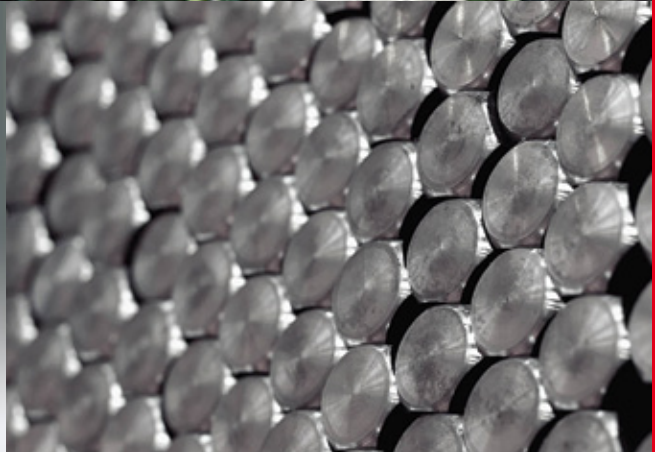
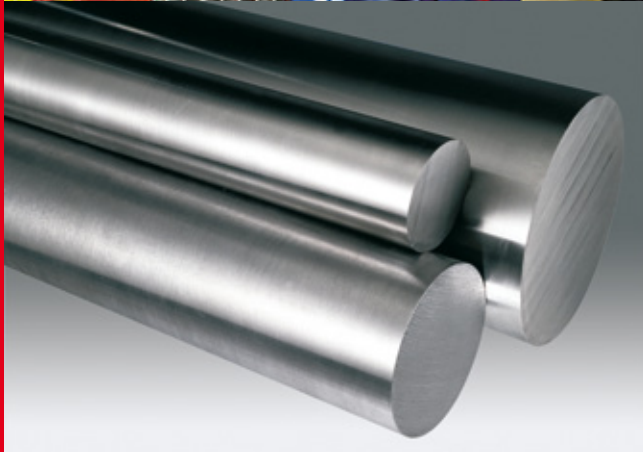


Special Steels

Sidenor Bright Steels



Sidenor R&D

The activities of SIDENOR R&D are centred on increasing competitiveness through improvements and innovations in Quality, Costs, Productivity and Development of Products with our customers.

Sidenor focuses on the needs of the customer:

- Creating collaborative environments
- Becoming the main technological metallurgical and steelmaking reference
- Giving solutions to current and future demands
- Offering R&D facilities as a tool for cooperation
- Solving your short term technical problems



Sidenor is
your ally in
INNOVATION

Products and Developments

ENHANCED MACHINABILITY: *WITH SIMILAR MECHANICAL PROPERTIES*

MECAMAX®AV

Improved machinability steels for high cutting speeds

MECAMAX®PLUS

Improved machinability steels for all the cutting speed range

MECAMAX®MB

"Green" technology for complex machinability operations

SPRING STEELS: *HIGH STRENGTH AND WEIGHT REDUCTION*

HELICOIDAL SUSPENSION SPRINGS

Inclusion engineering and longer lifetime in lighter suspension springs

CASE HARDENING STEELS: *FINAL COMPONENTS' QUALITY*

ISOCEM®

High hardenability with reduced cost for conventional and gas quenching processes

NANOCEM

Case hardening steels that guarantee a fine grained structure at high temperature

FASTENER STEELS: *MECHANICAL PROPERTIES GUARANTEED*

EXTREME FASTENERS

10.9 and 12.9 quenched and tempered (Q&T) steel grades with high mechanical properties for wind fasteners at extreme conditions

