STRENX®
PERFORMANCE STEEL

INTRODUCING NEW STRENX® 1100 PLUS WITH INCREDIBLE WELD PERFORMANCE

Strenx® 1100 Plus* is a new high-strength structural steel with weld properties that are unique. Strength, elongation and impact toughness of the welded area fulfil minimum guarantees of the base material.

This gives important engineering advantages. Your design can be based on the same minimum static strength in the entire application, depending on applicable design rules.

Strenx® 1100 Plus is perfect for making lifting equipment that is stronger, reach higher and can take heavier loads. That's why we call it performance steel.

* Strenx® 1100 Plus has not yet received an official EN standard designation

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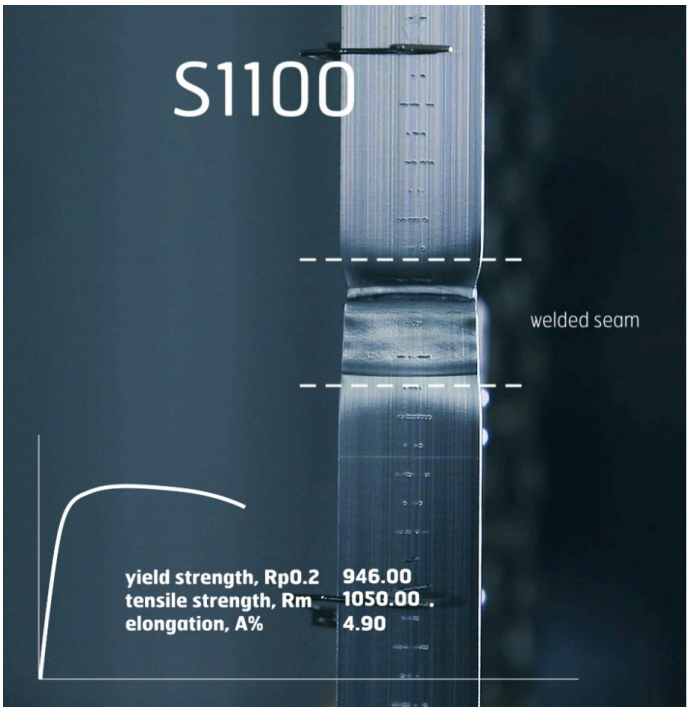

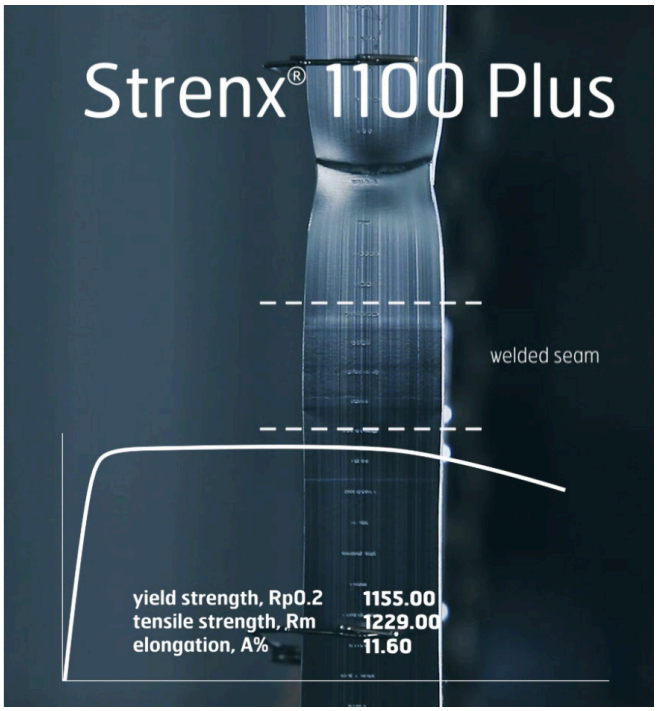

THE BENEFITS OF GOING PLUS

Strenx® 1100 Plus is a new hot rolled, quenched and tempered strip steel with weld properties in line with the base material.

Strenx® 1100 Plus has good forming properties. It is very flat and comes with a 3 mm/m flatness guarantee.

Strenx® 1100 Plus is a consistent material with predictable behaviour in the workshop, not the least thanks to very low residual stresses.

The steel is designed especially for lifting applications and other advanced structures that benefit from matching strength in the welds.

Its chemistry is optimized to achieve matching strength properties over the weld when slightly under matching consumables are used.

The alloying design has also been targeted at achieving premium base material properties and formability.

A fine-tuned alloying concept promotes the excellent combination of strength and toughness in all zones of welded seam. CET/CEV max 0.46/0.89.

Based on CTS tests according to EN ISO 17642-2:2005 welding can be performed at room temperature. The diffusible hydrogen level of consumable should correspond to ≤ 5 ml/100 g of weld metal.

Typical weld performance[1]

$\Delta t_{8/5}$ [s]	$R_{p0.2}$ [MPa]	R_m [MPa]	A_5 [%]	Fracture location	CV 27 J at -40°C
5...20	> 1100	1170-1210	11-12	BM (5s) BM (20s)	WM OK FL+1 OK FL+3 OK FL+5 OK

1 Weld tests performed with milled specimen (without reinforcement)

Mechanical properties

Thickness [mm]	R_{p02} min [MPa]	R_m [MPa]	A_5 min [%]	Bending min $R_{i/t}$ both directions
4.0-6.0	1100	1130-1350	10	3.5
6.1-8.0	1100	1130-1350	10	4.0

Chemical composition (ladle analysis)

C max [%]	Si max [%]	Mn max [%]	P max [%]	S max [%]	Al min [%]
0.20	0.50	1.80	0.020	0.005	0.015

Impact properties

Test direction	Min. impact energy
Longitudinal	27 J at -40°C
Transverse	27 J at -20°C

Dimensions

Thickness [mm]	Width [mm]	Length [mm]
4.0-8.0	Up to 1700	Up to 13600

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