Precision Steel

precidur® HBS 1000 / HBS 1000 HE

Product information for hot-rolled precision strip made in Hohenlimburg

thyssenkrupp

Version 9/21

Bainitic steel

The HBS grades from BU Precision Steel are steels with a quasi-single-phase bainitic microstructure.

They are highly suitable for critical forming operations due to their favorable yield-to-tensile ratio. These steels are optimized in particular for the forming of punched or cut edges.

precidur®

- is used in virtually all industry sectors.
- offers close thickness tolerances similar to cold-rolled strip, optimum surface finishes and consistent material properties over the entire strip length and width.
- is characterized by its symmetrical strip profiles and mill edges.
- is the sum of all the experience we have gained in more than 100 years of manufacturing and processing steel.

Contents

Technical features

Bainitic steel

Material number:	in Anlehnung an 1.0958
Material name:	HR700Y950T / HDT950C (precidur® HBS 1000 HE based on HR700Y950T / HDT950C)
Proprietary brand:	precidur® HBS 1000 / precidur® HBS 1000 HE *(Hole Expansion)*
Delivery specification:	precidur® HBS 1000 VDA 239-100 und VW 50065:2017 / DIN EN 10346 precidur® HBS 1000 HE based on VDA 239-100 and VW 50065:2017 / DIN EN 10346
Application:	Ultrahigh-strength steels with first class edge formability, extended fatigue strength, very good weldability and high bending capacity
Special future:	Despite very high strengths, bainitic rolled microalloyed steels are suitable for enhanced forming. This is evident among other things in very hole expansion values.

Chemical composition

Ladle analysis mass percentages	C [%]	Si [%]	Mn [%]	P [%]	S [%]	Cr [%]	Al [%]	Ti [%]	Nb [%]	Mo [%]	Cu [%]	B [%]
min.	-	-	-	-	-	-	0.015	-	-	-	-	-
max.	0.18	1.00	2.20	0.025	0.010	1.00	0.100	0.25	0.25	1.00	0.20	0.0050

Mechanical properties

Longitudinal to rolling direction	Yield strength $R_{p0,2}$ [MPa]	Tensile strength R_m [MPa]	Elongation A_5 [%]*	Elongation A_{80} [%]*	Hole expansion Longitudinal and transverse specimens	
precidur® HBS 1000	700 - 900	950 - 1130	min . 12	min . 9	-	
precidur® HBS 1000 HE	680 - 900	950 - 1130	min . 12	min . 9	min. 20 %	Ø 25 %

* The elongation is inadequate for showing the good forming behavior of bainitic steels.

Possible delivery options

Options	Mill edge (NK) Cut edge (GK)	pickled		unpickled	slit	trimmed	Cut to length
precidur® HBS 1000	NK or GK	✓	or	✓	✓	✓	✓
precidur® HBS 1000 HE	NK or GK	✓	or	✓	✓	✓	✓

General thickness tolerances

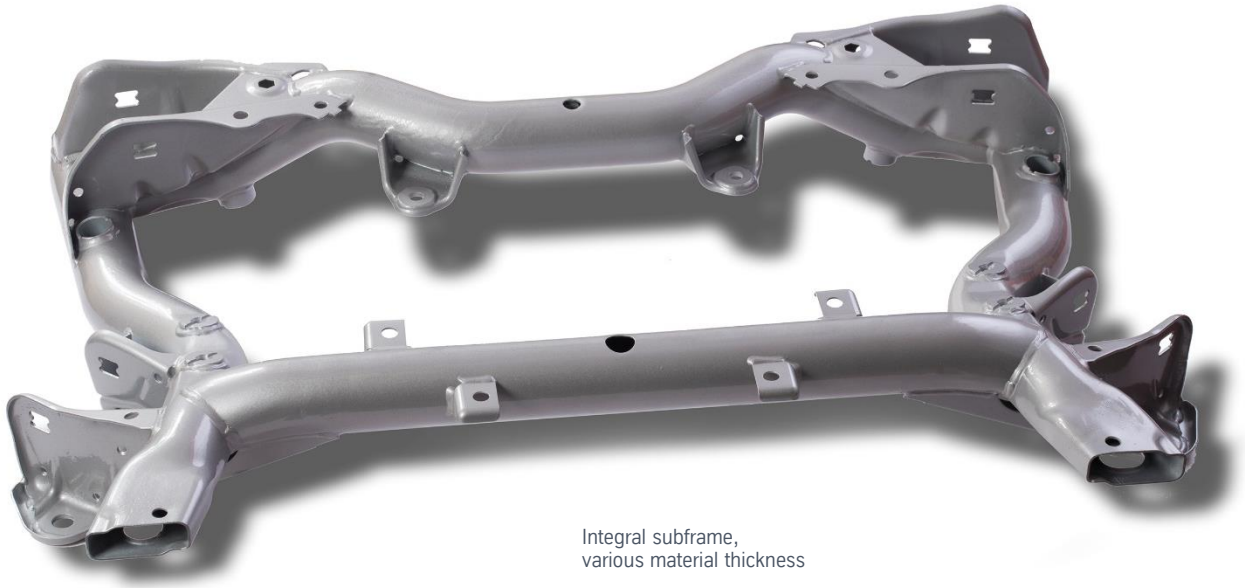
Strip thickness [mm]	1.5 – 2.54	2.55 – 4.03	4.04 – 6.03	6.04 – 8.03	8.04 – 9.03	9.04 – 11.03	11.04 – 14.03	14.04 – 16.00
Standard tolerances [mm]	± 0.04	± 0.04	± 0.05	± 0.055	± 0.06	± 0.07	± 0.08	± 0.10
Special tolerances [mm]	± 0.03	± 0.035	± 0.04	± 0.045	± 0.05	± 0.055	± 0.06	± 0.07

General delivery options

Coil inner diameter:	standard 508 mm / optional 610 mm
Coil outer diameter:	max. 1,890 mm
Coil weight:	max. 20.5 kg/mm strip width
Strip width*:	max. 720 mm
Strip thickness*:	1.5 – 16 mm

* May be subjected to restrictions.

Application examples for bainitic steel



Integral subframe,
various material thickness

Special mill grades feature unique thyssenkrupp properties. Other terms and conditions of supply not specified here will be based on the applicable specifications. The specifications used will be those valid on the date of publication of this product information.

Please contact our sales/technical customer support team for detailed information.

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