

Steel  
Precision Steel

# precidur® Boron-alloyed case-hardening and heat- treatable steels

Steels for a wide variety of applications in automotive and machinery manufacture as a substitute for alloyed heat-treatable steels.



thyssenkrupp



precidur®

is our thyssenkrupp Hohenlimburg trademark for premium-quality precision strip. And it epitomizes the way our service and support are systematically focused on the individual and highly exacting requirements of our customers.

# precidur<sup>®</sup> — our brand for precision strip

precidur<sup>®</sup> stands for extremely close thickness and profile tolerances in widths up to 720mm and thicknesses of 1.5 to 16mm; optimum surface properties, whether black or pickled; homogeneous material properties, full hard and annealed; a wide variety of grades, from unalloyed to high ductility and high strength to high-alloy; rounded mill edges without burrs or microcracks that ensure no embrittlement due to work hardening. All in all, precidur<sup>®</sup> offers the ideal prerequisites for optimum direct forming and excellent cold rolling process properties. precidur<sup>®</sup> stands for our qualitative edge, built

up over more than 150 years, extended through ongoing modernization measures and proof of our customer focus and our all-round reliability. Full process automation, unparalleled speed of production, short-term availability, maximum flexibility in putting together even small, tailored batch sizes, constant transparency and data availability, rapid response to short-notice change requests— in fact we're ideally prepared for every eventuality. Or to put it another way: We are your premium partner for premium precision steel. Today, tomorrow and beyond. Together with precidur<sup>®</sup> we look forward to your challenge.

## The advantages of precidur<sup>®</sup> at a glance:



Extremely close thickness and  
profile tolerances

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Wide variety  
of grades

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Homogeneous material properties,  
optimum surface quality

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Tailored batch sizes

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Ideal for processing and forming

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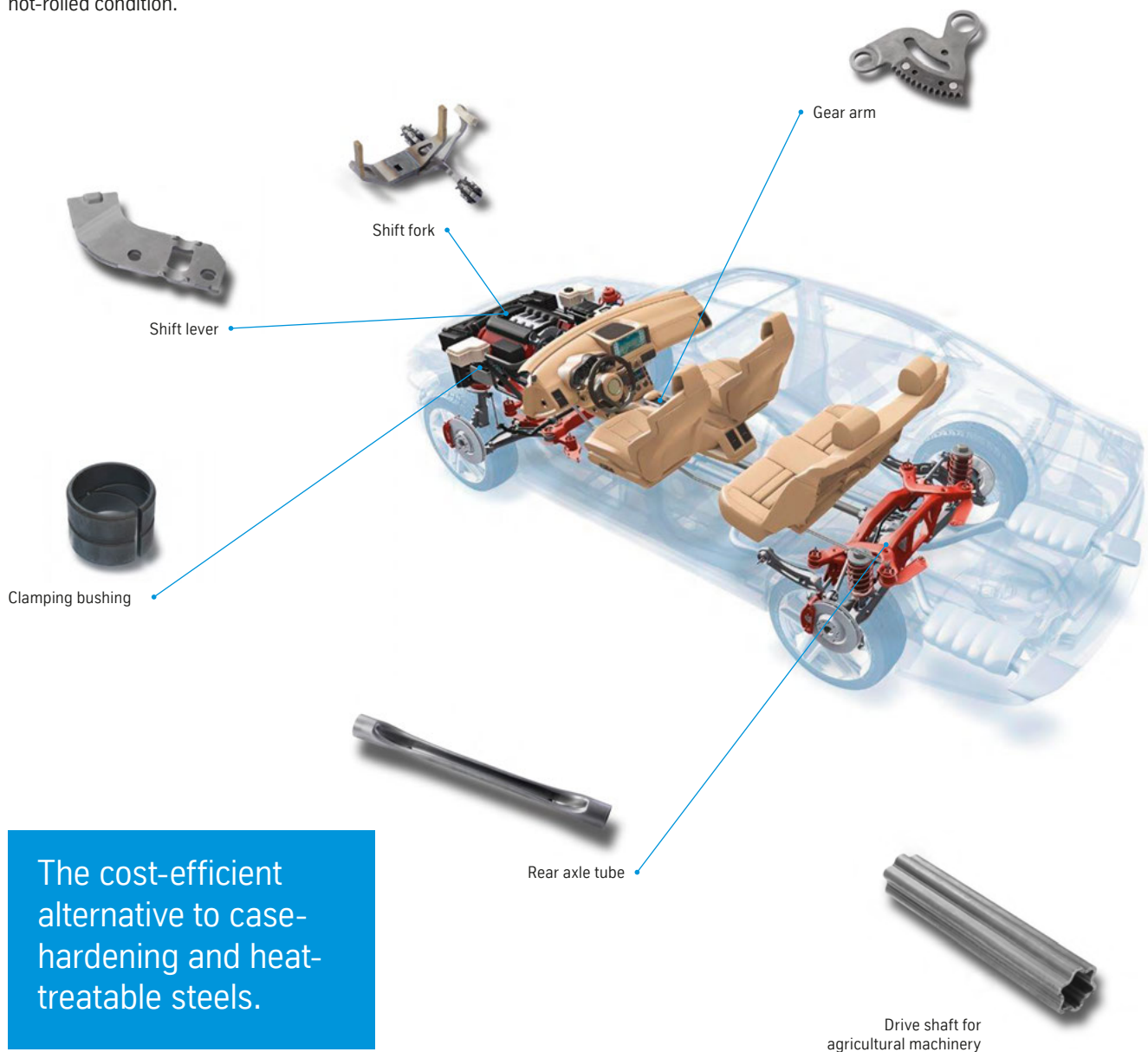
Quick, flexible and competent  
support and service

