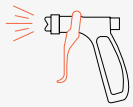


CASE STUDY - DIE CAST

Longer tool life through advanced technology.

76% ✓
REDUCTION
IN LUBRICANT
APPLICATION
RATE



50%
INCREASE
IN TIP LIFE



33%
INCREASE
IN SLEEVE LIFE



WHAT WE ACHIEVED.

A large die caster was looking to achieve two improvements in their process. They wanted to extend tooling life for their plunger tips and sleeves while also reducing application rates for plunger lubrication. By the end of our program implementation, we had achieved these exact goals, lowering application rate by 76% while increasing tip life by 50% and sleeve life by 33%. As an added benefit of the lower application rates allowed by our Micro-Dose Plunger Lubricant Technology the customer experienced a significant improvement in workplace air quality. Less smoke and flame were generated in their production process.

HOW WE GOT THERE.

We partnered with the die caster to conduct a series of trials testing the impact of differing plunger lubricant application rates of our advanced Micro-Dose plunger lubricant technology. Several trials were conducted to determine which level would provide the best lubricity and wear characteristics with minimal application rates. Initial observations showed signs of excessive plunger lubrication film, which can cause quality issues, such as casting stain and inclusions. Through methodical testing, we were able to gradually reduce application rates to a point below the customer's target levels while maintaining optimized

product performance. Encouraged by our progress, the die caster agreed to expand the trial to another machine, yielding similar positive results.

OUR SOLUTION.

We introduced our advanced Micro-Dose plunger lubricant technology that provides exceptional lubricity at low application rates. Its success during the trial, along with the close partnership we forged with the die caster, enabled us to push further and test more extensively to find the ideal application rate to provide superior performance. The project did not end after a successful trial. In close partnership with the die caster, we expanded the project through implementation phase on multiple machines to find the ideal application rate for superior lubrication performance without defect generation.



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.

Here, we achieved the following:

- Reduction of material wasted due to dramatic improvements in tip and sleeve life
- Reduction of waste through lower lubricant application rates
- Reduction in energy due to reduced needs for transportation because of lower plunger lubricant volume required

