

INCAST®

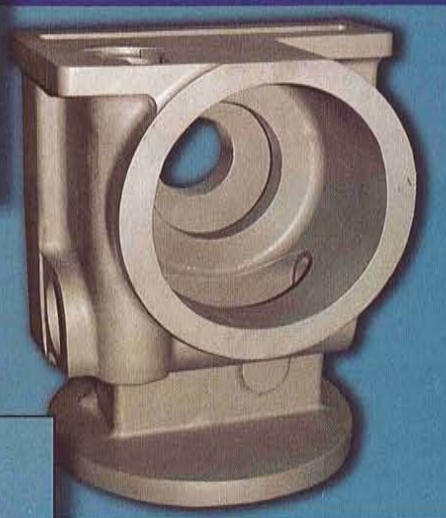
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Legal Ease p. 44



58th Technical Conference & Equipment Expo Edition



**Uni-Cast /Cera-Met
Vestshell Inc
Alcoa Georgetown
Take Honors in
Casting Contest**

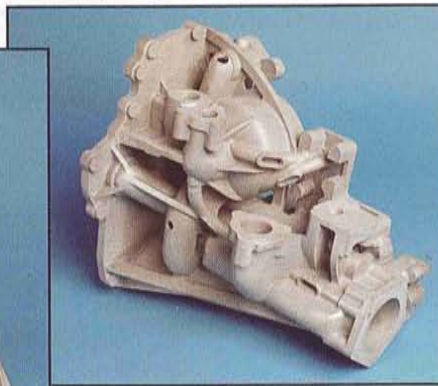


Abstracts Outline Technical Program

**Expo Offers Technology, Equipment,
Demonstrations, Products, Services**



Investment
Casting
Institute



AEROSPACE WINNER UNI-CAST/CERA-MET

Complexity both inside and out characterize this investment-cast main lubrication pump cast by **Uni-Cast/Cera-Met** of Bethlehem, PA. The 12"x 9"x 13" aluminum casting, used in a commercial aircraft turbine engine, features superior surface finish and contains numerous

internal passages which could not be machined.

Aerospace winner in the Investment Casting Institute's 2011 Casting Contest, the casting is manufactured with 15 individual soluble wax cores. The most difficult curved internal passage is 0.230" diameter and 11 inches long. Additionally, extensive grade B areas require stringent x-ray in inspection. Castings must pass internal pressure testing of 800 psi. The casting showcases the capabilities of Uni-Cast/Cera-Met's solid mold process..

INDUSTRIAL WINNER VESTSHELL INC.

This large stainless steel housing is manufactured by **Vestshell, Inc** of Montreal, Quebec, Canada. Used by the nuclear industry, the investment casting replaces four earlier part numbers and occupies less space in the final gear assembly.

Industrial winner of the Investment Casting Institute's 2011 Casting Contest the component measures 13"x 14"x 16" and weighs about 190 pounds. The customer demands a class 1 grade B NDT requirement throughout the castings.

The preproduction castings were manufactured using SLA patterns and were supplied just in time for the completion of a test installation. Should the design receive production release, the potential is 600 units to be used to replace all existing installations.



MILITARY/DEFENSE WINNER ALCOA GEORGETOWN

This accelerator gear box diaphragm manufactured by **Alcoa Goergetown** illustrates how the investment casting process can be used to manufacture high-tolerance, complex components with intricate internal passages.

Military/Defense winner of the Investment Casting Institute's 2011 Casting Contest, the aluminum casting measures 16.5" in diameter, and 6" deep. It features nine intricate complex cores ranging from 3 to 12 inches in length with .300" diameters.

Although the part was never made by any other metalworking process, it illustrates how investment casting can provide weight saving compared to sand casting, due to high strength, thin walls and complex intricate pockets, which reduce mass.

