the leaders in industrial non-chemical water treatment. Ford Motor Co. Unilever, Kellogg's & Kimberely Clark are just a small selection of the companies who we have provided equipment and continue to work with reducing cost and their chemical consumption.

Water is undoubtedly the worlds most important natural resource and is vital for all industrial processes. Inefficient treatment of water can prolong manufacturing time, lead to production losses and end up adding significant cost and time to any companies overheads

In keeping with Fluid Dynamics ideology the MagCat uses no power, has no consumable parts, requires no maintenance and is very simple to install

Why does MagCat excel

MagCat is the result of years of development coupled with decades of experience in treating industrial water systems. Developed using a combination of Fluid Dynamics established catalytic and magnetic technologies it is capable of treating a vast array of different types of water that scale aggressively such as water with high TDS levels or even seawater.

MagCat has successfully eliminated or substantially reduced chemical & Co2 dosing whilst still extending or eliminating cleaning procedures in process equipment or pipelines.

MagCat treats water without polluting or sacrificing any elements into the stream, making it totally environment friendly, eliminating the need for treating water to remove chemicals before it is rejected into main water ways.

The versatility of MagCat is such that it has numerous applications here is just a selection of systems it can treat

- Waste water systems with scale deposition
- Pumping stations
- Cooling towers
- Sea water cooling systems
- Desalination systems/Evaporation systems
- Vacuum pumps
- Water systems contaminated with oil

Examples of MagCat success

U.K Government Military Installation 2009

Effluent lines from an reverse osmosis, iron removal system and water softener used to scale up every six months requiring pressure jetting of lines and acid cleaning of pumps. Chemicals could not be used as the water was being drained to a stream. Following installation of MagCat the whole system has not required shutdown for cleans, over 18 months of continual operation. The plant is currently undergoing expansion and MagCat has been specified for the next stage following the impressive results.

Alier Paper Mills, Spain
2010

Vacuum pumps a vital piece of equipment in any paper mill suffered from scale build up, despite a costly CO2 dosing system injecting 3 tonnes of gas into the water each day. Despite this procedure continual scale build up meant that every 3 months the vacuum pumps were stripped for cleaning. Following installation of MagCat not only has the CO2 dosing been eliminated but following 6 months of MagCat treatment no cleaning has been necessary

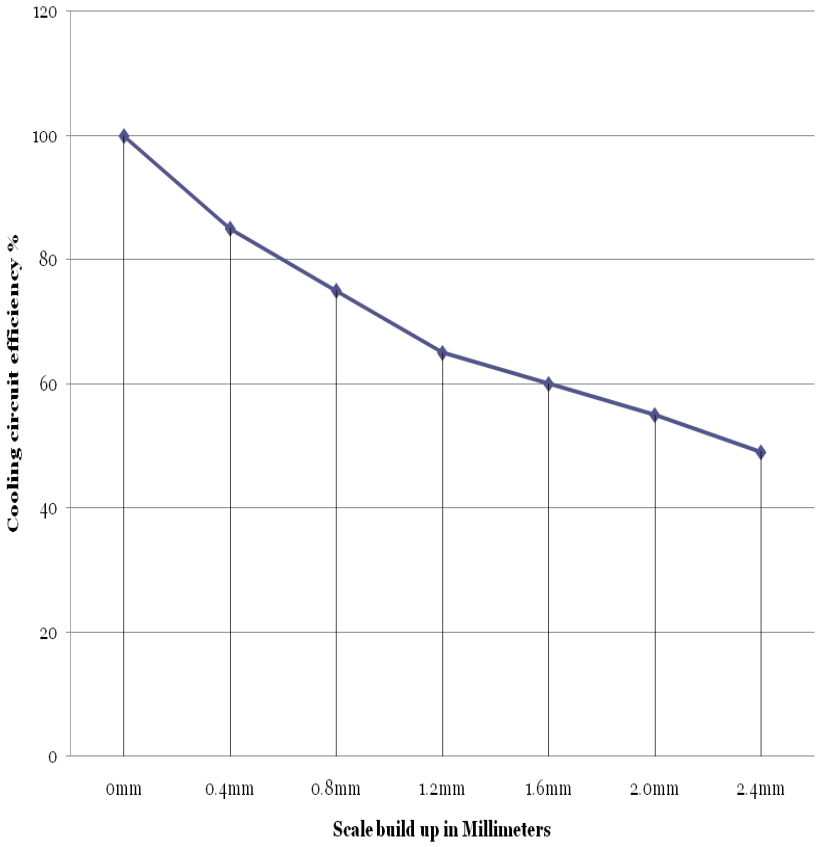
Cotto Tiles, Thai Cement
2010

Cooling circuit for tile mould making machines. The circuit was heavily contaminated with oil and had silica and calcium deposition in pipelines A number of chemical and non-chemical treatments had tried to prevent the problem but failed.
Following installation of MagCat scale ceased to deposit and within just 6 months 70% of the existing scale had been removed.

