

# SSAB World

CUSTOMER BUSINESS IN FOCUS

## SSAB AND RUUKKI

Introducing a new force in steel:  
joined together to give  
new power to our customers

2/14

A SHARED  
PASSION  
FOR A STRONGER,  
LIGHTER AND MORE  
SUSTAINABLE  
WORLD

10 languages ★ 100 000 copies ★ 112 countries ★ SSAB World: a global magazine



# WELCOME TO OUR NEW SSAB

I'm proud and happy to be able to announce that SSAB and Ruukki have now started out on their journey together to challenge the future.

Our new SSAB has set its sights on realizing our shared vision of developing a stronger, lighter and more sustainable world.

Together with you, we will go further than anyone else to realize the full potential of lighter, stronger and more durable steel products.

As a customer, you are our number one priority and we always take an active interest in the customer's business and seek to develop long-term relationships.

Thanks to the combination of SSAB and Ruukki, we are pleased to be able to offer you the possibility to benefit in numerous ways from our new, enhanced offering:

- A broader, world-unique product portfolio in Advanced High Strength Steels (AHSS) and Quenched & Tempered steels (Q&T);
- A wider range of quality steels providing the best and most consistent workshop properties;
- A new range of steel products in QT/AHSS and standard steels (Tubes, Bars, Stainless, Shaped parts, etc.);
- Logistic solutions which allow us to serve you better locally, around the world;
- Stronger manpower resources at your service to solve your problems and allow you to concentrate on further developing your own products and production.
- Additional services to support your business, such as branding, licensing, kits, joint marketing, customer training, etc.

SSAB remains committed to being more than a mere supplier of steel. We strongly believe that, in the current competitive environment, we can both benefit by teaming up further. By sharing knowledge, together we create value.

Our customer teams are eager to meet you in order to describe further the wide range of new possibilities that can help your business.

Please don't hesitate to contact them in case of any needs or questions.

I look forward personally to continuing our positive co-operation and developing new opportunities together.

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**MARTIN LINDQVIST**

## Smart Solutions

SSABs lightweight high strength steels help make the difference for customers making tippers in China, forestry equipment in the USA and intelligent speed bumps in Sweden.

04



## Social Steel

Social media is becoming more and more vital to good business. The right social media strategy can help all companies, however big or small, make positive connections with customers and prospective new recruits alike.

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## Shedding Weight

Using smart design and lightweight steel, Danish tank trailer manufacturer VM Tarm has succeeded in shedding more than 2,500 kilograms from its latest creation: the tank trailer of the future.

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## Seeing the Future

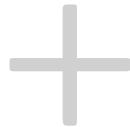
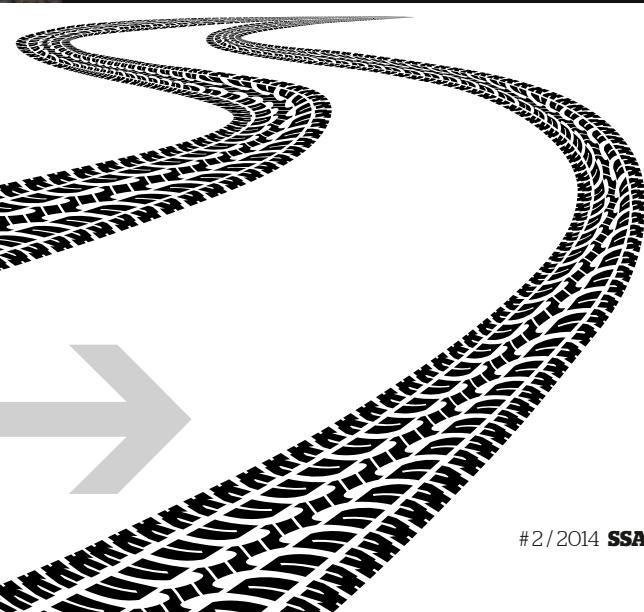
Increasing urbanization and a growing population is good news for the heavy transport industry. But tougher regulations and ailing infrastructures make for a tough road to steer towards a sustainable future.

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## Steeling Time

The dense forests of Southern Belgium keep a secret that has been hidden for 70 years: a cemetery for old American cars, abandoned by homeward bound US soldiers.

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**Happy Birthday to...**

Hardox: celebrating 40 years of toughness



# Smart SOLUTIONS

TOGETHER WE CREATE BETTER RESULTS



Dongfeng Special  
Vehicle Co uses  
innovation and  
new technology  
in its quest for a  
lighter tipper.



#### REDUCED FUEL CONSUMPTION WITH HARDOX LIGHTWEIGHT TIPPER

- Reduced weight by one ton.
- Heavier loads, while still complying with the strict Chinese payload limit.
- Lower weight reduces fuel consumption, resulting in significant cost savings.

**A NEW U-SHAPED** on-road lightweight tipper, made from SSABs Hardox wear plates, is delivering significant cost savings for its users.

Dongfeng (Shiyan) Special Vehicle Co., Ltd. is a manufacturer of special-purpose vehicles, such as dump trucks, semi-trailers, cement mixers and fuel tankers, which it exports to South-East Asia, South America, Africa and other regions.

As one of the leading tipper manufacturers in China, Dongfeng values innovation, including the opportunity to utilise new materials and technologies. Three years ago, it started working with SSAB on the development of its new lightweight on-road tipper. SSABs technical development team helped Dongfeng design the U-shaped tipper body, made of Hardox 450 wear plates, as well as providing welding and processing training.

