



## HARDOX® – a part of your success

## HARDOX in my body™

The "HARDOX in my body" sign is a guarantee that your container has all of the unique properties imparted to it by HARDOX wear steel. The sign on the container assures you that you have invested in a container made from steel of the highest quality in terms of resistance to wear and cracking. The sign also increases the resale value of the container.

### **HARDOX** in containers

HARDOX wear steel combines toughness with high hardness. In a container, this means higher resistance to blows and dents than that offered by other steels, and also a higher wear resistance.



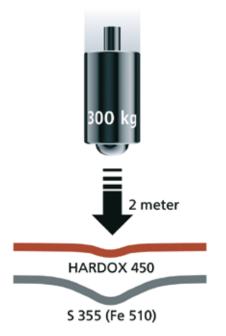
The "HARDOX in my body" sign is a guarantee that the container is of the highest quality, and it increases the resale value of the container.

the steel to resist wear very effectively. The guaranteed hardness range of HARDOX 400 is 370-430 HBW, and that of HARDOX 450 is 425-475 HBW. Due to their high hardness, HARDOX 400 and 450 have much higher resistance to sliding wear than ordinary steels.

# Longer useful life HARDOX wear steel has a high and uniform hardness. This enables

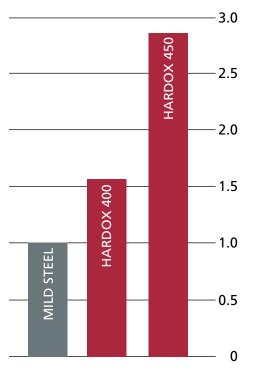
## Better economy

It is the hardness combined with high toughness that is unique to HARDOX wear steels. Therefore a container made from HARDOX has a longer useful life. Practical tests in which 300 kg weights are dropped onto HARDOX wear steel demonstrate the exceptional toughness of the plate and its resistance to blows and denting. HARDOX 450 has high toughness. The yield strength of around 1200 MPa allows large items to be loaded without causing permanent dents in the container. The wear is uniformly distributed, and the longer useful life gives better overall economy of the container. The high toughness is due to the exceptional purity of the steel. Only very pure ore from northern Sweden is used as the raw material for HARDOX. This is unique to HARDOX wear plate. Due to its high purity, HARDOX has a higher resistance to cracking, which is valuable if the container is in intensive use.



## Increased load-carrying capacity

The combination of hardness and toughness enables a new approach to be taken in the design of containers made from HARDOX wear steel. A minimum of reinforcing beams increases the load-carrying capacity within a given total weight. The close tolerances of HARDOX plate enable the container to be made lighter, which results in increased load-carrying capacity. The wear resistance of the steel increases the useful life and the overall economy of the container, since the need for repairs is reduced.



Comparison of mild steel, AR 400 and HARDOX 450 The higher hardness of HARDOX 450 compared to ordinary 400 HBW material always ensures improved resistance to sliding wear. In favourable cases, such as if granite is the material that causes wear, the useful life or wear time can increase by up to 75 percent.

Comparison between mild steels and HARDOX 450 Test method developed by SSAB Oxelösund for determining the impact resistance. The test simulates rigidly fixed plates onto which a weight of 300 kg is dropped from a height of 2.85 m. The dents in HARDOX are much smaller than those in other steels.

A container without transverse reinforcements on the outside also has lower aerodynamic drag, which is directly reflected in a reduced fuel consumption of the vehicle that carries it. The free outside surfaces without reinforcements also provide good advertising space for the company that the container represents.

# HARDOX offers new opportunities

If the container is made using HARDOX wear steel, its field of application will be more flexible. Anything from wood chips to demolition rubble can be transported without the container being damaged. Only HARDOX can make this possible.

A "HARDOX in my body" sign on your container gives you the assurance that you have a container made from HARDOX wear plate, and thus a container that will last longer.



Scrap. A container made of a "mild steel" has cracked due to its poor resistance to wear, dents and blows. Not an attractive sight.



Advertising sign. A container made of HARDOX wear steel has a long useful life and resists wear very effectively. The smooth sides of the container can serve as an advertising sign for the company it represents.

SSAB Oxelösund is currently the world's biggest producer of hardened structural steels and wear plate. Our products - HARDOX, WELDOX, ARMOX and TOOLOX - are sold in more than 100 countries. The heavy plate produced in our rolling mill is given unique properties by advanced hardening and post-treatment processes.

We also produce standard structural and pressure vessel plate. The steel slabs produced in Oxelösund are delivered to our own rolling mill and to the SSAB Tunnplåt rolling mill in Borlänge.

Steel production at the then Oxelösund Järnverk began back in 1917. Towards the end of the 1950s and in the early 1960s, the plant was expanded to a fully integrated steelworks, with heavy plate as its main product. The world's most modern rolling mill for heavy plate came on stream in 1998. A new line for hardening and finishing thin plate was started in 2001. The Oxelösund steelworks now has a workforce of 2400 employees.

SSAB Oxelösund is a member of the SSAB Swedish Steel Group. The parent company was founded in 1978 and was introduced on the Stockholm Stock Exchange in 1989.

