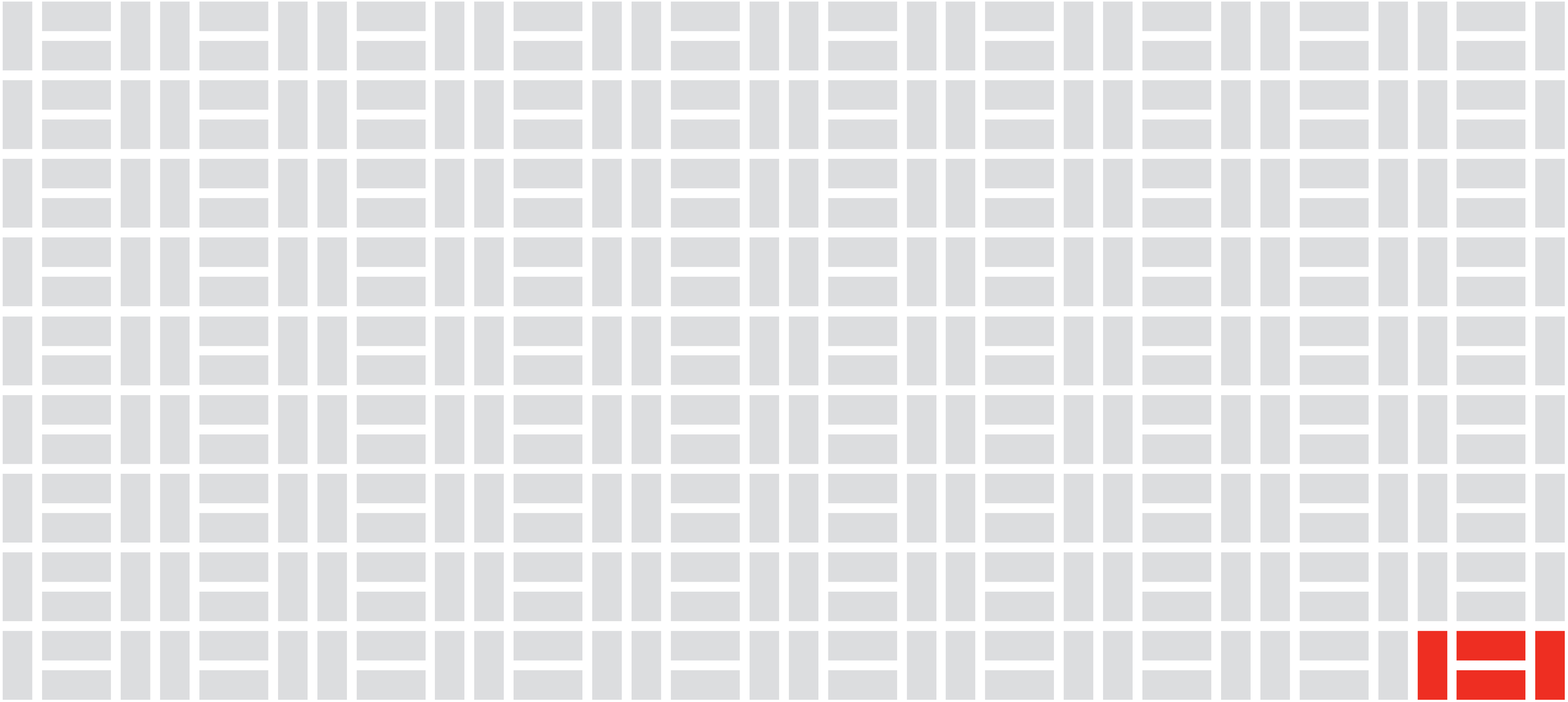
Hasçelik

PRODUCT CATALOG

www.**hascelik**.com



Our Steel Mill

Our Steel Mill: Pioneering the Future

Hasçelik is one of Turkey's leading producers of hot-rolled special steel, cold-worked bright steel, and grinding balls. With an extensive service network and the most modern rolling mills in Turkey, the company maintains a strong position in the industry. Now, with our new steelmaking facility investment that integrates sustainability and innovation into our production processes, we are ready to shape the future.

Hasçelik Meltshop Facility

CCM Casting Machine

CCM Casting Machine: Precision in Every Cast
Hasçelik's state-of-the-art four-strand billet/bloom caster is equipped with advanced technologies to deliver unparalleled quality. Key features include:

Convex molds for superior precision,
Condrive mold oscillators for optimized casting flow,
Conflow stopper control for flawless submerged casting, and
Electromagnetic Stirrers (EMS) in both the mold and final zones for consistency and homogeneity.

An integrated and modernized Level 2 automation system ensures precise process controls, guaranteeing high-quality output. This cutting-edge machine is designed to produce steel billets across a wide range of grades, including low, medium, high, and micro-alloyed steels, catering to industries such as automotive, aerospace, and mechanical engineering.