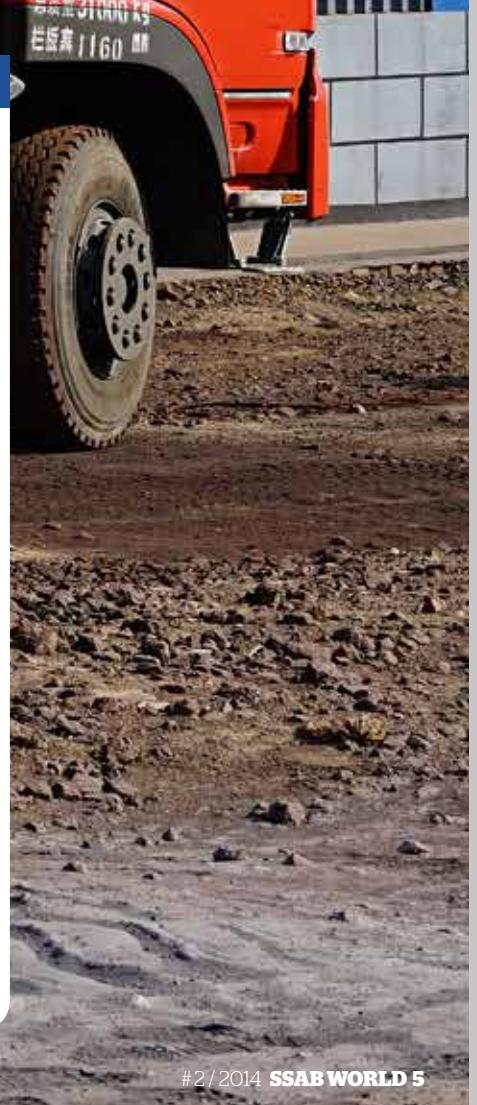
"The excellent performance of U-shaped

lightweight tipper body made from Hardox can achieve maximum payload under the current Chinese transport regulation. This is one of the key advantages that attracts end users," says Yuan Zhipeng, Manager of Heavy Industrial Products from Dongfeng Special Vehicle.

The use of lightweight Hardox wear plates allows for a higher payload, while reducing fuel consumption. For end users, this results in significant cost reductions. According to Dongfeng, the tipper can generate up to USD 500 in additional monthly income.

"The new tipper has not only extended our product lines, it has created value for our customers. We will continue to maintain our close, win-win partnership with SSAB," Mr. Yuan says.

For more information please contact guoxian.li@ssab.com.



# SMART SOLUTIONS



Edeva's Actibump only comes into play when a vehicle is travelling too fast.

## SELECTIVE SPEED BUMP USES WELDOX TO HANDLE LOADS

- ✓ Robust material with high tolerance to heavy loads.
- ✓ Light weight, minimize the need for support structures under the hatch.
- ✓ Easy weldability eliminates the need for machining and screw elements.

**AN INTELLIGENT TRAFFIC SYSTEM** called "Actibump", developed by Swedish company Edeva, helps reduce traffic speed, thereby minimizing risks for other road users. Using SSABs Weldox 700 allows the system to withstand repetitive, heavy loads.

Edeva develops and markets intelligent traffic systems, designed to facilitate the selective management of traffic speed. The "Actibump" system checks the speed of an approaching vehicle using radar. If the car is exceeding the

speed limit, a metal hatch is lowered into the road surface, creating a bump, equivalent to a pothole. The bump is deep enough for drivers to notice – reminding them to reduce their speed – but does not cause any damage. Actibump only affects the vehicles that are driving too fast, while other vehicles remain unimpeded.

The part of the Actibump system that is exposed to the most wear and tear is the metal hatch. In addition to large repetitive, heavy loads, it has to contend with demands caused by studded

winter-tires and snowplows. The cover of the hatch is designed to withstand the load and comply with the tolerance requirements for the application.

According to Edeva's Managing Director, David Eskilsson, finding a robust material was a key priority when developing Actibump.

"We chose Weldox 700, 16 mm because of the tensile yield limit, weldability and the fact that the tolerances of the parent metal enabled us to source it in bent form, without enlisting the aid of specialist suppliers," says Eskilsson.

## GOOD LOOKS AND GREAT FUNCTION GET THE JOB DONE

- Lighter weight
- Stronger construction
- Improved looks

**DEMAND FOR LIGHTER**, stronger crane booms, led US crane manufacturer Link-Belt to turn to Ruukki and its Optim brand of ultra high strength steel; the natural choice according to Dave Necessary, Material Sourcing Manager at Link-Belt.

Founded in 1874 and based in Kentucky, USA, the Link-Belt Construction Equipment Company manufactures telescopic and lattice boom cranes. The crane market is expanding, thanks largely to the rapid growth of infrastructure projects in emerging countries, and Link-Belt is always looking to develop cranes that are stronger, longer lasting and farther reaching. But looks count for Link-Belt,

too. "Link-Belt's painted formed booms have become the visual hallmark of our quality reputation," says Necessary. "That's what customers want to see, and it's a key reason we are more surface-conscious than anyone else in the industry."

When Link-Belt opened a new manufacturing facility in 2009 —becoming one of a few crane makers in the world to manufacture its own formed-booms—it wanted a steel provider that could not only meet its requirements for strength, lightness and durability, but deliver good surface steel with low defects as well. Link-Belt turned to Ruukki special steels for fabricating its next gen-

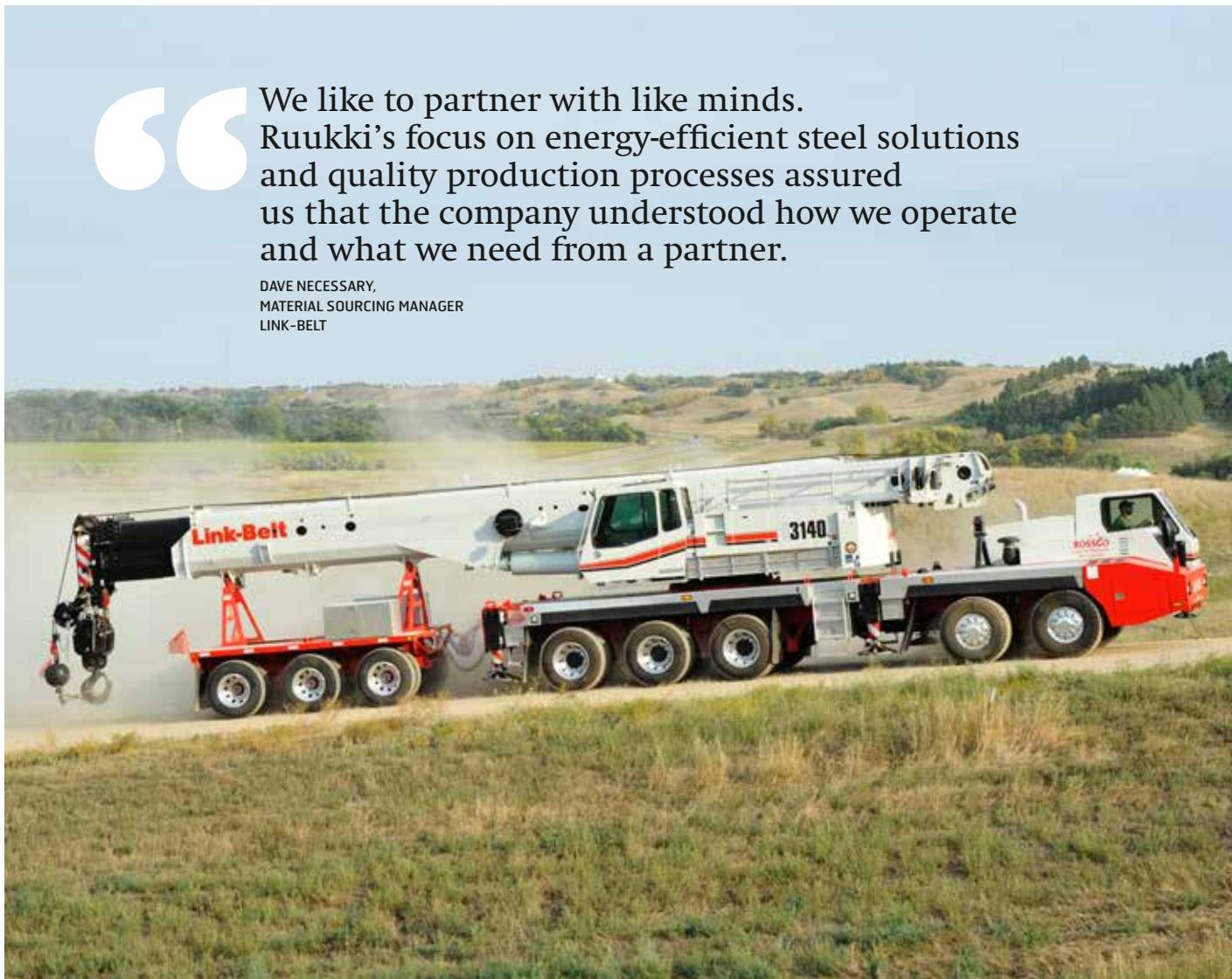
eration of telescopic crane booms. Using Ruukki's Optim® brand of ultra-high-strength steel helped exceed Link-Belt's specifications for strength, lightness and durability.