DUCTIL

Low carbon ductil martensitic structure on 8.8 and 10.9 grades for cold heading

DROP FORGING STEELS: *CHARACTERISTICS ASSURANCE*

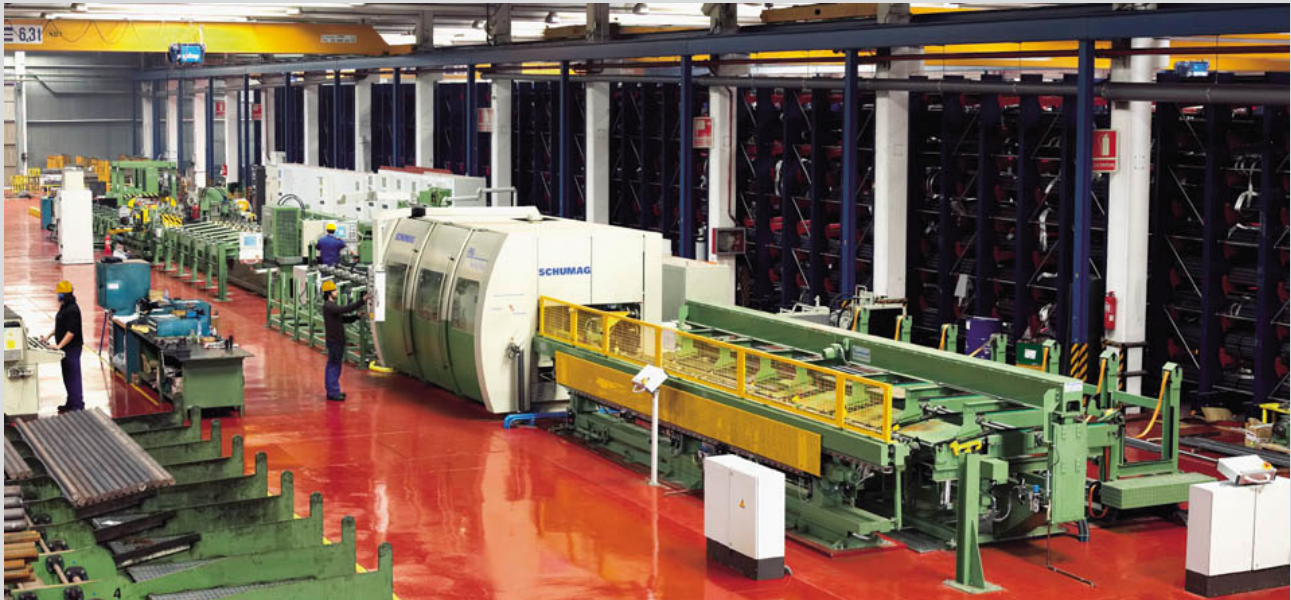
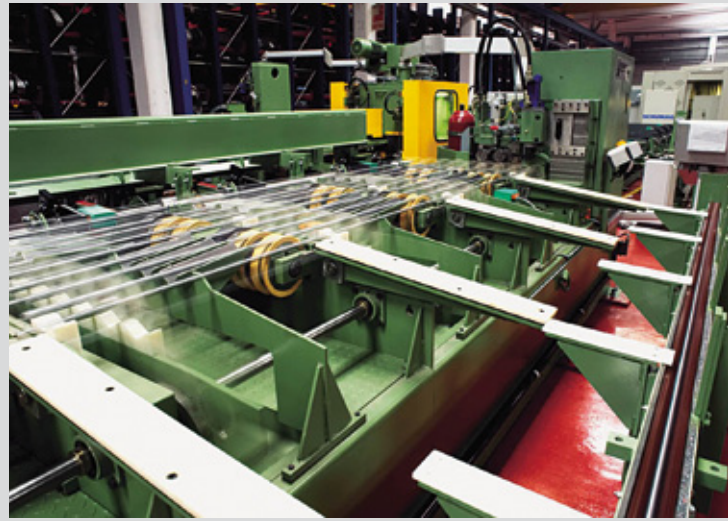
MICROALLOYED