Prior to installation

6 months of MagCat treatment with over 70% scale removal

Effect of scale build up in industry

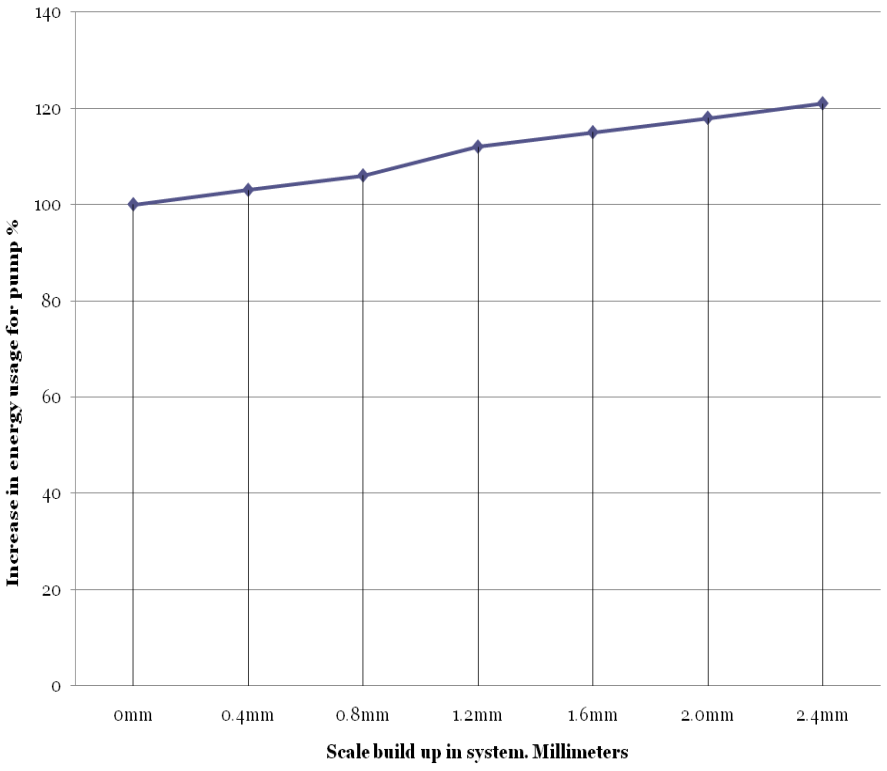


The effect of scale build up in heating equipment such as heat exchangers will dramatically reduce the efficiency and increase energy costs.

To the left is a graph showing the drop in cooling efficiency as scale builds up on the surface of plates, tubes and elements acting as a insulator and preventing efficient heat transfer

As scale builds up in pipe work it causes frictional resistance increasing the work load for the pumps in turn wasting energy

To the right is a graph showing the increase in energy required per millimetre or scale build to pump water round a given circuit



MagCat installation

- **MagCat comes supplied in a stainless steel housing**
- **Supplied with stainless steel flanges or threaded ends**
- **Can be installed vertically or horizontally**
- **Once installed will have a maximum pressure drop of 2%**
- **Can be manufactured for any diameter of pipework**
- **Can be installed in remote locations**

MagCat Sizes	Maximum Flow m3/hr	Total Length	Max Working Pressure	Max Operating Temp
3/8''	1.4	650mm	16 bar	120C
1/2''	1.4	650mm	16 bar	120C
3/4''	1.4	650mm	16 bar	120C
1''	1.4	650mm	16 bar	120C
1.25''	4	1000mm	16 bar	120C
1.5''	4	1000mm	16 bar	120C
2''	8	1200mm	16 bar	120C
2.5''	21	1200mm	16 bar	120C
3''	35	1200mm	16 bar	120C
4''	54	1200mm	16 bar	120C
5''	95	1200mm	16 bar	120C
6''	134	1200mm	16 bar	120C
8''	239	1200mm	16 bar	120C
10''	409	1200mm	16 bar	120C
12''	600	1200mm	16 bar	120C
14''	818	1200mm	16 bar	120C

Standard MagCat sizes. Equipment can be manufactured to treat larger flows or higher pressure pipe lines.

MagCat®

Manufactured in the U.K by

Fluid Dynamics

Hard water solutions since 1973

For further information please contact Fluid Dynamics or your local distributor.

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