Ruukki's 130/160 gauge Optim steel also helps Link-Belt achieve a lightweight telescopic boom that is crucial in supplying the increasing demand for "greener" fleets in the crane industry. "We like to partner with like minds. Ruukki's focus on energy-efficient steel solutions and quality production processes assured us that the company understood how we operate and what we need from a partner," says Necessary.

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DAVE NECESSARY,  
MATERIAL SOURCING MANAGER  
LINK-BELT





# A LIGHTER TRUCK FOR A BRIGHTER FUTURE



In development since 2012, VM Tarm's new tank trailer is 28 percent lighter than similar models.

**Imagine a tank trailer that is 2,675 kilograms lighter than similar models on the market.**

That means more payload can be carried, reducing the number of trips needed to transport loads and reducing CO<sub>2</sub> emissions. Danish company VM Tarm believes its truck will be a winner both for its customers and the environment.

**LOCATED IN THE WEST OF DENMARK,** VM Tarm's roots date back to 1962 when Bernhard Lauritsen started to transport milk cans in tractors for the dairies in Western Jutland. As his company grew he began to maintain and repair the vehicles and to export milk tankers and trailers to the neighboring Scandinavian countries. In 1984, his company changed name to VM Tarm a/s focusing only on the production of milk tankers. Over the last 20 years, VM Tarm began producing aluminum feed tankers, liquid manure trailers and vacuum tankers, used for carrying dangerous goods, grease, liquid waste and beer.

## CASE: TARM

In April 2014, VM Tarm launched its ambitiously named "Tank Trailer of the Future", a four-axle 41,500-liter pressure tank with three 'compartments', to transport different sub-loads. What makes this trailer extra special is that, even though its load carrying capacity is more flexible, at only 6,800 kilograms, it weighs 2,675 kilograms less than a similar tank trailer. This makes it 28% percent lighter than other models currently on the market.

**THE TANK TRAILER** has been in development since August 2012. It's a response to increasing customer calls for lower weight trailers and higher payload. VM Tarm realized that even though low weight was already a key focus in its products, further weight reduction would give it a competitive edge.

Early on in the development, VM Tarm concentrated on reducing weight in every part of the vehicle, searching for suppliers who could provide light-weight composites, steel and plastics.

"From the start, we were aiming for a reduction of 15 percent, but the result of 28 percent, as well as the option of a payload of more than 40 tons, with the current weight limit of 54 tons in total, far exceeded our expectations," says Technical Manager Brian M. Andersen.

VM Tarm chose SSABs Domex 700 steel to reduce the weight of the chassis by 52 percent. High strength steel was also used on other parts of the trailer.

"SSAB opened our eyes regarding the possibilities of high strength steel and was ready with support like no other supplier," says Andersen. "Its high strength steel lets us reduce dimensions and weight while maintaining the safety and durability of the trailer. At a first glance, other materials might seem to be a better choice, but they could not withstand the dynamic loads on the tanker."

**AS WITH DEVELOPING** any new product, there were challenges. "We wanted to push the limits, but still reach a solution which we and our customers would have confidence in," Andersen confides. "So far, it looks like we have hit the balance between success and failure."

Months of calculations and simulations were conducted before the prototype was manufactured. During this period, Andersen and his team counted on SSABs experience from similar projects. "This was

very valuable to the project and helped us to achieve a great result – a strong product which we believe has a long life on the roads," he comments.

**BESIDES MEETING ITS** customers' needs, VM Tarm believes its lighter tank trailers will have a positive effect on the environment. The lower weight means a higher payload, reducing the number of trips needed to transport goods and, therefore, lowering CO<sub>2</sub> emissions.

The new tank trailer was initially tested on bumpy roads and extreme courses in Western Jutland carrying water at the maximum load. Then, Scandinavia's largest dairy company – Arla Foods – used the tanker to transport milk between their sites.

The test results will be analyzed in late 2014 before the product is officially launched on the market, according to Andersen. But, he's convinced the industry sees the economic benefits of the increased payload. "So far our customers' first reaction has been 'When will we have the chance to buy it?,' he says.



At a first glance, other materials might seem to be a better choice, but they could not withstand the dynamic loads on the tanker.

BRIAN M. ANDERSEN  
TECHNICAL MANAGER  
TARM



### ● ABOUT VM TARM A/S

Headquartered in Western Jutland, Denmark, VM Tarm a/s manufactures stainless steel and aluminum tankers for transporting feed, liquid manure, chemicals, milk and beer in the Nordic countries. The company was founded in 1962. It currently produces 120-150 tankers per year and employs 150 people.

