PRESS RELEASE
April 16, 2013

SSAB launches new method to measure material wear – positive characteristics of Hardox 450

SSAB is first to develop a method for measuring material wear from gravel flows. The method has been used in tests on Hardox 450 and the results show positive wear characteristics, which opens the door to building lighter mixer drums and transport loading platforms with a long lifespan. The method and results will be shown for the first time at the Bauma trade fair in German.

The reason for SSAB to develop its own method of measuring material wear is because no standardized method exists on the market today which can simulate the actual wear on different materials.

– Our method makes it possible to simulate different types of wear, such as wear from gravel flows with both impact and sliding wear from granite – an important element when we develop new products, said Patric Waara, Manager Wear Technology at SSAB.

Granite gravel is very commonly used for road construction as ballast or as a component of the asphalt and cement, and is a cause of wear during transportation. The quality of the steel used in a concrete mixer drum or on a vehicle loading platform is therefore decisive to the lifespan of the drum or loading platform.

– Hardox 450 has been tested according to the company's internally developed method, and the result is very positive, said Waara. Thin materials used in various products must withstand wear since they too carry loads. With Hardox 450, SSAB meets the tough demands set by manufacturers of vehicle loading platforms and mixer drums.

The new method for measuring material wear is based on flow simulations and the so-called Finite Element Method (FEM). FEM is an analysis tool used to improve products by directing flows away from high-stress areas. In this way, material wear can be decreased where the load is at its highest.

The method has been developed in collaboration with industrial doctoral candidate Dan Forsström, from Luleå University of Technology, who works with an entirely new technology which combines well-known flow simulation technology with FEM analysis.

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