Key Specifications:

- 4 Strands
- 10 m Radius
- Submerged Casting Technology
- EMS in Moulds and on Strands
- Level 2 Process Controls

EAF Scrap Preheating Technique

EAF Scrap Preheating Technique
Hasçelik introduces Türkiye's first continuous charging Electric Arc Furnace (EAF), powered by the Consteel® Scrap Preheating Technique, setting a new benchmark in energy-efficient steel production. This innovative system ensures maximum energy efficiency by seamlessly transforming scrap into high-quality steel, making it the best alternative to conventional EAF technology.

Cornerstones of Sustainable Steel Production
The integration of Consteel® and EAF technologies with advanced waste heat recovery and continuous casting methods forms the foundation of Hasçelik's new steel mill. This facility is more than just a technical achievement—it is a bold step towards a sustainable future.

Our commitment is clear: to lead the industry with innovative change by harmonizing energy efficiency and environmental responsibility.

Advanced Features for Superior Quality
Hasçelik's steel mill is equipped with:

Consteel® EAF featuring the Consteerrer® electromagnetic stirring system for uniform liquid steel quality, A Ladle Furnace for precise refining and A Double Vacuum Degassing System (VDS) for high-purity steel. All systems are integrated into a modern Level-2 automation platform, ensuring optimized processes and guaranteed product quality.

Product Range

Steel Group	Grade
Carbon Steel	C10 (SAE 1010) (BS 040A10),C18, C22 (SAE 1020) (BS080A15), C30, C30E, Ck30 (SAE 1030) (BS 080M30), C35 (SAE 1035) (BS080A32) (BS080A35), C40 (SAE 1040) (BS 080M40), C45R, C45 (SAE 1045) (BS 080M46) (BS 060A47), C50E, CK50, C50R, CF53 (SAE 1050), C60 (SAE 1060), C70 (SAE 1070), C80D (SAE 1080), 1090
Case Hardening Steel	16MnCr5(S) (SAE 5115), 20MnCr5(S) (SAE 5120), 20NiCrMo2 (SAE 8620), 17CrNiMo6, 20MoCr4
Heat Treatable Steel	42CrMo4 (SAE 4140), 41Cr4 (SAE 5140), 41Cr54, 34CrNiMo6 (SAE 4340),
Spring Steel	60SiMn5, 55Cr3 (SAE 5155), 51CrV4 (SAE 6150), 60SiCr7 (SAE 9262), 55Si7
Free Cutting Steels	11SMn30, 1213, 11SMn37, 1215, 10520, 11SMnPb30, 12L13, 11SMnPb37, 12L14
Micro Alloyed Steel	30MnSiVS6, 38MnSiVS5, 20MnV6, SAE 1141, SAE 10V45
Construction Steels	S235JR (St37-2), S275JR (St44-2), S355JR, S355J0 (St52-3), S355J2G3 (St52-3N), E295 (St50-2), E335 (St60-2), E360 (St70-2)

Discover Our Green Future

Sustainable Steel, Sustainable Future.

Stay up-to-date with our progress and become a part of Türkiye's green and efficient steel production journey. For more information, visuals, and updates, please visit our website.

- **Energy Efficiency:** With our advanced production techniques, we achieve a 10% reduction in annual energy consumption, taking a step towards a greener world.

- **Quality Standards:** Through smart analytics and machine learning, we continuously improve our production processes to aim for the highest quality standards.

- **Eco-Friendly:** We reduce our CO2 emissions to as low as integrated plants.

- **Low Noise:** Our Consteel production method reduces noise levels by 50 dB compared to traditional methods, improving our working environment.

- **Employment Opportunities:** We contribute to the local economy by providing employment for 350 people.

- **Global Reach:** By exporting to 70 countries, we strengthen Türkiye's international position in the steel industry.

Hot Rolled Special Steel

Special Steel Rolling Mill

IATF 16949 and ISO 9001 certified, Hasçelik Special Steel Rolling Mill is the most modern rolling mill facility in Turkey with a production capacity of 300,000 tons per year. Hasçelik produces round and hexagonal hot-rolled special steel bars from billets. Additionally, special carbon steels and alloy steels can also be delivered 100% surface and inner crack tested based on customer requirements. Steels degassed under vacuum and special steels tested by Ultrasonic & EDDY Current methods are also offered to clients.

Hot Rolled Special Steel Round, Flat Steel Bar and Manufacturing

Hasçelik special steel rolling mill, which is the most modern rolling facility in Turkey has a capacity of 300.000 tons per year. Having a fully continuous line, Hasçelik produce round and hexagonal hot rolled special steel bars from billets.

Hasçelik special carbon and alloy steels, can also be delivered 100% surface and inner crack tested based on customer requirements.

Hasçelik hot rolled special steel manufacturing company has following products groups

US & EDDY Current Tested Special Steels:

The complete continuous hot rolling mill represents 100% crack controlled products produced in our production center.

Vacuum Degassed Steels:

They are products that are rolled from vacuum degassed billet rolled in round and hexagonal sections in order to meet the qualified steel needs of Industries.