### ● VM TARM'S 'TANK TRAILER OF THE FUTURE'

Approved for the transport of food products, each of the three compartments has a cleaning turbine and a baffle plate. It can carry a total weight of 56 tons. There's an insulated cabin and axle lift on the first and third axels, designed to cope with the harsh Nordic winters. The weight of the truck is 6,800-6,885 kilograms depending on the extra equipment, meaning it weighs 2,675 kilograms less than the average tank trailer on the market. High strength Domex 700 from SSAB was used for the chassis construction.



# SOCIAL MEDIA

by ISABELLE KLIGER illustration VECTORSTOCK

## THE BUSINESS OF SOCIAL MEDIA

The World Steel Association **has laid good groundwork** in recent years to open up the world of social media. With the right approach, good content and a little creative thinking, even the smallest players in the steel industry can operate effective, results-driven **digital storefronts.**

# 1. SOCIAL MEDIA – A GOLDMINE FOR THE STEEL INDUSTRY

**THE RISE OF SOCIAL MEDIA** has transformed the way in which people access information – both in their personal and professional lives. While business-to-business (B2B) companies, particularly in the industrial sectors, have tended not to be as quick to embrace digitalization, steel companies are slowly but surely becoming more confident about using social media. So says Soo Jung Kim, Media Relations Manager at the World Steel Association (worldsteel).

"The last few years have seen an accelerated emergence of social media use in the steel industry. It has become a vital communications platform for many steel companies and is increasingly used for direct communications and engagement with key stakeholders," says Kim.

Two years ago, worldsteel conducted a survey on social media trends in the steel industry. The survey demonstrated that, while some steel companies adopted social media very early on, about 70 percent of respondents confirmed that they had a presence but viewed themselves as beginners in the world of social media.

"The current landscape is very different," Kim continues. "These days, social media is a crucial communications tool for the steel industry and more companies use it in a strategic, sophisticated manner with clear objectives.

"The name of the game is varied content and dialog, which has led to a far broader approach – away from old-fashioned company announcements to broader interest subjects, such as safety, environment, community, training and people," she adds.

Russell Mattinson, Digital Media Manager at SSAB agrees that that social media is an "untapped goldmine" for the steel industry.

"People at work want to be able to apply the same digital behavior on the job as they do in their private lives," says Mattinson. "And let's not forget that the use of mobile devices is growing more quickly than television or PC usage ever did. Social media is an integral part of a global paradigm shift towards digitalization and mobility."

**LAST YEAR**, SSAB began actively promoting its social media presence, becoming more visible on Facebook, Twitter, LinkedIn and YouTube.

Since August 2013, SSAB has increased its number of followers on LinkedIn by 50 percent and the number of Likes on SSABs Facebook page is up 40 percent. SSAB has also published a series of YouTube films called "Minds of Steel", designed to demonstrate ways of using its products in various situations. Showing real people working with SSAB steel, the films address specific questions and offer practical tips.

"Our philosophy when working with social media is that it shouldn't be seen as a channel for traditional marketing blurb. Instead, we want to provide information that is genuinely useful to customers, end users and people who just want to know more about steel," adds Mattinson.

**WORLDSTEEL** is also continuing to put social media to good use, having run two successful campaigns in the last year.

"We wanted to reach out to the general public, aged 13 to 30, to inspire them to think differently about the steel industry. We launched two intriguing, captivating campaigns; a Twitter debate and a Facebook photo competition," explains Kim.

The Twitter debate, which featured steel industry CEOs, industry specialists and the media, was the first online debate for the steel industry. It generated more than 600 tweets in one hour and resulted in more than a half million impressions. The photo competition increased the number of likes on the worldsteel Facebook page more than 15 times.

"This initiative helped worldsteel build a sizable online community, but I also believe it helped position steel as a more innovative, forward-thinking industry than many people had perceived it to be before," Soo Jung Kim concludes.



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The last few years have seen an accelerated emergence of social media use in the steel industry.

SOO JUNG KIM  
MEDIA RELATIONS MANAGER  
AT THE WORLD STEEL  
ASSOCIATION

## FACTS & NUMBERS

of B2B social media users are →

**54%**

→ age 18-34

B2B buyers say they use industry-specific →

**1 in 5**

→ forums during the buying process

# MEDIA



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People at work want to be able to apply the same digital behavior on the job as they do in their private lives.

RUSSELL MATTINSON  
DIGITAL MEDIA MANAGER  
SSAB



PHOTO: GETTY IMAGES

## • ABOUT THE WORLD STEEL ASSOCIATION

The World Steel Association (worldsteel) acts as the focal point for the steel industry, providing global leadership on all major strategic issues affecting the industry, with a particular focus on economic, environmental and social sustainability. Worldsteel promotes steel and the steel industry to customers, the industry, media and the general public, promoting a zero-accident working environment for steel industry employees and contractors.

of online adults →

**42%**

→ use multiple social networking sites

increased click-through rate for →

**158%**

→ e-mails with social media sharing buttons

## 3. PLAIN SAILING FOR B2B FORE-RUNNER

**GLOBAL SHIPPING** and energy giant, Maersk Group, has proven that social media is not only relevant to companies who want to communicate with the consumer market. Since launching a new social media strategy in 2011, its social channels have gathered more than 1.8 million followers. Anna Granholm-Brun, Digital Content Strategist for Maersk Group, explains how it was done.

Maersk believes that its business customers, like the end consumers they supply, are people who want to connect with relevant content. Last year, the Group's container shipping unit, Maersk Line, launched a campaign encouraging employees and followers to tag pictures of Maersk containers around the world, for which it received the European Digital Communication Award for the "Social Media Campaign of the Year" – having attracted more than 400,000 Facebook fans in only eleven months.

"Communication, regardless of what your company does, needs to be engaging. Our strategy is to create authentic content that people actually find interesting and relevant," Granholm-Brun says.

Each Maersk Group business unit has taken a unique approach to social media, depending on its specific target audience. For example, offshore drilling company, Maersk Drilling, uses LinkedIn to recruit hard-to-reach people in its highly specialist market. Meanwhile, other business units, such as Maersk Oil are using social media with a focus on increasing brand awareness.

**MAERSK GROUP** has more than 1.8 million followers on its various social channels. If you include all the business units' social communities, it reaches just over three million people around the world. However, Granholm-Brun emphasizes that engagement is the key to any successful community.

"The only way to ensure that your effort in building communities is fruitful is to continuously create relevant, authentic and engaging content that your fans and followers find relevant to them and their interests," she says.



Danish shipping giant Maersk has made waves with its super successful social media campaigns.



