

HARD WATER PROBLEMS IN AUTOMOTIVE INDUSTRY

AUTOMOTIVE INDUSTRY APPLICATIONS

Automotive steel / Sheet stock for body panels - The extruding of angles, channel stock, and framing is a control of extruding dies and feed rates. The dies are cooled with a "milk" like substance that is a water lubricant mixture. The parts are extruded and then drop press formed. The presses are also cooled. The hydraulic saws are cooled with this water lubricant substance. The **ScaleBreck system** will control the lime scale deposits on the nozzles, pipes, and pumps. In addition, the **ScaleBreck system** will help keep the water lubricant mixture well mixed when dispersed into the water.

Steel / iron foundry - The **ScaleBreck system** controls lime scale deposits in the cooling water for the cooling of the molds. The production rates are governed by temperature controls.

Aluminum foundry - Aluminum is much less tolerant of water temperature variations. The cooling process is very critical. The **ScaleBreck system** will control lime scale deposits in the cooling waters for the cooling of the molds. The production rates are dependent on the temperature controls.

Engine plants - Engine plants are generally assembly machine shops. The processes include: drop forge, compression sizing, and boring, broaching, milling, grinding, turning and polishing. All of these procedures require coolants, lubricants, and temperature controls. The **ScaleBreck system** will control lime scale formation in all of these functions while extending the life of the tooling.

Machine tool coolants - Coolants are a mixture of lubricants and water. These lubricants can become contaminated with bacteria and cause problems in the systems which, in turn, can result in an "off-grade" product. The calcium ions in the water can form lime scale that will clog pipes, spray nozzles, orifices, journals, passage ways, flutes, and other surfaces needing to be both cooled and lubricated.

One of the highest costs of this operation is in tooling. The set-up person must tear down the machine and retool on a frequent basis. The **ScaleBreck system** can cut costs of man hours and tooling while keeping the quality control at a high level of performance.

Energy savings - With better lubricant action by using the ScaleBreck system, there will be less waste heat to be dissipated and less lime scale on the heat exchange surfaces. This will result in lower coolant pumping costs.

Environmental issues - Environmental issues and the "going green" movement in the world today is more important of an issue that ever before. **ScaleBreck** is the ideal environmental product while saving your plant a ton of money at the same time.

INSTALL SCALEBRECK ELECTRONIC WATER CONDITIONER

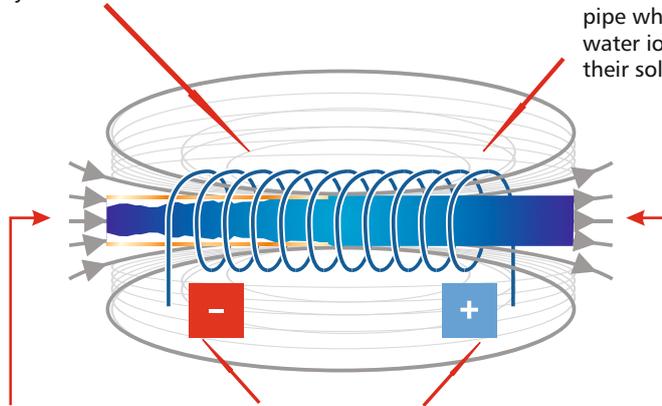


SCALE BRECK

ELECTRONIC WATER CONDITIONER

Single cable wrapped around pipe produces a square wave alternating at 1000 to 20000 cycle/sec

Complex modulated signal field at variable frequency - induces electrical field in the pipe which alter the hard water ions and increases their solubility



Incoming water containing calcium and other mineral ions in solution

Modulated signal from converter at only ± 12 Volts DC

Conditioned water can absorb more calcium and dissolve existing scale



PRODUCT SPECIFICATIONS

Components

Each model comprises of a Scale Breck unit, signal cable, ties, plugs and clear instructions.

Materials

Electronics hermetically sealed. Enclosures for indoor use are made of high grade thermoplastic or fabricated as per design. Enclosures for outdoor use are made weatherproof.

Controls & Indicators

All units have indicators showing correct operation, providing power applied and signal coil connected.

Reliability

Only high quality electronic components are utilized, including a custom designed chip (IC) controlling signal generation processing. Components have a life span of over 20 years.

Safety

The Scale Breck conforms to electrical safety standards. The electronics are sealed with resin. The output is safe to both personnel and sensitive equipment. There is no electrical contact between pipe and coil. The low output voltage is non-hazardous.

Power

Units can be connected to either 110 VAC or 230 VAC 50/60 Hz. Optional: Solar power or 24 Volt direct current.



NO
CHEMICALS



NO
MAINTENANCE



ONE TIME
INVESTMENT



EXCELLENT
RETURNS

- NO OPEN COILS
- NO HANGING WIRES
- NO OBSTRUCTIONS TO THE FLOW
- NO PRESSURE LOSSES.

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