

PRESS RELEASE

AlMgty – one alloy for all needs: world innovation from Fehrmann ALLOYS at the formnext fair

New high-performance aluminum alloy for 3D printing and casting with outstanding elongation, good strength and resistance to corrosion.

With the new high-performance aluminum alloy AlMgty, Fehrmann ALLOYS presents a product with properties hitherto not available on the market. The new alloy is already the subject of intense interest, with enquiries from major car manufacturers, and Ziegelmayer, manufacturer of the world's best 470 racing yachts, has placed an order. The worldwide market rollout is scheduled for 2020.

AlMgty: essential facts

- The new aluminum alloy can be used for 3D printing, for sand casting, pressure casting and mould casting.
- All properties in a single alloy: The mechanical properties of AlMgty remain very similar in all processes, so that components made of the same alloy can be produced additively as prototypes or as a small series, and can also be mass-produced by die casting.
- Resilience in 3D printing: tensile strength 355 MPa, yield strength 220 MPa, elongation 19% (as built)
- The mechanical properties can be customized to suit the client's individual needs.
- Resistant to corrosion and anodizable
- Attractive price, as expensive components like scandium are not used.
- Only generally available components are used to make the alloy. This means there is no risk of supply problems due to low availability or extraction conditions that are hard to control, as with scandium.

Fehrmann ALLOYS in brief:

This outstanding product is the result of a cooperation between two well-known companies that combine their specialist expertise in the new firm Fehrmann ALLOYS. Fehrmann GmbH is a leading developer of high-performance aluminum alloys with 70 years of experience with aluminum, while CREMER is a Hamburg-based trading firm that does business all over the world. CREMER has been a major player in world trade for more than 70 years, and its 67 subsidiaries supply customers worldwide with raw materials and minerals, and now with metal powders for 3D printing as well. The joint venture Fehrmann ALLOYS will start marketing AlMgty through more than 30 sales offices in 2020.

Use-case Ziegelmayer:

The Hamburg shipbuilder Ziegelmayer produces small, fast sailboats for racing such as the Olympic 470 yacht. It equips the Olympic champions who sail the 470 boats as well as seven of the top 10 at the Olympic Games. The yachtsmen make extreme demands on the material used to build the boats: every component has to combine maximum resilience with minimum weight. Every gram counts. Thus Ziegelmayer commissioned Fehrmann ALLOYS to reconstruct the rudder mounting for the 470 yacht, and to manufacture it from AlMgty using 3D printing. This brings Ziegelmayer three clear benefits: on the one hand, a new bionic construction saves weight, and on the other, the use of the more stable AlMgty saves material and therefore weight. And less material in turn means shorter production times and thus lower production costs.

The printing will be done by Andreas Wiesner, former head of process development and project manager for large and multi laser systems at SLM Solutions and now owner of the firm AM & Research. The complete comparison of weight and costs will be announced at the leading trade fair Formnext (19.-22.11. in Frankfurt/Main)

Interview partners:

Henning Fehrmann(henning.fehrmann@fehrmann.tech), Sebastian Ziegelmayer (++49-40/ 27 08 443, info@ziegelmayer.org) and Andreas Wiesner (++49-170 / 22 86 455, Andreas.wiesner@amresearch.de) will all be happy to give you an interview.

In addition, Prof. Dr.-Ing. Claus Emmelmann (++49-40 / 48 40 10-500, martina.dorfner@iapt.fraunhofer.de), a leading expert on additive manufacturing and director of the Fraunhofer IAPT, will be happy to answer any technical questions about additive manufacturing using aluminum powders.

Press contact for further information and photo material:

Gabriela Friedrich
Public Relations / Copywriting /Editing
Jürgensallee 42 b
D-22609 Hamburg

Phone ++49-40 / 82 27 95 98
gf@gabriela-friedrich.de