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The only way to ensure that your effort in building communities is fruitful is to continuously create relevant, authentic and engaging content.

ANNA GRANHOLM-BRUN  
DIGITAL CONTENT STRATEGIST  
MAERSK GROUP

# MEDIA



CONEXPO offered an excellent opportunity to engage a large audience in a social media conversation.

ANDIE DROBNIK  
COMMUNICATIONS MANAGER  
SSAB AMERICAS



## 4. FACEBOOK TAKES CENTER STAGE AT CONEXPO



**WITH 125,000 VISITORS** and 2,400 exhibitors, CONEXPO-CON/AGG is the most important event for the construction and aggregates industries in the Americas. This year's show marked SSABs first use of social media to promote its presence at a major event in the US – with excellent results.

"The social media results showed a phenomenal boost for the SSAB brand and profile as a whole on Facebook," said Russell Mattinson, SSABs Digital Media Manager. "As we are still quite new to social media, our objective was to strengthen SSABs digital identity and extend our reach for future communications."

**DURING THE EVENT**, SSABs Communication team posted information and photos to SSABs Facebook and Twitter channels, as well as the Facebook and Twitter channels dedicated to the Hardox Wearparts business. During the week of CONEXPO, the total reach of the SSAB Facebook page increased by more than 4,000 percent compared with the previous week. Furthermore, the number of new likes was up more than 100 percent, while engagement grew more than 20 times.

What helped drive engagement were the regular posts throughout the week, along with the compelling content and photos. Beyond promoting SSABs presence, the posts also highlighted customers' participation at the show.

"CONEXPO offered an excellent opportunity to engage a large audience in a social media conversation," comments Andie Drobnik, Communications Manager, SSAB Americas. "I'm delighted that these efforts helped us increase awareness and strengthen our brand among both new and existing fans."

## 5. ATTRACTING TALENT IN ALL SECTORS

**JOBSEEKERS** these days are increasingly likely to apply for a job with a company if they have heard of it and are familiar with its products or services. This is why more and more companies are using professional social media sites to advertise their vacancies and, perhaps even more importantly, establish the strength of their brand as an employer.

**LINKEDIN** is the world's largest online professional network, with more than 300 million members worldwide. Since its founding eleven years ago, LinkedIn has "connected the world's professionals to make them more productive and successful".

Xavier Oliel is Head of LinkedIn Talent Solutions for Sweden.

"LinkedIn is transforming the way companies hire," he explains. "Our members include 39 million graduates from around the world; our fastest growing demographic."

"According to our LinkedIn's Talent Trends 2014 Report, which surveyed 18,000 fully-employed workers in 26 countries, 85 percent of professionals are either actively looking for a job or open to the right opportunity. Meanwhile, 56 percent of respondents worldwide confirmed that the single most important factor when considering a new role was if the company "has a reputation as a great place to work".

"The internet has given candidates 'superpowers', " continues Oliel. "These days, you can make a decision about a company before even going to an interview. LinkedIn also gives hiring managers and



### FACTS & NUMBERS

of Americans say Facebook is →

**47%**

→ their prime influencer of purchases

global business executives who →

**90%**

→ say that social media is important today

# MEDIA

PHOTO: COLOURBOX



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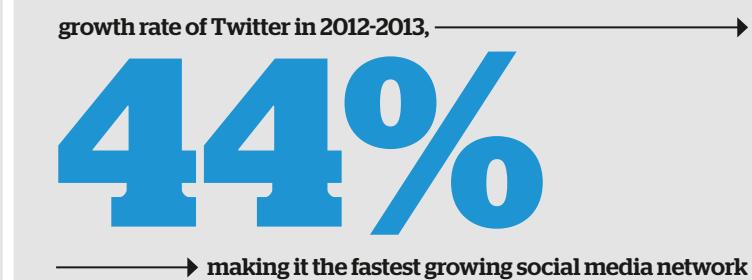
These days, you can make a decision about a company before even going to an interview.

XAVIER OIEL  
HEAD OF LINKEDIN TALENT SOLUTIONS  
FOR SWEDEN

HR departments superpowers, enabling them to understand how their brand is perceived and adapt their communication accordingly.”

**IN THE NORDIC REGION,** LinkedIn has roughly 300 corporate customers and five million members. According to Oiel, it is a myth that social media is only for IT companies.

“While technology companies were the early adopters, we can see other sectors becoming more and more active all over the world. In the Nordic region, oil and energy are our biggest sectors, while the automotive, electronic manufacturing, building materials industries are also extremely active,” he adds.



# ENTERTAINMENT

by ROB HINCKS photo: IBER PRESS





# STEELING TIME

**Steel and nature  
have found a happy  
balance in the mighty  
forests of Chatillon,  
Belgium**

**CEMETERIES ARE NOT** just for people (or pets).

In many places in the world there are cemeteries for steel. The most famous is the huge airplane graveyard in Arizona, USA, where 4000 old aircraft stand in rust-free condition in the dry desert air: often being used for spare parts. Less famous is the abandoned Nara Dreamland amusement park in Japan, which suffered bankruptcy at the hands of nearby Disneyland Tokyo, and whose huge steel-framed rollercoaster stands ghostlike – quiet and rusting – over the park.

But most fascinating of all must surely be the car graveyard in the Chatillon forest in Belgium. Many US soldiers stationed in the area during the Second World War were allowed to ship their cars over from home. When war ended, the US military decided it too costly to ship all the cars back again, so they were driven into a clearing in the forest, parked neatly and left for future collection at the owners' expense. Few ever did find the money or desire to ship home their cars and today they remain as they were left. Originally numbering around 500, only a handful remain today (thanks to sticky fingered collectors), all but rusted away and intertwined into the relentless growth of mother nature.

# A FUTURE FUELLED BY CHANGE



The global heavy transport sector faces a growing number of challenges over the next few decades. From tackling aging transport infrastructure and ever tougher emissions legislation, to handling evolving government intervention and regulation, the heavy transport sector steers a tricky path towards a more **sustainable transport future**.



by DAVID NOBLE photo: GETTY IMAGES

**THE BIGGEST CHALLENGE** facing the sector is an ever increasing global population and its demand for urbanization, clothing, food, goods and services: all of which are supplied, at some stage of the chain, by heavy transport.

According to the World Energy Council (WEC), the impact of the anticipated growth in world population will see over two-thirds of humans living in cities, compared to about half today, and a doubling in travel and road freight due to increased demand for transport, economic development and improved living standards.

