

Automotive

The Unique Challenge

A large automotive diesel engine manufacturer in Indiana was having boron issues with a competitor's cleaner on their engine blocks.

Boron plated out of the cleaner, leaving a sticky residue. The operators were manually removing this residue from the parts, oftentimes cutting themselves on the sharp edges of the engine block. The boron also plated out on the rollers on the transfer line causing many hours of clean up.

Boron is a controversial raw material. It has already been banned in European formulations. As a global organization, the manufacturer is looking to rid themselves of boron where possible.



Automotive Engine Block

Houghton Approach

Houghton proposed switching to the boron-free Cerfa-Kleen® 5281, a biostable non-nitrited, high pressure spray cleaner with short-term in-plant rust inhibition.

It is used at ambient temperatures to dramatically reduce energy costs and the biostable technology extends sump life.

Case Study:

Cerfa-Kleen® 5281 turned an environmental issue into a money-saving win!

Results and Benefits

As a result of switching to Cerfa-Kleen® 5281 all boron issues have been eliminated!

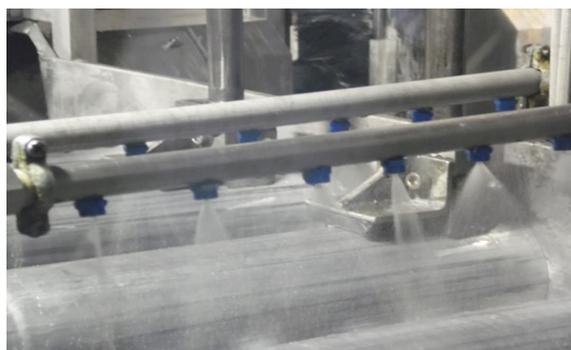
Cerfa-Kleen® 5281 costs \$4 per gallon more than the original solution but increases the bath life by 50% for a net savings of \$20,000 per year.

The sticky residue is gone, reducing health and safety concerns and labor costs for the operators who had to remove it.

The part is much cleaner and the rust preventive within Cerfa-Kleen® 5281 provides rust protection from the point when blocks and heads are washed until they are assembled, which could be multiple weeks.

Other benefits and features include:

- **Outstanding cleaning capability for optimal soil removal.**
- **Ability to wash using high pressures without formation of foam.**
- **Ability to wash heavy soils at ambient temperatures without biological activity.**
- **Incorporates corrosion inhibitors to protect from rusting, which reduces scrap rates and rework.**
- **The cleaner and Rust Preventive within Cerfa-Kleen® 5281 do not leave any residual residues or films.**



Industrial Spray Cleaner Machine



HOUGHTON™

Fluid Partnerships Making A World Of Difference

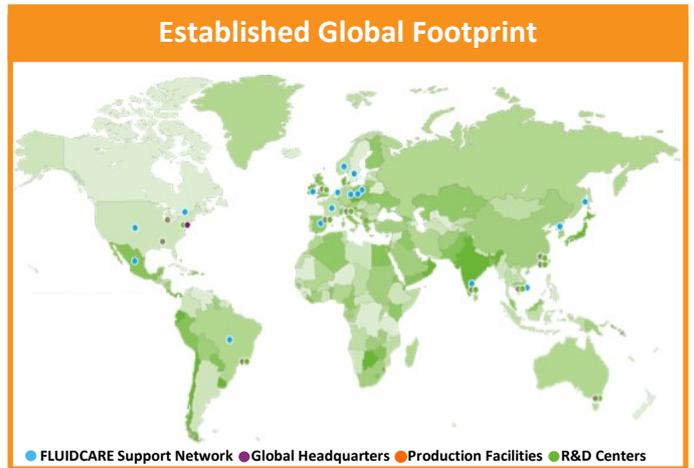
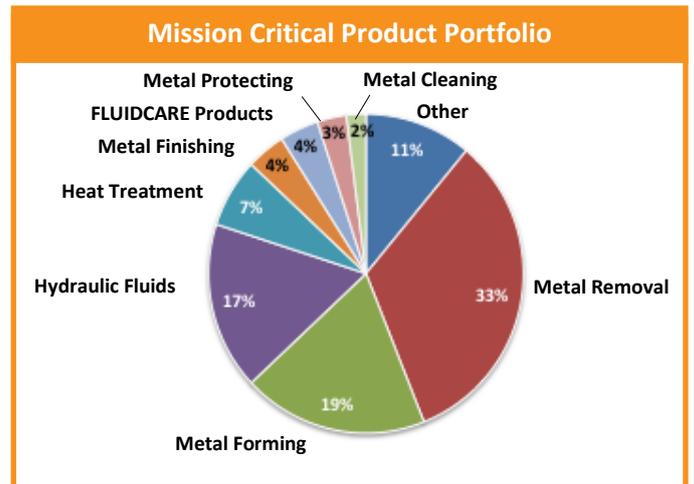
Case study after case study demonstrates why Houghton International is leading the global Metalworking Fluids market today. Growth industries, such as automotive, aerospace, energy, steel and aluminum rolling, fabricated metal goods and energy, look to Houghton for Total Chemical Management. For over 150 years, our technology, coupled with value-added services such as formulation and on-site customization and monitoring, has reduced our customers' operating costs, improved productivity, increased product quality, and strengthened overall competitiveness. Currently, >13,000 customers worldwide, across a diversified range of manufacturing processes, have improved operations due to the mission-critical product portfolio of Houghton.

Building A Team For Customer Success

An approach that combines chemistry and technology with business expertise uniquely positions Houghton to support customer growth and changing market requirements. With over 2,000 employees in 33 countries, and 12 manufacturing facilities in 10 countries, we are well prepared to capture regional and local business opportunities and support growing expansion of global customers.

Through innovation, expertise and efficiency, our engineers and business specialists are able to build a team with the customer that ensures product optimization, employee health and safety, procurement and logistics management, and reduction of environmental impact. By providing both the solution to customers' fluid challenges and the foundation for continued improvement, Houghton offers a proven method of sustainable profitability.

For immediate consideration and evaluation of your fluids needs, and to request additional support material, please contact your Houghton International sales representative at houghtonintl.com/en-us/requestinfo.



Established Client Relationships

Houghton International has long-standing partnerships with over

13,000 Leading Global Customers

servicing their metalworking fluids needs across a wide range of applications and diversified end-markets including **automotive, aerospace, fabricated metal goods, bearings, energy, non-ferrous and steel.**



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