

# Stronger steel guarantees benefit environment

**SSAB is improving its guarantees for wear plate and structural steel. Higher toughness is promised, opening new opportunities to reduce material consumption and produce lighter structures without risking cracking or breaking. The new guarantees also offer clear environmental benefits.**

## **Tough tests of material properties**

SSAB has subjected some of its best-selling steel products to tough tests, including strong impact, heavy wear and high loads. The tests focused on the material properties hardness, toughness and elasticity; three properties that are critical to any structure. Two of the properties—hardness and toughness—can be influenced, while elasticity is the same for all steel materials.

Hardness pertains to the stresses the steel tolerates, such as the weight of stones that can be dropped into a truck without causing permanent damage, as well as how well the material can withstand wear and tear. Toughness pertains to the ability of the steel to withstand tensile forces and loads without cracking and eventually breaking. Both hardness and toughness are properties that can be affected during the steel production process. Tests have shown that both Hardox wear plate and Weldox structural steel meet far higher standards than were previously guaranteed. SSAB is therefore expanding its guarantees, promising stronger steel.

"The extensive tests our steel has undergone show that our products are tougher than we had previously declared," says Christer Offerman, product manager at SSAB. "With this revision of our guarantees, we provide our customers with both greater security and more room in which to develop their designs, paving the way for them to boost competitiveness and profitability."

## **Good news for industry and the environment**

SSAB markets its high strength abrasion-resistant steel under the Hardox brand, which has become recognized worldwide for its excellent properties. Hardox is currently used for truck bodies, containers, buckets, construction machines and similar structures subjected to excessive wear. The new, improved guarantees enable design engineers to safely reduce weight in existing structures, since less steel is required to achieve the same properties. Manufacturing companies will find lower material costs and new construction opportunities, while buyers of machinery and equipment made of Hardox will appreciate having more room for paid payload and lower energy consumption, which will boost profitability and benefit the environment. In addition, structures made of high strength steel will be stronger and more robust, requiring less maintenance and with longer service intervals.

## **Tougher steels with improved weldability**

New opportunities also arise for structures subjected to demanding heavy loads. Weldox structural steel is used for purposes such as cranes, bridges, buildings and other structures that must withstand heavy loads and high fatigue requirements. Weldox, which will also be covered by the new guarantees, is known for its good weldability thanks to its high purity. The new guarantees for Weldox promise much tougher steel—for some products up to three times higher toughness, which means the steel can withstand cracking much better than indicated in previous guarantee limits.

"The new guarantees enable design engineers to develop much thinner structures while still meeting the same requirements for high strength and resistance to cracking. Just as with Hardox, the new guarantees offer environmental benefits because material consumption decreases," says Christer Offerman.

## More possibilities

Both Hardox and Weldox are available in a number of versions, which means that the customer's individual requirements for material properties can be met within a broad range.

"SSAB has a wide standard program and can also offer customized solutions for both wear plate and structural steel. We have the necessary expertise to develop solutions for every need," says Christer Offerman.

The new guarantees will begin in autumn 2012 and cover the Hardox and Weldox brands.

**For additional information, please contact:**

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SSAB is a global leader in value added, high strength steel. SSAB offers products developed in close cooperation with its customers to create a stronger, lighter and more sustainable world. SSAB has employees in over 45 countries and operates production facilities in Sweden and the US. SSAB is listed on the NASDAQ OMX Nordic Exchange, Stockholm. [www.ssab.com](http://www.ssab.com).