"The key issue already confronting the heavy transport industry, both globally and at a regional level, is about how to achieve improved logistics performance, which translates into a need for reduced operating costs, increased efficiency and lower fuel consumption and CO<sub>2</sub> emissions," said Gerard Piedra, Business Developer, SSAB.

**THAT NEED IS** underscored by the WEC prediction that the number of megacities around the world is expected to increase from today's 22 to between 60 and 100 by 2050. Many of these megacities, emerging mostly in Asia, Africa, and Latin America, will face high levels of traffic congestion, pollution, and noise, an effect that will be amplified by the two to

# FOCUS: GLOBAL TRANSPORTATION

three billion cars and trucks that could be in circulation.

Driven by increases in all travel modes, some sources expect the heavy transport sector's energy consumption to increase by between 80 and 130 percent compared to today's level. In addition, the WEC predicts the heavy transport sector alone could consume more than one third of global energy supplies (including more than half of all oil produced). Most of this demand is expected to come from regions undergoing strong economic and population growth: China, India, Russia, Latin America, and the Middle East.

**FOR SSAB'S PIEDRA** there is little doubt that high strength steels such as SSAB's Docol and Domex have a significant, fast emerging role to play in helping transport companies both reduce energy consumption and increase revenues.

"High strength steels will certainly deliver lighter, better performing vehicles," he says.

"And the resulting use of smaller, more efficient engines and new tire technologies will not only reduce fuel consumption, but also substantially lower the CO<sub>2</sub> footprint across the board since less steel consumption in itself leads to less emissions in the atmosphere," he adds.

## GLOBAL TRANSPORTATION

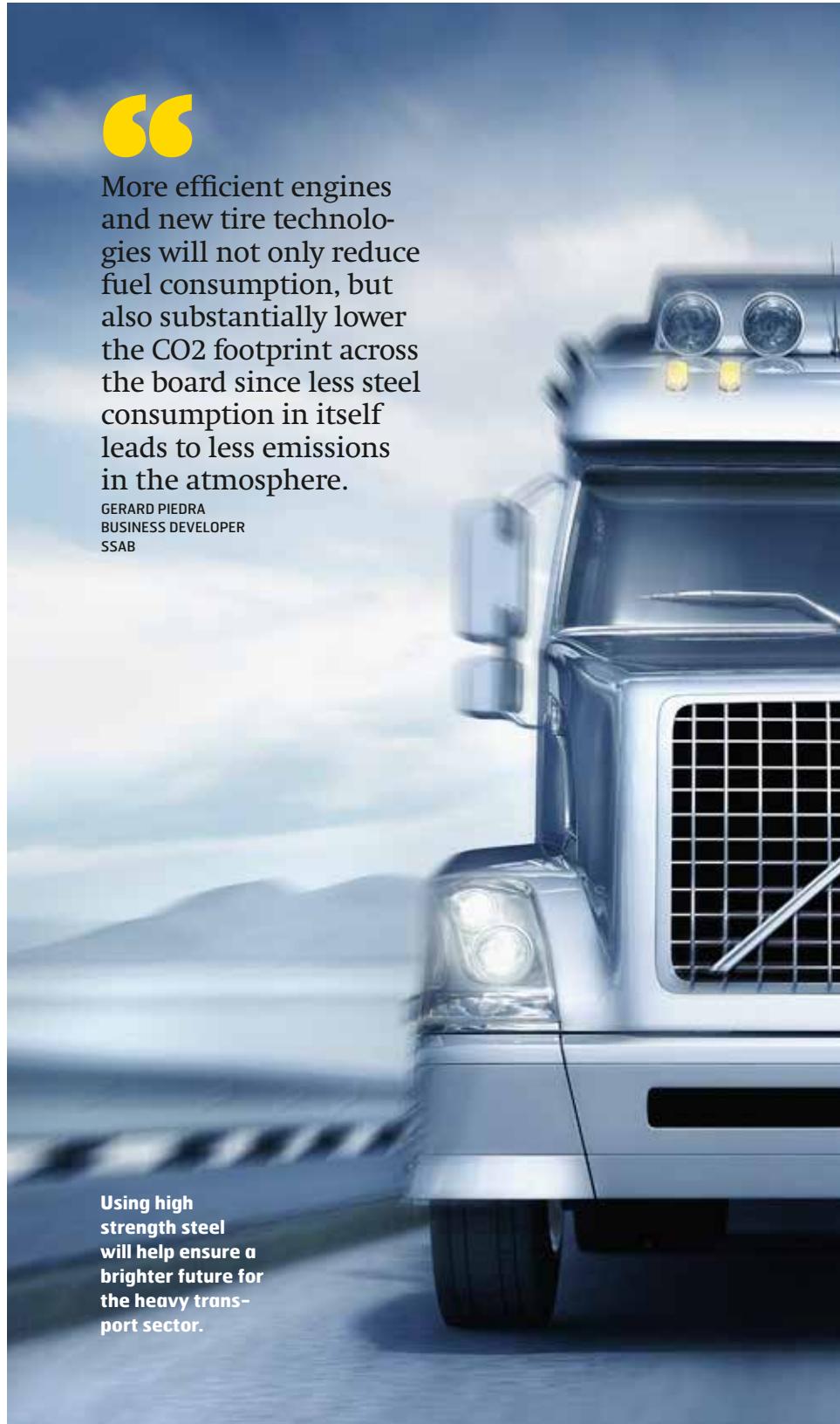
- In 2010, the global heavy transport sector consumed about 2,200 million tons of oil equivalent to about 19 percent of global energy supplies.
- The United Nations projects the world's population to grow by 0.9 percent per year on average, from an estimated 6.9 billion in mid-2010, to 8.5 billion in 2035, and 9.2 billion by 2050.
- Transport fuel-use worldwide is dominated by oil products, with more than 96 percent of fuels comprising conventional gasoline or distillate fuels (including conventional diesel).
- Biofuels and natural gas are the two most promising alternative fuels. For example, the International Energy Agency estimates that by 2030 consumption of biofuels will account for about 5 percent of the total road-transport fuel demand against approximately 2 percent today.

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More efficient engines and new tire technologies will not only reduce fuel consumption, but also substantially lower the CO<sub>2</sub> footprint across the board since less steel consumption in itself leads to less emissions in the atmosphere.

