



ENEFLOW Fluid Dynamic Power Cells

Magnetohydrodynamics (MHD)

Magnetohydrodynamics (often abbreviated MHD) is a relatively young scientific discipline. Simply put, it refers to the principles of motion of a fluid affected by a magnetic field. Developed mainly during the last three decades or so, it has scarcely reached maturity. Scientists know, for instance, that the formation of the universe was somehow dependent upon the principles of MHD but its exact role is not yet known.

Yet, in recent years magnetics have been at the cutting edge of dramatic new technologies applied to medicine, nuclear engineering, thermodynamics, propulsion and transportation. Examples include MRI, magnetic resonance imaging, which has revolutionized diagnostic medicine. Other practical applications of magnetohydrodynamics include moving ships without propellers and trains without wheels!

Building on these extraordinary developments, our researchers and engineers have now taken fluid flow systems performance enhancement technology into the 21st century through applied magnetohydrodynamics for controlling mineral scale build-up and scale-induced corrosion.

Our patented ENEFLOW Fluid Dynamic Power Cells can eliminate and control scale build-up in all types of fluid flow systems caused by dissolved diamagnetic earthsalts in hard water – minimizing and sometimes eliminating the need for chemicals or complicated equipment to maintain. The most common of these minerals, of course, are calcium and magnesium. Furthermore, when ENEFLOW Fluid Dynamic Power Cells are installed in a fluid flow system, they can improve the bactericidal function of disinfectants, accelerate reagent diffusion and improve the efficiency of ion-exchange resins.

ENEFLOW's revolutionary magnetic circuits incorporate multi-pole, multi-axial, permanent magnetic flux generators which uniquely concentrate the magnetic forces for maximum descaling effect.

ENEFLOW's Fluid Dynamic Power Cells are the only permanent magnetic circuits available that utilize a metallic blend of nickel, cobalt, aluminum and neodymium iron boron chemically bonded to magneto-ceramic ferrite. The resultant magnetic flux generators exhibit extraordinary fluid treatment characteristics the next generation in applied MHD technology for controlling mineral scale in all types of fluid flow systems.

Although the most common fluid is water, ENEFLOW systems will condition many different types of fluids including crude oil, gasoline, diesel & heating fuels, low pressure steam, saltwater, waste water, green & black liquor in pulp & paper mills, etc. The list of applications is limited only by the fluid's chemistry, velocity, temperature and your own engineering imagination.

ENEFLOW Fluid Dynamic Power Cells are non-



invasive and are installed around a pipe. There is no need to cut into a line to plumb-in a system. No external energy source is required and ENEFLOW Power Cells are completely maintenance free. Furthermore, they are 100% environmentally safe.

- power plants/nuclear & fossil
- petrochemical plants
- pulp & paper mills
- food processing plants
- parks departments
- schools
- hospitals
- correctional facilities
- pharmaceutical plants
- hotels/motels