Steels with high mechanical properties after forging

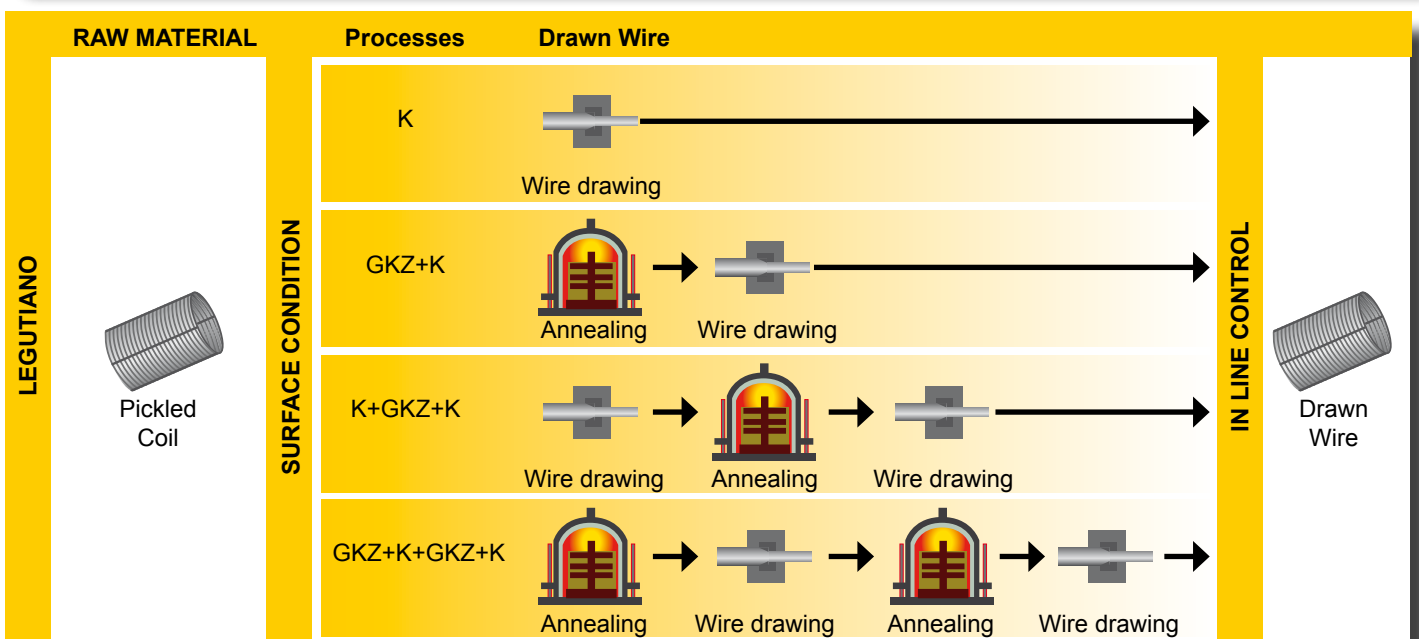
