

## High-tech steel bike from thyssenkrupp wins Red Dot Design Award

Built by Engineers. Made from Steel. thyssenkrupp Steel has developed a high-tech steel racing bike. Called steelworks, this impressive feat of engineering has won the company this year's 'Best of the Best' Red Dot Design Award in the category Material & Surfaces. Of the roughly 5,000 entries in 40 categories, the 'Best of the Best' award is presented only once in each category. The award-winning steelworks bike will now go on display for a year in the Red Dot Design Museum.

### Advanced material opens up new possibilities

The high-tech bicycle frame designed by thyssenkrupp is made from dual-phase steel, an advanced, highly durable steel that has a higher strength and stiffness than aluminum and the forming capabilities of carbon materials. The galvanized steel sheet is initially formed into two half tubes which are then welded together in an automated, high-precision 3D laser welding process. This technology, otherwise used only in the high-tech industry, produces virtually invisible welds of consistent high-end quality for bicycle frames and demonstrates the completely new design possibilities offered by steel. The extremely high stiffness of the steel frame in the area of the pedal bearings ensures optimum power transmission and assists propulsion. At the same time the high flexibility of the saddle tube and the intrinsic damping properties of the material make for a fatigue-free, comfortable ride.

### Breaking with convention for top performance and comfort

Modern bicycle frames are generally made from aluminum tubes or carbon fiber laminates to achieve high stiffness, though this inevitably comes at the cost of comfort. This

was the starting point for steelworks. “We took inspiration from the diverse properties of steel. Without the high strength of steel, the bionic design of the saddle tube would not have been possible,” says Jia-Uei Chan, leader of the steelworks project. Using thin steel sheet and state-of-the-art production processes, steelworks breaks with the conventions of customary frame manufacture to combine the otherwise conflicting design demands of stiffness and comfort. The bike will be available to buy from late summer 2019.

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Built by Engineers.  
Made from Steel.  
[www.steelworks.bike](http://www.steelworks.bike)

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