GERARD PIEDRA  
BUSINESS DEVELOPER  
SSAB

Using high strength steel will help ensure a brighter future for the heavy transport sector.



by DAVID NOBLE

NEWS IN BRIEF • BUSINESS • PEOPLE

## LIGHTER, MORE FUEL EFFICIENT AUTOMOBILES



**A bumper made from Docol.**

**AUTOMAKERS** around the world now have access to a new advanced high strength structural steel from SSAB: Docol 1700M.

SSAB's innovative new offering delivers the global auto industry a cold-rolled high strength steel that will enable them to make safer, lighter and more fuel-efficient cars with improved environmental performance.

Olof Carré, Global Product Manager

for SSABs automotive segment, says the new Docol 1700M grade is suitable for a wide spectrum of applications including energy absorbing components such as car bumpers.

"Docol 1700M makes it possible for the first time for auto manufacturers to produce thin, lightweight steel bumpers that deliver a high energy absorption capacity and characteristics difficult to achieve with other materials"

"The high strength of the new SSAB steel grade means that a thinner piece of steel offers the same properties as a thicker version did before, lowering the weight of a component and contributing to good handling and better environmental performance without compromising protection," he adds.

## MORE APP IMPROVEMENTS

**SSAB'S APP** continues to develop and now features a greater stock-search capability as well as being available in a tablet version. "More and more people use tablets, and with their larger format, we are able to make the app even more user friendly," says SSABs Åsa Hedlund who is responsible for SSABs app project with Anna Esberg.

The improved stock-search function sees Domex, Docol and Weldox added to the existing Hardox and Toolox. "In addition to this, you can even search for Hardox that is manufactured in our production facility in Sweden, a function that many of our customers have requested," says Esberg.

In addition, the app retains all its original features listing information on all SSABs brands, contact details to sales representatives and BendCalc, a tool for calculating different bending forces of steel. The app is available for both Apple and Android technology.



**Åsa Hedlund (left) and Anna Esberg are responsible for SSABs app project.**



**Mack Trucks, winner of the Swedish Steel Prize 2013.**

## THE SWEDISH STEEL PRIZE THE NOBEL PRIZE OF STEEL!

**WHEN THE WINNING** candidate of the 2014 Swedish Steel Prize is announced in mid-November it will be the sixteenth consecutive winner. SSAB launched the prestigious award in 1999 with the aim of inspiring and disseminating knowledge about high strength steel.

The Swedish Steel Prize is open to any corporate or other enterprise that uses high strength steel in their production or in an individual product. SSABs aim with the prize is to stimulate innovative uses for these steels and provide additional insights to customers on their full potential.

The winner of the 2013 prize was the American company Mack Trucks, which is part of Volvo Group (US). It won for the company's innovative suspension system, which takes full advantage of the properties of high-strength steel to deliver improved handling and reduces tyre wear by up to 25 per cent. The new suspension also results in safer vehicles and increased driver comfort.

Each year towards the end of November the winners are honoured at a gala ceremony in Stockholm, the Swedish capital, which is the highlight of an event stretching over several days with hundreds of representatives from the steel industry taking part in seminars and study visits.

# HAPPY BIRTHDAY HARDOX: 40 YEARS OF TOUGHNESS

1974



The world's first bendable and weldable wear plate enters the market.



The rapid acceptance of Hardox was greatly assisted by Lennart Bergqvist and other dedicated SSAB people preaching about its virtues and applications.

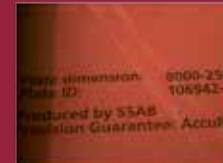


During the first years of production, Hardox hardness and toughness impressed everybody. The flatness, not so much. This was solved when a new levelling line was installed in Oxelösund.

1984



Hardox® was introduced in 1983 as the brand name for SSAB's tough wear plates with a campaign spearheaded by the former Swedish heavyweight boxing champion Ingemar Johansson.



In Germany Hardox was marketed as 'unverwechselbar', meaning there is only one plate deserving the Hardox name. This was further emphasized when we introduced plate-wide marking, making it easier to keep track of even small pieces of Hardox.



You can spot Hardox from a distance, thanks to its red rust-resistant primer. As you get closer, any doubt about the plate's origin vanishes when you see its identity repeated over and over on the surface.

The early 1970s saw Egypt's Aswan Dam completed, the introduction of computer floppy disks and the first pocket calculators, the founding of Microsoft and ... **the birth of Hardox in 1974.**

**TELLING MOST STEEL MAKERS** in the early 1970s that you wanted a bendable wear plate would have been mission impossible. But not for a small group of SSAB engineers, who passionately believed in the potential for a steel quality offering a unique and unmatched combination of hardness and toughness.

In 1974 their combined skills and commitment paid off beyond anyone's expectations. After much trial and error, they successfully gave birth to Hardox, a game-changing steel delivering extreme performance for extreme challenges.

Designed to produce lighter, stronger and longer lasting solutions, Hardox allowed customers to design products delivering extreme performance, higher payloads and less energy consumption. And time has not stood still: since its introduction, Hardox has constantly evolved. Today, 6.5 mm of Hardox's hardest quality has the same service life as 80 mm mild steel in similar wear conditions.

The testimonials from customers about the benefits of Hardox speak for themselves. A sugar plant in Mexico says the knife blades it makes from Hardox 500 to slice

through the fiber-rich cane stalk last three times longer than traditional blades despite the acid-like sugar juice. A manufacturer of earth moving equipment reports that using Hardox in its excavator buckets means it no longer suffers from the bent cutting edges and bucket floors that it did when using a lower tensile strength of the steel. And an Australian steel shredding machine maker relies on Hardox HiTuf to keep their shredders working when those made of softer material fail.

"SSABs technical knowledge and expertise is fantastic. Whether it's machining, welding, cutting, they make sure we understand everything we need to know about pre-heat, post-heat, welding wire types, and so on," said Joe Beentjes, owner of the Australian Pacific Shredder company.

**IN SITUATION AFTER SITUATION**, Hardox has simply stood the test of time. The modern Hardox range is wider than ever, ranging from 0.7 mm to 160 mm. The new Hardox dimensions open up new possibilities where the thickness used to be a limitation. After 40 years of toughness, Hardox is still going strong.

## HARDOX FACTS

- Hardness minimizes wear since it is difficult for abrasive material to cut into the hard surface.
- The hardness is more than skin deep – Hardox is hard throughout.
- The hardness does not conflict with Hardox's structural performance.
- Hardox comes in a wide range of grades and dimensions to suit every unique application.

94

2004

2014



Hardox teamed up with Weldox in a new knowledge center, dedicated to teaching customers about best practices for Hardox.

What is wear, really? Claes Lövgren, one of many Hardox ambassadors, decided to get to the bottom of wear. His paper 'About wear' has helped users everywhere to select the right Hardox for every application.