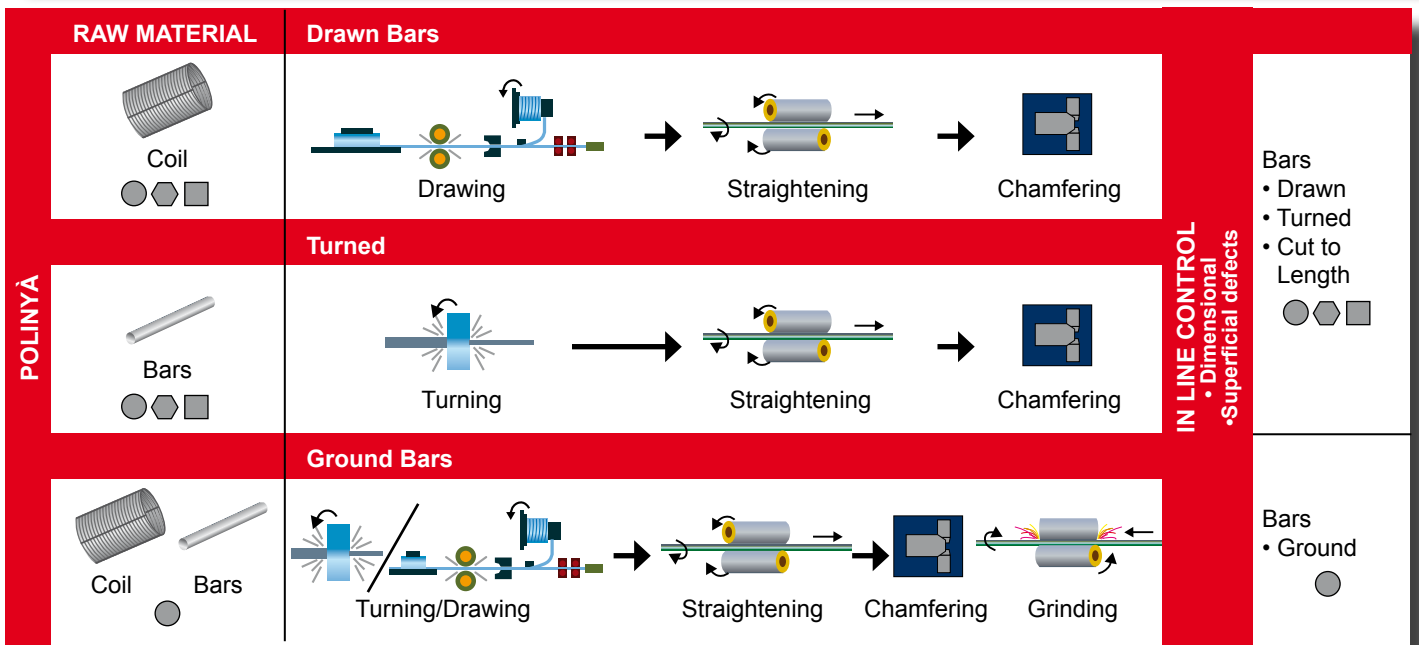
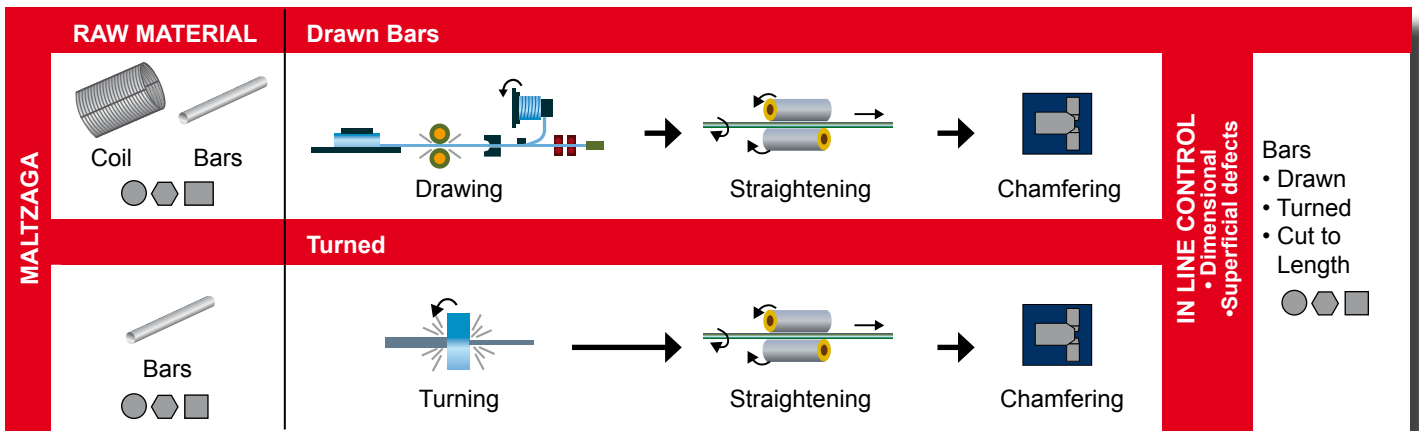
Sidenor Bright Steels

