

SSAB wants to sell steel for a cold climate

LULEÅ. Weldox is a pure steel with high strength which in combination with high impact toughness is effective in cold environments. During the Winter Wind conference, which took place in Piteå at the beginning of February, SSAB explained what makes some steel better suited to cold climates than others.

Winter Wind is a conference which gathers together the world's experts within wind power. It started in 2008 with approximately 100 participants, and has grown since then. This year over 500 participants from a total of 20 different countries gathered at the conference, which was held this year in Piteå. Participants included researchers, engineers, manufacturers, developers, investors, wind power owners and suppliers. In addition, representatives from authorities from around the world were also present. On the first day of the conference 18 participants chose to visit SSAB in Luleå to learn more about steel production.

Weldox; perfect for wind turbines

SSAB's business developers within Energy and Offshore, Joakim Nyström and Christian Sahl, were present in Piteå. They gave information about Weldox's excellent qualities for wind turbines due to the high strength and toughness of the steel.

"For every extra meter the tower is built higher, wind speed increases by 0.2 meters per second, which in turn means energy that can be extracted also increases. Today the highest towers are approximately 140 meters high and they often have a hybrid design i.e. they are made with concrete at the base and steel higher up", said Nyström.

A new technique is needed to be able to build even higher towers. There are limitations today because it is not possible to freight larger sized steel sections and therefore they need to start with a concrete base of the tower that takes long time at site.

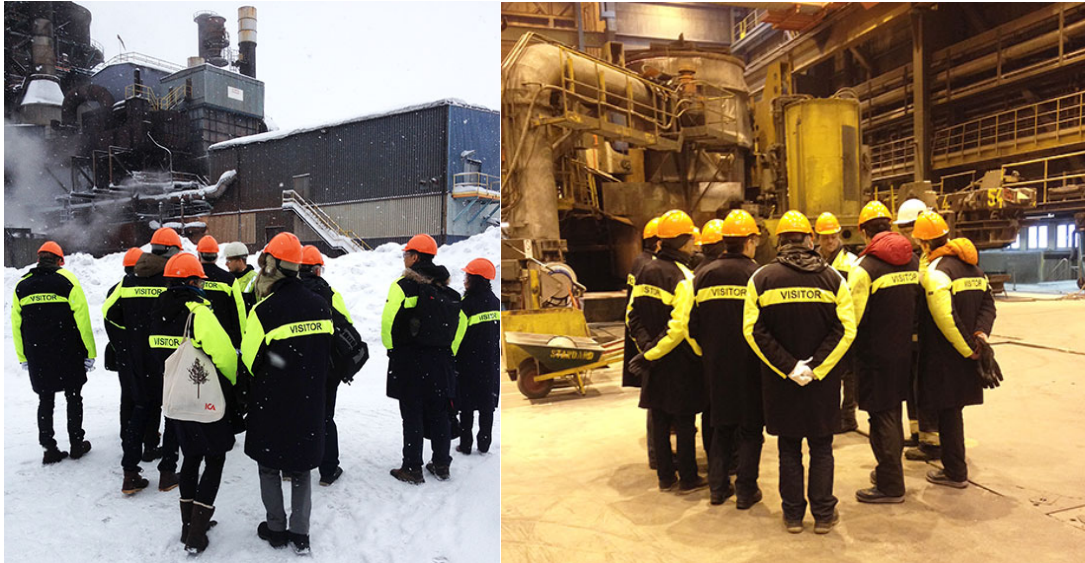
"Another critical factor is the tower weight. SSAB is therefore interested in conducting research with tower manufacturers on whether Weldox 700 could be a better alternative for these parts," explained Nyström.

The construction could look different using high strength steel, and Weldox could very well be used in three areas of the tower.

"Our proposal is to replace the welded ring sections with standing facet bent sheet hammered with friction coupling. This would give a weld-free solution which could take advantage of the steel's strength better than the present solution, which is limited by fatigue in the welds. Another interesting application in the mast is anchor bolts in the concrete foundations into which the towers are screwed. Our brand new opportunity to offer Weldox and Hardox in bar format could be an excellent solution to the cracking problems that currently exist in this application. A third application is for the fastening of the generator and the gear box at the top of the tower to be made in Weldox," explained Sahl.

Cue Dee, which builds masts for wind gauges, was one of the participating companies at the conference. Their construction is a high mast that should be as light and flexible as possible, but at

the same time be able to withstand the wind to avoid too much swing. Here Nyström believes that Weldox in bar format and maybe Hardox tubes could represent the perfect solution.



Visitors were given a tour by Jonas Lövgren and Per Lagerwall at the Blast furnace, and were then taken by bus to CAS-OB and Continuous casting where Anna Carlsson-Dahlberg and Christer Nilsson greeted them and explained more about the process of turning iron into steel.



SSAB's business developers Joakim Nyström and Christian Sahl were present in Piteå for two days, during which they explained more about SSAB's high strength steel and its advantages in a cold climate.



The Winter Wind conference continued for three days in Piteå where steel for a cold climate was one of the main themes.



Joakim Nyström and Christian Sahl do their best to explain about Weldom's unique characteristics for constructions in a cold climate.