



WHEELS AND ROLLERS IN TOOLOX®

Toolox® 44 has been proven to be the optimal choice for heavy duty wheels and rollers. Toolox® is delivered as already heat-treated to a high tensile strength of 1450 MPa. An excellent fatigue resistance which gives a superior performance under the most demanding conditions. The guaranteed crack resistance combined with the 100% ultrasonic testing assures long and problem free life time. Toolox® is based on an ultra-clean metallurgical steel concept developed over decades at the SSAB Oxelösund plant in Sweden.

In addition to the excellent mechanical properties, Toolox® represents a superior solution in the workshop. The low carbon and alloy content makes plasma and oxycutting possible, which provides the ability to start machining from a shape much closer to the final one. Toolox® is developed for optimized machining performance. Being stress-free, deformations after machining are at a minimum. The surfaces obtained when machining are very smooth which further improves the function of the rollers and extends the fatigue life.



Crane steering wheels in a steel plate rolling mill. The wheels are normally changed every 3-5 years. Previously 35CrNiMo14 (similar to W.Nr.1.6582) machine steel was used. The wheels were induction-hardened to a depth of 10 mm. Now Toolox® 44 with no surface treatment is used. A major advantage in manufacturing is achieved since time is saved due to no need for heat treatment. Furthermore, cutting the rings from plate saved machining time and guaranteed a homogeneous small grain structure.



Guide rollers in cement mill stacker/reclaimer. In the previous solution, case-hardened 42CrMo4 was used. Changing to Toolox® 44 decreased the lead time with 10 days due to not needing to send the rollers for heat treatment. A much better surface finish with Toolox® gives better resistance to adhesive wear.



Toolox® maintains a high mechanical resistance up to 600°C. This is a benefit used in a wagon at an aluminium plant for charging aluminium coils into an annealing oven. The oven maintains a temperature at 560°C, which means that the wheels are repeatedly heated and cooled. Previous material for these wheels was stainless steel, now they have changed to Toolox® 44. Toolox® 44 retained its mechanical properties longer when exposed to cyclic heating to 560°C.



Wheels used in a steel coking plant locomotive. Previously the wheels were made from forged steel, which was a solution that worked well. The disadvantage was the long lead times once the wheels needed to be replaced. Making the wheels out of Toolox® 44 plates solved the problem.

Availability

Plates and square blocks from 6–320 mm. Bars between 21 and 405 mm with lengths up to 5000 mm. Toolox® is available from the local SSAB stock. Cut pieces of Toolox® can be obtained through the well-established global network of Approved Toolox® Distributors. Both SSAB and the distributors can provide you with good application support as well as technical guidelines.

Contact and more information

Contact your local sales representative to learn more, visit www.toolox.com or consult Tech Support at: help@ssab.com.