2013 INTERNATIONAL DIE CASTING DESIGN COMPETITION WINNERS

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During its celebrated 40-year history, the annual design competition staged for the North American die casting industry has evolved to keep pace with the latest manufacturing trends. In 2013, the emergence of "re-shoring"—with OEM companies returning to the U.S. for die casting production because of rising energy, tooling and related business costs was on everyone's radar. Each year, the Die Casting Design Competition sponsored by the North American Die Casting Association (NADCA) showcases cutting-edge developments by many of the industry's pre-eminent companies.

"This year's winning castings exemplify the continued advancement in die casting capabilities," said NADCA President Daniel Twarog. "There are advances not only in geometric complexity, quality and cost savings, but in structural applications as well. The entries in this year's casting competition had a broad array of applications, from rugged heavy section components to delicate ultra-thin section components for various markets. There was also a shift toward more structural die castings among the 2013 entries."

New Award Categories Added

Categories in the competition are grouped by material and include aluminum, magnesium, zinc and other alloy families. New categories have been added, including squeeze casting and aluminum structural die casting. Both custom and captive casters are eligible. For each category, there are four equally weighted criteria: ingenuity of casting and/or product design, overall quality, cost savings as compared to other manufacturing processes and the part's contribution to expanding the market for die castings A panel of independent judges, acknowledged experts, with no ties to eligible casters, choose the winners.

"The design competition is an excellent forum for companies to showcase their capabilities," said President Twarog. "The recognition a company receives from this awards competition is a unique opportunity to attract more customers and greater market share."

NADCA will honor this year's award winners at its 2013 Die Casting Design Competition Luncheon on Monday, September 16 at 12:15 pm - 2 pm during the Die Casting Congress & Tabletop programming in Louisville, KY. The luncheon is an exceptional opportunity to meet this year's winners and learn more about their innovations. You can register to attend the luncheon *(for only $25)* at www.diecasting.org/congress/registration.

To Compete in 2014

Innovative die casting design entries may be entered in the 2014 Die Casting Design Competition. All award-winning castings will be displayed next year at NADCA's Die Casting Congress, September 22-24, in Milwaukee, WI.

The competition is open to die castings from aluminum, magnesium, zinc, semi-solid & squeeze, and other alloy families. Within each category, there are more specific levels: aluminum under 1 pound; aluminum 1-to-10 pounds; aluminum over 10 pounds; aluminum squeeze/semi-solid; zinc under 6 ounces/non-electroplated; zinc over 6 ounces/non-electroplated; zinc any size with decorative finish; magnesium over 0.5 pound; and magnesium under 0.5 pound.

Any number of die castings may be entered in the awards competition. Complete and submit a separate entry form for each casting or assembly of castings. As-cast entries are required. The metal surface cannot be improved or concealed by tumbling, shot blasting, coating or other surface treatments. NADCA encourages sending secondary processed samples, but these must be in addition to the as-cast parts.

Castings submitted for the competition MUST have approval in writing from the customer allowing NADCA to use the casting(s) in exhibitions and magazine articles. When possible, information and photographs describing the design process will be published in *Die Casting Engineer* magazine, but because of proprietary reasons, not all information can be shared. Such exceptions should be noted on your entry form.

You can download the entry form at www.diecasting.org/castings/competition. All entries must be postmarked by June 30, 2014. For more information, contact: Dan Twarog at twarog@diecasting.org. Send entries, along with sample castings and descriptions, to:

NADCA - 2014 Casting Competition
241 Holbrook Drive • Wheeling, IL 60090

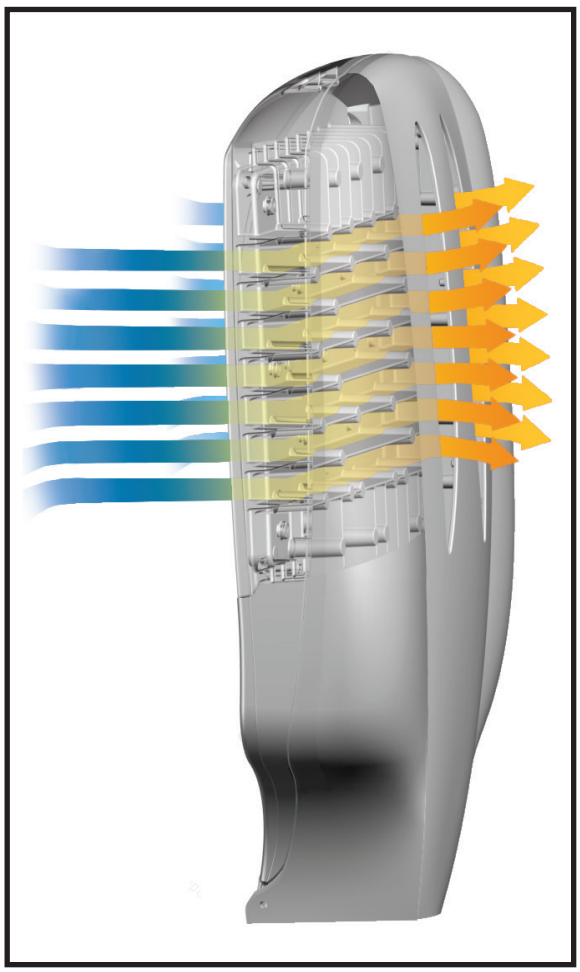
Aluminum Die Casting Over 10 lb.

Caster: Microcast Technologies Corp.
1611 West Elizabeth Ave.
Linden, NJ 07036

Caster Award Nominees: Edward Wasowski, Engineering Manager

Customer: H.E. Williams, Inc.

Customer Award Nominees: Owen VandeVelde, Chris Papa



Part: Housing – Upper Dual / Lower Dual
Material: 380 AL
Weight: 15.8 lb./ 31.3 lb.
End Market: LED Lighting (Industrial)

Customer's Comments: "LED lighting has a substantial advantage over standard lighting systems in that it requires far less electricity (50% of standard) and 60% longer life. The tools designed by Microcast Technologies allow the inserts to be changed out to make four versions of the casting using one mold base set-up."

Challenge: Traditionally the large overhead lights used on roadways or large parking areas have been made up of a combination of weldments and castings or metal fabrications. Typical bulbs are incandescent, fluorescent, metal halide, or high-pressure sodium. LED lighting has a superior life and uses less electricity. This project involved producing superior LED housing castings.

Solution: LED lighting systems create a great amount of heat, so cooling is essential. By die casting the complete housing in a two-piece assembly, combining all of the LED mounting, access and maintenance features in a single set of parts, the company produces a unit that lowers the system cost and provides long maintenance-free operation.

About the Die Caster: Microcast Technologies, located in Linden, NJ and Juarez, Mexico, specializes in aluminum and zinc die casting, machining, assembly and plating services for the military, telecommunications and LED lighting industries.