

**HARDOX®**  
WEAR PLATE

# NEW HARDOX® 500 TUF LIVES UP TO ITS PROMISES



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**SSAB**

# MINIMAL WEAR OF HARDOX® 500 TUF CONFIRMED AFTER +40,000 METRIC TONS OF CRUSHED ROCK



"We usually run our trucks for eight years before replacing them. It would be good if we didn't have to repair the tipper body before selling it. From what I see, Hardox® 500 Tuf can make that happen," says Lars 'Knotan' Eriksson, one of the owners of Rådmansö Schakt och Transport AB in Norrtälje, Sweden.

Rådmansö Schakt och Transport AB is a Swedish transport company with 70 employees operating a fleet of more than 50 units, including a dozen large tipper trucks and trailers.

A major and growing part of its business is the transport of crushed rock, gravel and sand for road building and infrastructure projects. Rådmansö Schakt och Transport AB has been testing the new Hardox® 500 Tuf wear plate for more than a year in a tipper-trailer combination with a maximum load capacity of 38 metric tons. This rig has logged 11,000 km since it was delivered early in 2016. It has transported more than 40,000 metric tons of abrasive materials, mostly crushed granite rock from the company's own quarry.



## AMAZING RESULTS

18 August 2017 was a day for Hardox® 500 Tuf to show what it's made of. SSAB's Technical development manager Mika Stensson came to Rådmanö to determine if the steel performed as promised. All signs so far pointed in the right direction, and the result was well above his expectations.

When measuring the end section of the 6 mm bottom with an ultrasonic thickness probe, it showed wear of only around 5% after more than a year in operation. The bottom and sides showed practically no dents or other signs of damage. Also impressive was the condition of the plate edge, it looked almost new.



Mika Stensson from SSAB reads minimal wear of approximately 0.3 mm on the Hardox® 500 Tuf bottom plate after more than a year of full operation.

## TIPPER BODY MANUFACTURED BY HARDOX® IN MY BODY MEMBER SLP

SLP AB is a highly successful truck body and trailer manufacturer located in Övertorneå in the far north of Sweden, just below the Arctic Circle. SLP is a licensed member of SSAB's quality program Hardox® In My Body, which ensures that the company's products are made according to strict requirements for material choice, design and production methods.

SLP manufactured the tipper and trailer body with the bottom plate in Hardox 500 Tuf. The full-length plates were bent by SSAB Shape and then shipped to SLP. The 6 mm bottom in Hardox® 500 Tuf and 5 mm side plates in Hardox® 450 were MIG-welded manually with overlapping seams. SLP worked as usual with the welding and machining needed to finalize the bodies. No pre-heating is necessary for Hardox® 500 Tuf plates with a thickness of 16 mm or less.



"Our customers trust us to deliver top performing products. There simply isn't any steel that can compete with Hardox," says Anders Hellman, Sales engineer at SLP.

## TECH TALK ON HARDOX® 500 TUF

Hardox® 500 Tuf is the latest upgrade in the Hardox® range. It has an unusually narrow Brinell hardness window of 475–505 HBW. The guaranteed impact energy is 27 J at –20°C, at –40°C the typical value is 45 J. Superior wear and dent resistance gives extended service life and the ability to endure heavy impact. Hardox® 500 Tuf is tough enough to perform as a structural material in heavy-duty tipper bodies, containers and buckets, even in freezing conditions.

Typical working conditions include the loading and unloading of heavy and sharp rocks in quarries and mines, handling large and heavy steel scrap, and in demolition when pieces of concrete with rebar are loaded or dropped into tippers. Based on sliding wear with granite, the estimated relative service life for Hardox® 500 Tuf is 85–100% longer than for Hardox 400® according to WearCalc and TippCalc, .

Hardox® 500 Tuf																					
Hardness nominal HBW		Impact toughness CVT guaranteed ft-lb at -4°F (J at -20°C)				Impact toughness CVL typical for ¾" (20 mm), ft-lb at -40°F (J at -40°C)				Relative service life interval (relative to Hardox® 400)			CEV/CET typical for ¾" (20 mm)			Thickness range inches (mm)					
475-505		20 ft-lb (27 J)				33 ft-lb (45 J)				1.3-2.1			0.52/0.36			5/32"-0.985" (4-25 mm)					
Width	1000-	1351-	1500-	1601-	1701-	1801-	1901-	2001-	2101-	2201-	2301-	2401-	2501-	2601-	2701-	2801-	2901-	3001-	3101-	3201-	3301-
Thickness	1350	1499	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	3100	3200	3300	3350
3.0-3.7																					
3.8-4.7																					
4.8-5.7																					
5.8-6.7																					
6.8-7.7																					
7.8-8.7																					
8.8-10.0																					
10.1-24.0																					
24.1-25.0																					

Some restrictions, contact your local sales representative for information

Outside the range of dimensions

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SSAB is a Nordic and US-based steel company. SSAB offers value added products and services developed in close cooperation with its customers to create a stronger, lighter and more sustainable world. SSAB has employees in over 50 countries. SSAB has production facilities in Sweden, Finland and the US. SSAB is listed on Nasdaq Stockholm and has a secondary listing on Nasdaq Helsinki. [www.ssab.com](http://www.ssab.com).

Check out more examples of  
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