

# Groundbreaking wear resistance with new Hardox® HiAce in acidic environments

Abrasive materials and acidic environments don't go well together – until now, that is. The new Hardox® HiAce wear steel is specially formulated to withstand wear in acidic and low pH environments.

A period of extensive testing in real life applications has clearly demonstrated the performance benefits of Hardox® HiAce.

## Hardox® HiAce is developed to fight acidic challenges

Transporting municipal waste in garbage truck bodies is one example where acids come in contact with steel under abrasive conditions. The waste creates a low pH environment which accelerates wear.

Apart from municipal waste handling, acidic conditions are present in many industries, including recycling facilities, pulp and paper mills, sugar processing plants, iron ore and potash mining, agriculture and process industries. Salt, sulfates, ammonium and chlorides are some of the chemicals responsible for creating an acidic environment.

### ***“Hardox® HiAce will last up to 2.7 times longer”***

*“When there is oxidation present, different wear mechanisms kick in. The acidity oxidizes the steel’s surface, making it more prone to abrasive and pitting wear. Hardox® HiAce drastically slows down this oxidation process, allowing the full hardness of the material to counteract wear. In low pH environments, our tests show that the service life is up to 2.7 times higher compared to a 450 HBW steel,”* says Jonas Allebert, wear technology specialist at SSAB’s Knowledge Service Center.

## FB Kedjor boosts performance at Södra Cell with Hardox® HiAce

The Swedish company FB Kedjor manufactures chain conveyors for pulp and paper mills and recycling plants. It has switched to Hardox® HiAce for liner plates in the conveyors and sees a great leap in wear performance.

*“Hardox® HiAce is a fantastic product for applications with both wear and corrosion. In acidic environments such as paper mills and recycling plants, you can really see the difference in wear resistance. And in the workshop, the material has the same properties as we are used to, when it comes to Hardox®. The customer response has been very positive,”* says Stanley Persson at FB Kedjor.

## SSAB

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The pulp and paper mill Södra Cell in Sweden is one of the companies that have switched to Hardox® HiAce, as Håkan Axelsson at Södra Cell explains: *"We have tried this new grade Hardox® HiAce as wear liner under one of our chain conveyors for more than a year. The result is very satisfactory and we have decided to change to this grade on all our conveyors."*



Using Hardox® HiAce as a liner in chain conveyors working in acidic environments gives substantially longer service life.

### **Stena Recycling adds service life and saves maintenance costs**

Stena Recycling in Halmstad, Sweden, had a problem with the original cyclones in its car recycling plant. The cyclones were made in S355 (A36), a mild steel that wore out quickly and required frequent repairs. Since the cyclones were subjected to acids, SSAB recommended to rebuild them from scratch and use Hardox® HiAce both as a wear and structural material. The positive experience from the Halmstad plant has drawn interest from other Stena Recycling plants to rebuild their cyclones in the same way.

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Hardox® HiAce replaced the earlier solution with structure plate and wear plate made of S355 (A36) in cyclones at a Stena Recycling plant.

### **Fanalca, Colombia, firmly believes in the benefits of Hardox® HiAce**

To improve the performance of its rear loader waste collection trucks has been one of Fanalca's main objectives in the past few years. When Hardox® HiAce was introduced, Fanalca decided to try the new material in their trucks as part of their efforts to improve and develop better solutions for the garbage collection industry. The main driver behind this decision was reducing repairs and problems associated with abrasive wear and corrosion.

### **Hardox® HiAce for more payload, less fuel and reduced CO<sub>2</sub> emissions**

The increased wear resistance in for example garbage trucks allows for the use of thinner steel plates without jeopardizing the service life. Thinner steel means more payload when fully loaded. And when traveling empty, a lower truck weight saves on fuel and reduces CO<sub>2</sub> emissions.

### **Hardox® HiAce doubles as a structural wear steel**

Apart from the additional wear resistance in acidic environments, Hardox® HiAce has the toughness necessary to perform as a structural material in garbage trucks, recycling containers, dump bodies and other heavy-duty products. It also works in freezing conditions as the impact energy value indicates.

Hardox® HiAce has a minimum impact energy (CVT) of 27 J at -20°C (20 ft-lb at -4°F). It is available in the thicknesses 4-25.4 mm (0.157-1 in). Hardox® HiAce has similar

mechanical properties as Hardox® 450. It can be processed by the same kind of machinery used for other Hardox® grades.

**Hardox® HiAce is available from SSAB stocks close to you**

For more information about Hardox® HiAce or to find out about the availability in your market, please contact:

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