Sidenor Bright Steels is the result of the global growth strategy of Sidenor in the world of steel. The acquisition in 2008 of three of the main home Bright drawers has allowed the creation of the largest Spanish group in this sector.

- **Bright Bars (*Maltzaga and Polinyà*):** specialise in the production of cold finished bars: Drawing, Turning and Grinding, Cut to length for the automotive, mechanical engineering industries, capital goods, energy..... sectors; it maximizes the synergies obtained by being integrated into a big steel company group to offer a wide range of steel grades: alloys, free cutting, heat treated,.....
- **Drawn Wire (*Legutiano*):** specialises in wire for bearings, cold heading and special grades according to our customers' specifications (needle bearings).



Production Process



Production Range

Bright Bars

Processes: Drawing / Turning / Grinding / Cut to length

Other Shapes	Operation	MALTZAGA	POLINYÀ
●	Drawing Ø	5 - 35 mm	5 - 50 mm
	Drawing from bar to bar Ø	30 - 75 mm	
	Turning Ø	10 - 125 mm	12 - 80 mm
	Grinding Ø	-	7 - 65 mm
⬡	Drawing Ø	6 - 32 mm	5 - 41 mm
	Drawing from bar to bar Ø	22 - 65 mm	-
■	Drawing Ø	11 - 25 mm	8 - 40 mm
	Drawing from bar to bar Ø	20 - 40 mm	
●	Sheared		
	Cut to length Ø	10 - 25 mm	8 - 30 mm
	Length	150 - 1.000 mm	180 - 550 mm
●	Sawed		
	Cut to length Ø	-	10 - 100 mm
	Length	-	100 - 3.000 mm
	Chamfered / Centered	-	D10/35 mm - L100/800 mm



Tolerances:

• Drawn	h9 / h10
• Turned	h9 / h10
• Ground	h6 / h8
• Other Shapes	h11

Other supply conditions:

- Length 2.800mm to 7.000mm
- Straightness up to 0,5mm/m
- Chamfered both sides (0,5mm to 8mm)
- Bundles 1.000Kg to 1.500Kg
- Technical conditions EN 10277-1

Steel grades:

- Alloys: 42CrMo4, 39NcrMo3Pb...
- Free Cutting: 11SMnPb30, 44SMn28, 46S20...
- Steel for shock absorbers
- Carbon: C35, C35Pb, C45, C45Pb...

In line system controls

- Control of superficial defects by Eddy current in the entire dimensional range
- Control of internal defects: by ultrasound from 10mm diameter
- Dimensional control: with laser equipment
- Control Antimix: Spectrotest or X rays



Drawn Wire

Processes: Simple:	K	(Euronorm +U+C)
Reduced:	GKZ+K	(Euronorm +AC+U+C)
Complete:	K+GKZ+K	(Euronorm +U+C+AC+LC)
Alloys:	GKZ+K+GKZ+K	(Euronorm +AC+U+C+AC+LC)

	Ø wire (mm)	Ø (mm)		coil weight (Kg)
		internal	external	
Coil	5 - 10 mm	500 mm	950 mm	750/1.500
	10 - 38 mm	800 mm	1.250 mm	750/1.500
Frame	1,5 - 3 mm	520 mm	950 mm	300/500
	3 - 9 mm	520 mm	950 mm	500/750
	9 - 11,70 mm	520 mm	950 mm	500/750
		750 mm	1.100 mm	750/1.500
	11,70 - 15 mm	750 mm	1.100 mm	750/1.500



