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Letter to the foundrymen

Nr. 4/GIFA 2007

Dear foundryman,

Aluminium Rheinfelden will be present at its traditional appointment with GIFA 2007, the 11th International Foundry Fair to be held in Düsseldorf, Germany, on June 12th-16th, 2007.

New applications for aluminium castings are more and more numerous, also thanks to the steady development of casting alloys. Innovation spells solutions from new materials, which have to meet growing severe requirements. There is no better example than the automotive industry. During the World Foundry Organisation (WFO)'s technical session, Rheinfelden will present GIFA visitors its new solutions for the next generation of car engines. On June 13th, at 12:25, our Engineer Rüdiger Franke will give a paper titled "Heat-resistant aluminium alloys and their applications in car engine components."

At our stand you will find the latest applications of Castasil-37, the new alloy for weldable die castings. A unique occasion to see and touch the real Lamborghini Gallardo Spyder's aluminium spaceframe.



Priceless advice and useful technical recommendations on Rheinfelden's diecasting alloys are waiting to be read in our new catalogues. Discover ductility at low iron contents with Silafont-36, Castasil-37, Magsimal -59 and Magsimal-33!

Federico Casarotto
Ing. Federico Casarotto

Ralf Klos
Dipl.-Ing. Ralf Klos

Aluminium Rheinfelden's highlights at GIFA 2007

New alloy for
permanent mould casting



Castadur-30, AlZn3Mg3

Load-carrying star for glass dome constructions

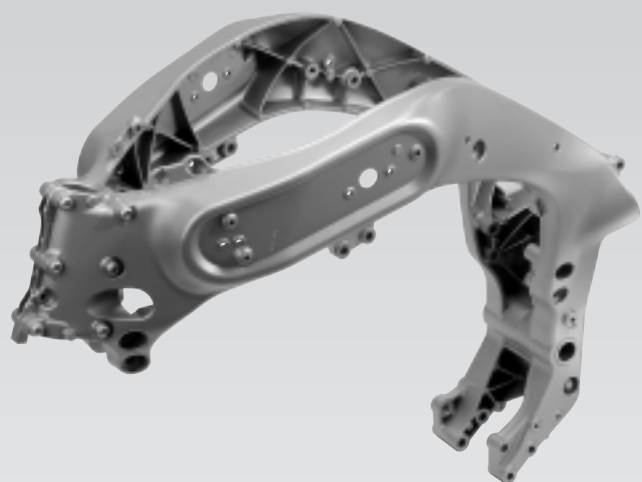
Castadur-30, temper T1, self-hardened

Size: \varnothing 260 x 110 mm;

Weight: 2,3 kg · wall thickness: 3 – 20 mm

Castadur-30 is the new self-hardening alloy for permanent mould castings, developed by Aluminium Rheinfelden. Good castability, high mechanical strength and ductility are combined with good machinability, with no risk of stress-corrosion. Castadur-30 can thus replace AlSiMg alloys heat-treated to temper T6, avoiding at the same time the costs due to straightening after quenching.

This load-carrying star-shaped casting crowns an elegant aluminium-and-glass dome, while providing the long term advantages accruing from the use of Ca-30.



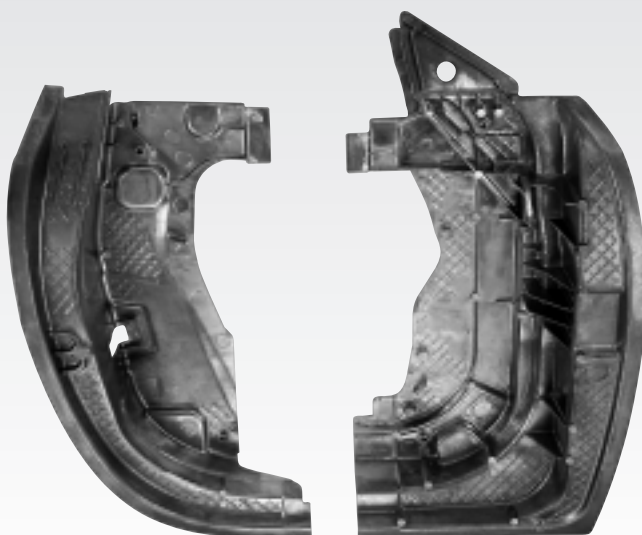
Silafont-36, AlSi9MgMn

Structural frame of the Yamaha MT-01 motorcycle

Silafont-36, temper T5

Size: 870 x 460 x 500 mm · weight: 13,6 kg

These dynamically loaded components are produced in series on pressure die casting machines with controlled melt filling (CF-die casting). The design optimization for pressure die castings led to 8 mm wall thickness in the heavy-duty engine compartment and 6 mm in the petrol tank area. The frame halves are screwed together next to the steering column mounting (to the left hand-side) and to the engine area (to the right hand-side) without requiring additional screw-in bushes. The high screw rip-out resistance of Silafont-36 with 0,3% Mg in temper T5 has been usefully exploited in this application.



Castasil-37, AlSi9Mn

Hinge and latch door panels / Jaguar XK

Castasil-37, as-cast state

Size: 620 x 340 x 170 mm · weight: 1,2 kg

Size: 700 x 340 x 170 mm · weight: 2,1 kg

The bodywork of Jaguar XK is made entirely in aluminium. Both side doors are designed combining aluminium die castings in Castasil-37 and extruded profiles or aluminium sheets. As no heat treatment is performed, these distortion-free die castings in Castasil-37 allow an accurate door edge construction and give even a bigger stiffness than traditional sheet constructions.

*GIFA 2007 will be a great occasion to discuss together about Your applications.
We are waiting for You at our **Stand Nr. F20, Pavilion 10!***

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