

# **HARDOX & WELDOX – From iron ore to customer**

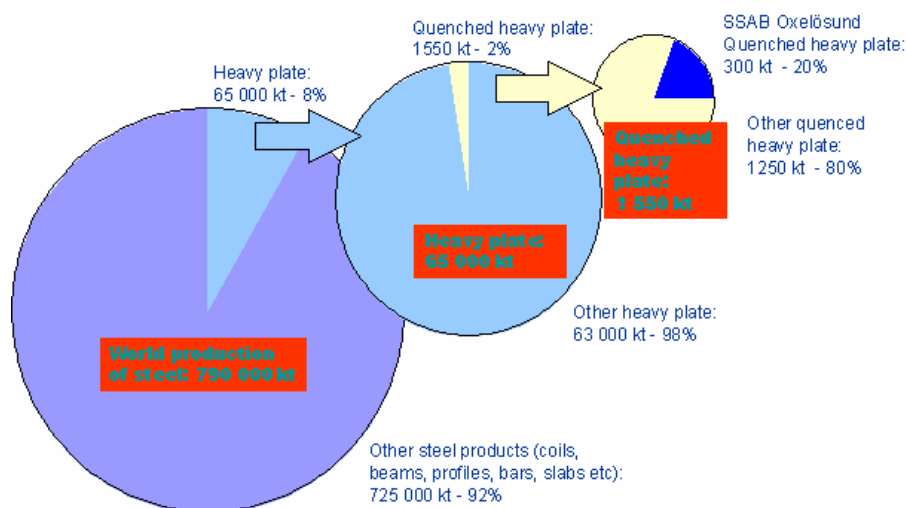
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## HARDOX & WELDOX – From iron ore to customer

SSAB Oxelösund AB is the leading Scandinavian manufacturer of heavy plate. The company is also the world leader, see picture 1, in the specialist area of abrasion resistant and extra-strength steels, marketed under the well-known brand names of HARDOX and WELDOX. Producing more than 550,000 tonnes of heavy plate and exporting to more than 100 countries. The HARDOX and WELDOX – grades are martensitic steels and produced by first austenizing at a temperature above 900 °C and then quenching in a so called roller quencher. Depending on steel grade and thickness the steels are then tempered.



Picture 1. World production of steel.

HARDOX is the abrasion resistant plate and has a typical hardness of 400, 450, 500 or even 600 Brinell, see table 1. The applications for HARDOX is where the customers has high demands on wear resistance, protection against plastic deformation, high surface pressures and also when it is necessary to save weight. Well known applications can be found in the mining, dumper, bucket and recycling areas.

WELDOX is the extra-strength structural plate and can be found with a minimum yield strength of up to 1100 MPa, see table 1. Weight saving and/or increased lifting capacity, less welding following from reduced thickness and less transportation cost are the typical advantages. Applications are mobile cranes, lorry cranes, forest machinery, bridges and more.

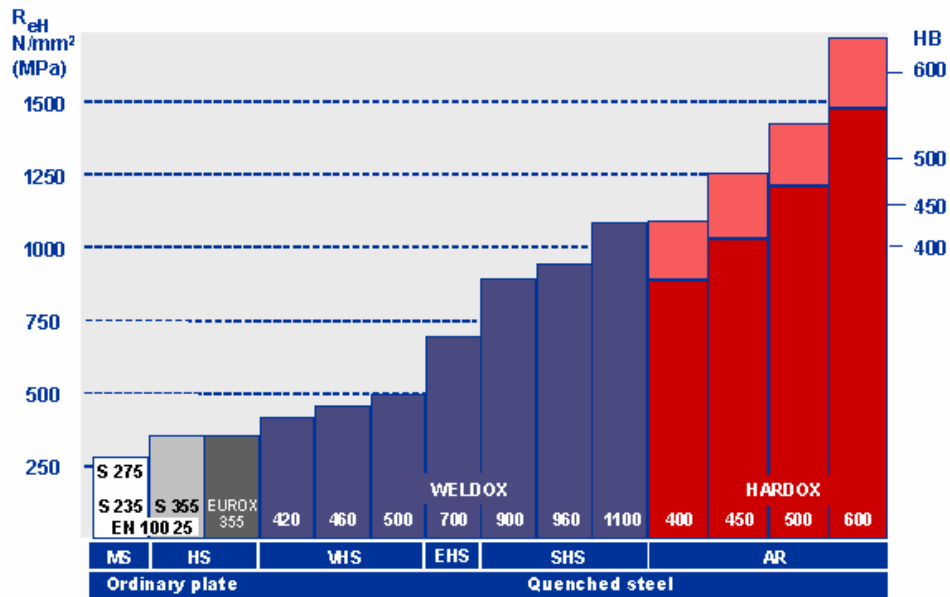


Table 1. Product range at SSAB Oxelösund

The quenched and tempered steels can be delivered with a length of up to 14,5 meters and a width of 3,35 meters. SSAB Oxelösund also has the only quarto rolling mill in the world that can produce as thin as 3,0 mm thickness.

The demand on quality for these mainly martensitic steels (not martensitic in the lower WELDOX grades, 420, 460 and 500) is high and the production processes has to be very refined in order to produce the quality needed. Keeping the customer demands in mind the steels are optimized towards welding (and thermal cutting) and bending. This is done by combining a low alloying content with advanced processes, having a very clean steel and good surfaces.

SSAB Oxelösund AB has invested more than 250 million USD in the past years in order to improve quality. The latest and biggest investments is a new rolling mill (1998) and a new quenching line (2001), especially build for 3-8 mm thickness.