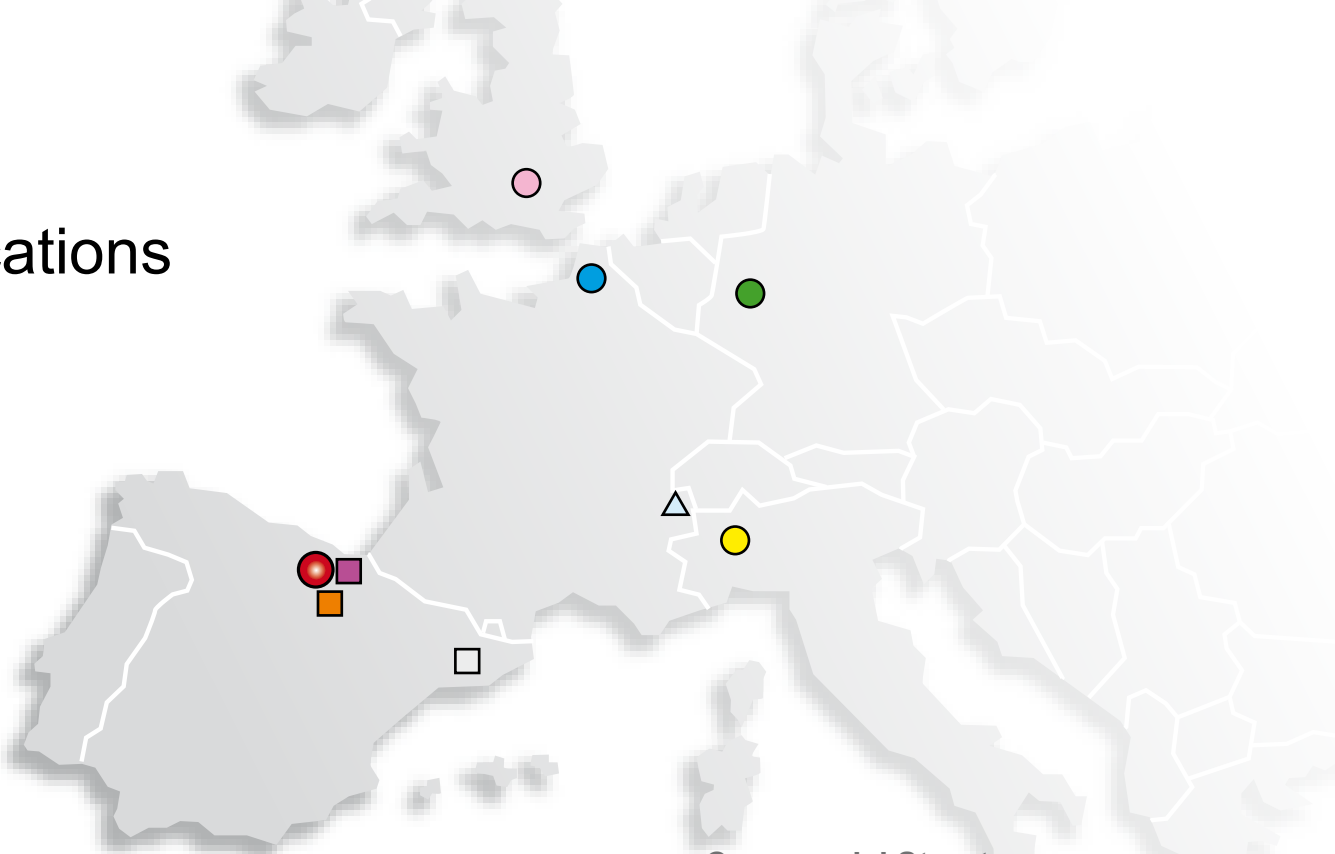
Surface condition:

- Pickled
- Phosphate
- Reactive Soaped

Steel grades:

- Alloys 41Cr4, 41CrS4, 42CrMoS4...
- Boron: 20MnB4, 23B2, 36MnB4, 35B2...
- Carbon: C4C, C10C, C15C, C20C...
- Bearings: 100Cr6

Locations



Commercial Structure Special Steels Business



Drawn Wire

- Legutiano factory
Polígono Industrial Gojain,
Avda. San Blas nº 6
01170 Legutiano (Alava)
Tel: +34 (945) 466032
Fax: +34 (945) 465490



Bright Bars

- Polinyà factory
Polígono Industrial Can Humet
P. Joan Miró nº3
08213 Polinyà
Tel: +34 (937) 135858
Fax: +34 (937) 133628



- Maltzaga factory
Barrio Maltzaga S/n
Apto. 183,
20600 Eibar
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Tel: +34 (943) 820040
Fax: +34 (943) 82024



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sidenor-france@sidenor.com

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Cockfosters, Herts, EN4 9EB
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sidenor-uk@sidenor.com

Certification

The vocation and behaviour of Sidenor Bright Steels in terms of Quality is embodied in its Quality System endorsed by the appropriate certificates and approvals from international organizations and also those specific to our customers.



Automotive industry
Certificate
UNE-ISO/TS 16949:2009

Quality Certificate
IQNet ISO 9001:2008

Environmental Certificate
ISO 14001:2004

Health and Safety
Certificate
OHSAS 18001:2007



Environment

Environmental Management System

A big area of concern for Sidenor is its performance in the environment area. This concern is reflected in the way we work with the different stakeholders, integrating the environmental variable in all the process monitoring, from design to final product delivery.

Following these principles, all the Company's plants adopt an Environmental Management System (EMS), prepared in accordance with ISO14.001, develop R&D projects and monitor the environmental footprint of our products.

Sidenor: awarded with the European Prize for Environment - Nationwide and Basque Country sections.

