

Boeing's New 3D-Printed Tool For Making Wings Is So Big It Set A World Record



(Link: https://www.youtube.com/watch?v=QVqWM7T8dcl)

Boeing and the Oak Ridge National Laboratory have together landed a new world record for creating the largest solid object 3D-printed in a single piece.

The printed product, known as a "trim-and-drill" tool, will help create the wings of Boeing's next-generation 777X jet.

The result of a joint project between Boeing and the Department of Energy's Oak Ridge National Laboratory (ORNL) in Tennessee, the record-breaking piece is 17.5 feet long, 5.5 feet wide, and 1.5 feet tall, and "comparable in length to a large

sport utility vehicle," the team said in <u>a release</u>. The tool was made with ABS thermoplastic composite materials and weighs around 1,650 pounds.

Guinness World Records judge Michael Empric confirmed the record measurement of 82.4 cubic feet at a special ceremony at the Oak Ridge facility on Monday where he also presented certificates to representatives from both ORNL and Boeing.

Large printer

Of course, a giant 3D-printed object like this requires a giant 3D printer, with Oak Ridge calling upon its Big Area Additive Manufacturing machine for the ambitious Boeing project.

Commenting on the new 3D-printed tool, Leo Christodoulou, Boeing's director of structures and materials, said, "The existing, more expensive metallic tooling option we currently use comes from a supplier and typically takes three months to manufacture using conventional techniques." The 3D-printed equivalent, on the other hand, took just 30 hours to construct.

Christodoulou said additively manufactured tools, such as the 777X wing trim tool, "will save energy, time, labor and production cost and are part of our overall strategy to apply 3D-printing technology in key production areas."

Production of Boeing's new 777X aircraft is scheduled to begin in 2017 with first delivery targeted for 2020. The trim-and-drill tool will be used at the plane manufacturer's new production facility in St. Louis, Missouri, to secure the jet's composite wing skin for drilling and machining prior to assembly.

The Boeing tool isn't the first piece of work like this to come out of Oak Ridge. The team also hit the headlines in 2015 when it 3D-printed <u>a sports car</u>, while in the same year it used its printing kit again to create <u>an integrated automobile and house</u>.

http://www.digitaltrends.com/cool-tech/3d-printing-world-record/?utm_source=Sailthru&utm_medium=email&utm_campaign=DT:%20Brief %20Daily%202016-08-30&utm_term=DT%20Newsletter%20-%20Daily%20Subscribers



Chi tiết ô tô



*FDM: Fused Deposition Modeling 熔融擠製成型 (Công nghệ tạo hình bởi từng lớp nhựa nóng chảy)



Sản phẩm gia dụng



Thiết bị dạy học trực quan



Tạo khuôn mẫu



Mô hình kiến trúc



Dụng cụ y tế

