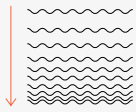


The next level, achieved.

Using cutting-edge innovation to gain every advantage.

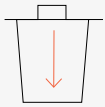
100% WASTEWATER VOLUME REDUCTION



20%✓ CYCLE TIME REDUCTION



20%✓ SCRAP RATE REDUCTION



WHAT WE ACHIEVED.

An industry-leading European die caster has focused on developing an increased competitive edge while facing ever-increasing competition and cost pressures. They were looking for an efficient and sustainable method of optimizing their production processes for a significant number of die casting machines.

Chem-Trend was able to provide immediate and wide-ranging impact through water-based HERA™ (High Efficiency Release Agent) products. The impact of the move resulted in efficiencies and savings throughout the process, including:

- Need for freshwater was reduced by 99%.
- Wastewater volume was reduced by 100% due to no excess release material flowing off the mold.
- Blisters were omitted, creating a 20% reduction in rejection rate.
- Remarkable extension of mold life thanks to elimination of thermal shock.
- Reduction in spray and air blow time reduced cycle by 20%.
- Significant reduction of energy costs.
- HERA™ contains no organic solvents, therefore reduced VOC exposure.
- Elimination of fire risk and reduced smoke emissions often associated with oil-base materials.

Due to the highly positive results, the die caster has set a goal of converting all of its international facilities to the solution provided by Chem-Trend within the next three years.

HOW WE GOT THERE.

Through assessment and testing, we identified opportunities:

- Relatively long cycle times for application of release agent.
- High consumption of freshwater for release agent application.
- High wastewater volume for reprocessing or disposal due to excessive release agent application for die thermal management.
- Unnecessary energy usage through thermal cycling of the mold due to reheat after excessive cooling by release agent.

OUR SOLUTION.

We implemented advanced HERA™ materials capable of solving the majority of issues. The materials do not lower mold temperatures, due to their ultralight application of a fine spray producing a thin layer of release agent. This dramatically reduces process thermal shock for improved die life while also leading to significant cycle time improvements and reduced energy consumption for increased profitability.

We then installed a thermal process monitoring system, recording thermal data in real time using infrared cameras permanently installed on the machine. This allowed for continuous process monitoring and optimization with HERA™ release agents.

The results exceeded all expectations of the customer. This led them to switch all machines in the facility to use the new products and associated technologies.

HANDPRINT IMPACT.

At Chem-Trend, we pride ourselves on our long history of sustainability efforts. However, it is our effect on our customers' processes that provides the greatest impact. It goes beyond our global Footprint; it is our even wider Handprint.



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For more information about our die cast capabilities, our innovations, or other stories, visit CHEMTREND.COM

Here, we achieved the following:

- Reduced release agent volume, leading to energy savings for die thermal management, more efficient cycle times, and compressed air generation.
- Eliminated water usage for dilution of lubricant and the resulting wastewater generation.
- Minimized transportation needs through lubricant volume reductions and shipping disposal costs of wastewater.
- Decreased scrap for the ultimate reduction in all forms of waste.