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# Boron-alloyed case-hardening and heat-treatable steels

precidur® boron-alloyed case-hardening and heat-treatable steels are supplied in accordance with DIN EN ISO 683-2, DIN EN ISO 683-3 and the Stahl-Eisen list. They are a cost-efficient alternative for the substitution of heat-treatable steels and offer significantly better cold formability due to their low carbon content.

Depending on grade and application, boron-alloyed steels can be fine blanked without prior annealing. Boron steels offer good processing and forming properties even in the hot-rolled condition.



The cost-efficient alternative to case-hardening and heat-treatable steels.



Technical features

Mechanical properties					
	Tensile strength	R <sub>m</sub> [MPa]	Elongation	A <sub>5</sub> min. [%]	Material number
	full hard*	annealed	full hard	annealed	
precidur® HLB 8	Ø 490	–	min. 22	–	1.7135
precidur® HLB 17	Ø 560	–	min. 20	–	1.5506
precidur® HLB 20	Ø 600	max. 550	min. 19	min. 25	1.5530
precidur® HLB 22	Ø 610	max. 580	min. 19	min. 23	1.5528
precidur® HLB 27	Ø 650	max. 580	min. 16	min. 22	1.7182
precidur® HLB 30	Ø 630	max. 570	min. 22	min. 24	1.5531
precidur® HLB 34	Ø 650	max. 580	min. 20	min. 25	1.5534
precidur® HLB 37	Ø 680	max. 580	min. 20	min. 24	1.5524
precidur® HLB 38	Ø 700	max. 590	min. 18	min. 24	1.5532/1.5537
precidur® HLB 42	Ø 750	max. 610	min. 17	min. 24	1.5527

\* Modified strength target values can be agreed on request.

Possible delivery options for MC grades								
Options	Mill edge Cut edge	pickled	black	slit	trimmed	cut to length	annealed	non- annealed
precidur® HLB	Mill edge or cut edge							
		✓	✓	✓	✓	✓	✓	✓

General thickness tolerances for precidur®								
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 for precidur®	
Coil inside diameter – Ø:	Standard 508mm / optional 610mm
Coil outside diameter – Ø:	max. 1,890mm
Coil weight:	max. 20.5 kg/mm strip width
Strip width:	max. 720mm
Strip thickness:	1.5 – 16mm