The new quenching line in Oxelösund was a much needed leap in capacity. At last the production was able to keep up with demand – at least for a while!

Hardox delivers extreme performance from XS to XL. With the introduction of a new rolling mill in Borlänge, Sweden, the thickness range is widened to offer wear plates from 0.7 mm up to 160 mm.

To satisfy the increasing demand for a hard and tough steel in the western hemisphere, Hardox is now also 'Made in the USA', in Mobile, Alabama.

With high pressure, water-cooling and the right steel you are well on your way to Hardox. It just needs another vital ingredient: our many years of knowledge and experience in making wear plates both hard and tough.

by DAVID NOBLE



## NORDIC WORLD SKI CHAMPIONSHIPS

- The FIS Nordic World Ski Championships in Falun will take place from February 18 – March 1, 2015.
- 12 competition days
- 21 World Champions
- 800 athletes from 60 nations
- 2,000 volunteers
- 1,500 media representatives
- 200,000 spectators expected
- 520 million TV viewers

# SKI-CRAZY FALUN GEARS UP FOR NORDIC WORLD CHAMPIONSHIPS

**TENS OF THOUSANDS** of ski buffs from around the world are expected to flock into the northern Swedish town of Falun early next year when it hosts the 2015 FIS Nordic World Ski Championships. And they can count of a great welcome, not least from SSAB, which is sponsoring the championships.

For the uninitiated, there are two kinds of skiing. Alpine skiing is about whooshing down a mountain at high speed in ski boots firmly fixed to your skis, while Nordic or cross-country skiing basically involves any form where the heel is not fixed down.

Both forms of skiing have their supporters. Yet even the most ardent ski-crazy Alpine skiers will admit that there is a wonderful, natural and unrestricted feel about free-heel gliding along a snow-clad path in a forest or alongside a lake using the long, slim and ultra light skis that mark the Nordic cross-country gear.

Nordic skiing got its name because it came

out of Scandinavia and many see it as the original form of skiing because it was used as a means of transportation during the long winter months. Primitive carvings in Norway from over 5000 years ago depict a skier with one pole, while a primitive ski dating back to 4500 - 2500 BC years ago has been uncovered in a Swedish peat bog.

For most of the 56,000 people who live in Falun, a world heritage site, Nordic skiing is as natural as breathing thanks to a winter season with sub-zero temperatures and frequent snow stretching from early November through to the end of March. Little wonder then that Falun has four times been selected to host the Nordic World Ski Championships by the FIS international ski federation: the first time in 1954, then in 1974 and 1993, and now, next year, in 2015.

Today Falun is buzzing as it gears up to deliver a well-organized and memorable 2015 championships, an event that comprises the three disciplines of cross country skiing, ski jumping, and

Nordic combined, a combination sport comprising both cross-country skiing and ski jumping. During the period leading up to the World Championships, Falun will also have hosted a number of World Cup events to provide a taste of what is to come in 2015.

SSAB is also making a significant contribution to the success of the 2015 Falun Nordic World Ski Championships with its corporate sponsorship of the event.

"It is natural for us at SSAB to sponsor the Championships because skiing stands for strength, health and safety – the same qualities SSAB wants to communicate to its employees and even to external audiences," says Anders Sörman, Marketing Project Manager at SSAB. He added that sponsoring such events helps SSAB reinforce its brand messages to current and future employees, existing and new customers and members of the communities in which the Swedish steel group operates.

## SUSTAINABILITY AND PROFIT

Through Hardox Wearparts, SSAB can offer wear solutions worldwide to the aftermarket. The network was established in 2001 and today has around 100 members all over the world. From designed wear parts to full scale wear solutions we help end users to a more sustainable and profitable business.

Visit [www.hardoxwearparts.com](http://www.hardoxwearparts.com) for more information.

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# WE WANTED TO BECOME A ONE- STOP SOLUTION

by ALANNAH VOLZ photo SSAB

**MINERAL-RICH OMAN** with its hot arid climate, mountainous terrain and soil with high silica content can be a harsh environment for steel products, accelerating the wear and tear process.

However, this has proved a golden opportunity for local Hardox Wearparts member Technical Trading Company (TTC) and for Hardox 400, 500 and 600 grades which "meet customer expectations and have a very good brand image" according to Chief Operations Officer Haitham Al Fannah.

TTC's welding repair and maintenance services division started selling Hardox plates in Oman in 2000. Within five years, local customer confidence in the quality of the Hardox brand and product range had soared and the company decided to take it further.

"We wanted to increase our customer base to be able to cater for even the smallest customers. And, we wanted to become a one-stop-solution for all wear problems in Oman," says Al Fannah.

In addition to Hardox plates, TTC now sells Hardox Wearparts and repairs and installs Hardox Wearparts onsite. To ensure it has state-of-the-art equipment to complement

its Hardox offer, TTC has invested in new machines for stud welding, milling, CNC plasma cutting and water jet cutting.

In 2013, TTC joined the Hardox Wearparts network, believing the network's concept and ideology was totally in sync with its own vision.

"It is a good platform to share information globally as any new application developed for Hardox wear parts in another country is communicated to others," says Gopi Reddy, Divisional Manager. Likewise, we get good web visibility and can promote our own services worldwide. Sharing application information with other wear part experts has helped us to develop new customer applications."

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### TECHNICAL TRADING COMPANY

**Owner:** Al-Sulaimi Group  
**Founded:** 1970  
**Employees:** 553, of which 36 are in the Hardox Wearparts team.

**Located:** Muscat, Oman.  
**Operations:** Hardox wear parts manufacturers and Welding refurbishment services for customers in the aluminum, steel pallets, cement and mining & crushing industries.





# 40 YEARS OF WEAR AND STILL LOVING IT

In the 1970s, producing bendable wear plates was a mission impossible in the minds of most steel producers. Some people at the Swedish steel manufacturer SSAB thought differently and decided to attack the issue head on.

After a fair amount of trial and error, they succeeded in producing Hardox with a unique combination of hardness and toughness. Since its introduction in 1974, the Hardox range has constantly grown thinner, thicker, harder and tougher.

Originally intended as a wear plate, Hardox became tough enough to double as a load-carrying part in applications such as containers, tippers and buckets. It allows for the design of structures that are wear resistant and lightweight at the same time, saving both money and the environment.

Don't just take our word for it. Ask any user and you will learn how Hardox delivers extreme performance for their extreme challenges – day after day and year after year.

Get the full story at [hardox.com](http://hardox.com)

