Impossible Objects and TIGER collaborate on the development of additively manufactured composite materials based on thermoset polymers

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TIGER, the global innovator in 3D material solutions and manufacturer of TIGER high-quality surface solutions, will collaborate with the US 3D printer producer Impossible Objects to develop revolutionary thermoset based 3D printed composites. This cooperation will widely expand the use of additive manufacturing in several industries like aerospace or automotive.

Impossible Objects, headquartered in Northbrook, Illinois, has developed an innovative 3D printing technology that can print composite objects using layers of high-performance, lightweight materials like carbon fiber. This composite-based additive manufacturing process, “CBAM,” is substantially faster than any existing process and can produce functional parts with significantly better mechanical properties than existing polymer-based methods.

For the CBAM process, a wide range of thermoplastic polymer binders is used. So far, no Thermoset Materials have been used or offered in the market. Thermoset materials have the advantage over thermoplastics, to always remain in a permanent solid-state, demonstrating outstanding isotropic performance, dimension stability, enhanced mechanical properties, and adjustable flame retardant behavior. An essential further advantage of thermoset composites is their low density, which makes the components substantially lighter than conventional construction materials like metal alloys. Therefore, this new 3D printed thermoset based composite will be instrumental to fulfill the future needs for automotive and aircraft construction.

About Impossible Objects:

Impossible Objects is a 3D printer and materials company pioneering advancements in the additive manufacturing and composites manufacturing industries. Our composite-based additive manufacturing technology (CBAM) is an entirely new process that is fundamentally different from conventional additive manufacturing technologies. CBAM parts are stronger, lighter, with better temperature performance, and are more durable than those made by other additive manufacturing technologies and are available with a broader selection of materials, including carbon fiber and fiberglass paired with Nylon and PEEK, and can be made at speeds more than 10 times faster than with other additive manufacturing processes. For more information, visit www.impossible-objects.com.

About TIGER:

TIGER is a Blue Ocean innovation leader in the 3 regions of North America, Asia and Europe for 3D Print Materials, TIGITAL® Inks and Coatings – Powder and Liquid. Founded as paint shop in Wels, Austria, in 1930 the company's structure today features an internationally active, family owned and professionally run business with 8 production sites worldwide and a sales network in about 50 countries.

Headquartered in Wels, Austria, the company generated 2018 sales of 295 million euros with 1,300 TIGERs (employees). Over 150 TIGERs powering the groups R&D in 3 research & development centers in Wels (Austria), Shanghai (China) and St. Charles (Illinois). TIGER has the privilege to tap into the wealth of over 50 years of proprietary know-how and expertise in polymertechnology – specifically in the production and processing of thermoset materials.

The high-quality coating solutions from TIGER – powder coating and digital inks for industrial printing systems – guarantee long-term value retention and are used 360° in the manufacturing industry, for example on facades, car wheels, furniture, agricultural and construction equipment or industrial machines. With TIGITAL® 3D Materials, TIGER drives innovation and offers completely new thermoset materials for additive manufacturing.

For further information, please contact:

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