

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[®] – our brand for precision strip

precidur[®] 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[®] offers the ideal prerequisites for optimum direct forming and excellent cold rolling process properties. precidur[®] 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[®] we look forward to your challenge.

The advantages of precidur[®] at a glance:



Extremely close thickness and profile tolerances



Wide variety of grades



Homogeneous material properties, optimum surface quality



Tailored batch sizes



Ideal for processing and forming

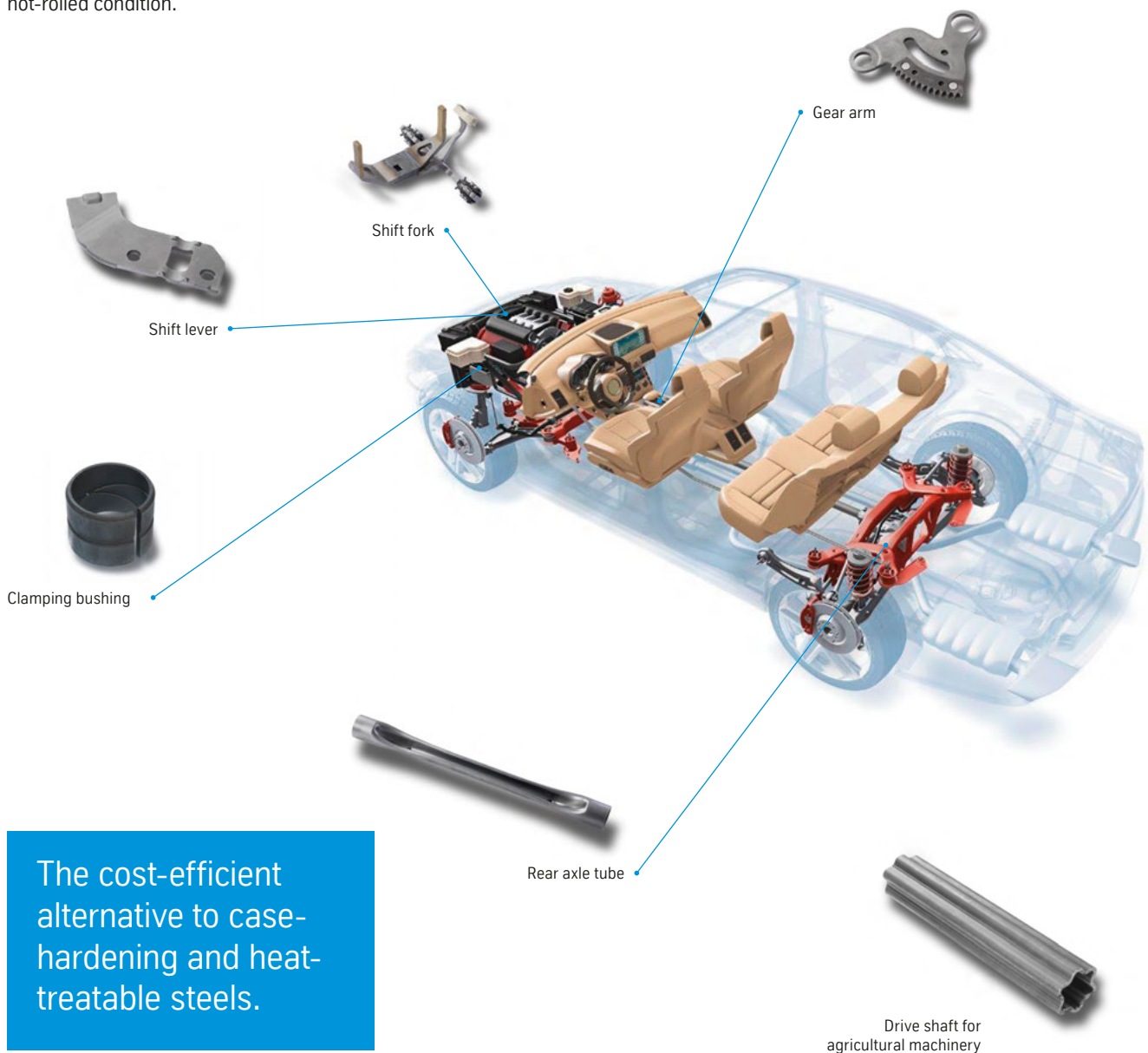


Quick, flexible and competent support and service

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.



Technical features

| Mechanical properties | | | | | |
|-----------------------|------------------------------|----------|------------|----------------|-----------------|
| | Tensile strength R_m [MPa] | | Elongation | A_5 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 |

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