

INNOVATIVE Application Solutions

MOKON

Die Casting

.... or as it is also referred to as metal casting, dates back to the early 1800's. Newly developed equipment, creative molds, and a wide variety of materials have renewed this industry.

Manufacturers are able to make strong, lightweight, and complex designs for the aerospace, automotive, consumer gaming and tools, electronic devices, industrial components, and numerous other industries. Today's state-of-the-art die casting facilities are not only clean and efficient, they provide a safe environment for their employees.

Mokon has been serving the Die Casting industry for over 50 years and developed our first hot oil heat transfer system back in 1967. While a lot has changed over the years, Mokon continues to provide innovative solutions to demanding applications.



Application Details

A leading North American die casting manufacturer was challenged to solve capacity constraints because of outdated equipment experiencing constant failures, unscheduled maintenance shutdowns, and poor product quality.

Considerations

The new design needed to solve the following: Quicker start-up and die changeovers, reduced downtime and maintenance, extended life of the heat transfer fluid, increased productivity, and less scrap.

Solution

Mokon's application engineer recommended a dual zone hot oil system, providing faster heat-up and containing our unique cool oil reservoir design, which extends oil life. The system also incorporated a valved process bypass, increased cooling utilizing a 21 sq. ft. heat exchanger, mechanical pump seals and welded joints where possible to minimize leaks, control face cover, and louvered side panels with filters to insure minimal contamination enters the enclosure. Mokon was able to provide the customer with a comprehensive design solution for the issues they encountered daily.



Mokon's heat transfer oil systems are available in a variety of capacities, zones, and configurations with process heating requirements up to 700°F (371°C).

MOKON®

Designed to Perform. Built to Last.

Die Casting



Applications:

- Aluminum Casting
- Automotive Part Production
- Metal Casting Mold
- Engine Block Casting
- High Precision Hot Forging
- Injection Molding
- Molten Hot Steel
- Ovens and furnaces

Benefits of Using a Mokon Hot Oil System:

- Faster heat-up and cool down
- Reduced downtime
- Elimination of life-shortening temperature shock to dies
- Reduced scrap rates for improved productivity
- Faster cycle times
- No need for regular shutdowns to clean channels
- Quality parts
- Extend die and fluid life
- Less die corrosion and scale buildup caused by water

Mokon's Expertise:

- Heat Transfer Oil Die Temperature Control Systems
- Oil Filtration Systems
- Heat Transfer Fluids
- Pump Tanks
- Maintenance Products
- Portable and Central Chillers
- Custom Designed/Engineered Systems
- Single and multi-zone circuits
- Stainless steel cabinets and components
- Magnetic drive seal-less pumps
- SCR and solid state relays
- Variety of communication options
- Remote interface electrical enclosures
- UL, CE, CSA, NFPA, NEMA and ASME designs



Custom oil skid-mounted temperature control system with flow regulation of five zones. NEMA 12 design with 270 GPM flow, 36 kW process heaters, and expansion tank.



Compact and portable heat transfer fluid system with temperatures up to 350°F (177°C).



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