Steel Group	Grade	Cross Section	Size	Norm
Structural	S235JR (St37-2), S275JR (St44-2), S355JR, S355J0 (St52-3), S355J2G3 (St52-3N), E295 (St50-2), E335 (St60-2), E360 (St70-2)	Round (Ø)	Ø 19-130 mm	EN10060
Carbon	C10 (SAE 1010)(BS 040A10), C18, C22 (SAE 1020)(BS080A15), C30, C30E, Ck30 (SAE 1030)(BS 080M30), C35 (SAE 1035)(BS080A32)(BS080A35), C40 (SAE 1040)(BS 080M40), C45R, C45 (SAE 1045)(BS 080M46)(BS 060A47), C50E, Ck50, C50R, Cf53 (SAE 1050), C60 (SAE 1060), C70(SAE 1070), C80D (SAE 1080), 1090			
Case Hardening	16MnCr5(S) (SAE 5115), 20MnCr5(S) (SAE 5120), 20NiCrMo2 (SAE 8620), 17CrNiMo6, 20MoCr4			
Heat Treatable	42CrMo4 (SAE 4140), 41Cr4 (SAE 5140), 41CrS4, 34CrNiMo6 (SAE 4340), 34CrMo4 (4135), 50CrMo4 (SAE 4150), 34Cr4 (SAE 5132), C22 (SAE 1020), C35 (SAE 1035), C45 (SAE 1060), 30Mn5, 25CrMo4,			
Spring	60SiMn5, 55Cr3 (SAE 5155), 51CrV4 (SAE 6150), 60SiCr7 (SAE 9262), 55Si7			
Micro Alloyed	30MnSiVS6, 38MnSiVS5, 20MnV6, SAE 1141, SAE 10V45			
* Ø 19 - 90mm (EN 10308 and EN 10221) surface crack control / ultrasonic tested.				

Crack Control Lines

Hasçelik products are gone through inner defect control and surface defect control based on client demands prior to delivery. Dr. Foerster branded testing device which uses Magnetic Flux Leakage method is being used for surface defect control. As for inner defect control, GE (Kraut-Kramer) branded Rowa Ultrasonic Testing device is used.

Two devices operate fully integrated with each other.

What is Primebar?

Straightened Hot-Rolled Steel Bar: These bars are produced by subjecting the materials to a straightening process after the hot rolling when their temperature drops below 50°C. The aim is to achieve a higher precision of straightness than the hot rolling tolerances allow.

Finished Hot-Rolled Steel Bar: Precision straightened steel bars undergo surface and internal flaw and crack inspections. The goal is to ensure that the material meets international tolerance standards and passes the required customer-specific surface and internal crack inspections.

Features;

By performing multiple straightening, we guarantee a straightness of 0.8mm/m, which reduces the scrap rates of our customers and increases their efficiency.

We measure the chemical compositions of our materials with an online XRF device and provide 100% guarantee with Mix Up tests.

After surface crack inspection, surface defects are automatically detected and, if necessary, the defective parts are re-ground automatically to make our product flawless. The ground material is then re-inspected with a surface crack inspection device to ensure 100% safe material. We are the only company in the world to automate all these processes.

Our Hasprime products, produced without manual handling, are hexagonally packaged without manual intervention, ready for dispatch. This also helps our customers utilize their storage areas more efficiently.

Primebar Line Features;

	Our New Line (Primebar)
Crack Inspection Diameter Range	Ø19 - Ø130
Straightening Diameter Range	Ø19 - Ø130
Straightness Precision	Ø19 - Ø105 ≤Ø,8 mm/m Ø105 - Ø110 ≤1,1 mm/m Ø110 - Ø120 ≤1,5 mm/m Ø120 - Ø130 ≤1,7 mm/m
Capacity	8.000 tonne/month

Production Stages;

- Chamfering & Face Turning.
- Chemical composition verification on the line with an online XRF device.
- Short length alignment.
- Hands-free feeding.
- Automatic grinding of surface defects on two bars simultaneously (First and only in the world).
- Hexagonal packaging.

VALUE JOURNEY OF STEEL

Quality

Our Laboratory Equipment

Our examination, testing and measuring devices that are being used in our laboratories:

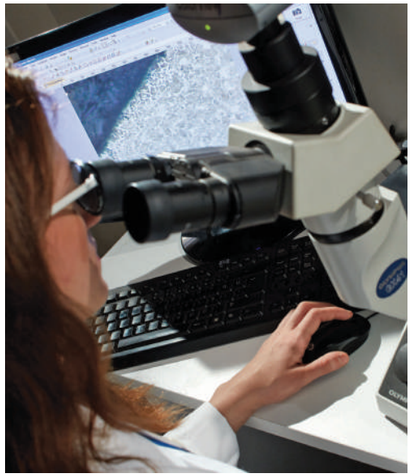
- Spectral Analysis Device-Oxford Instruments
- Tensile Device- Zwick / Roell
- Brinell Hardness Measurement Device BMS 3000-OBPC
- Rockwell Hardness Measurement Device Mitutoyo HR-300
- Optical Microscope Olympus
- Jominy Test Setup
- Specimen Cut, Mounting, Grinding and Polishing Devices
- Portable Spectral Analysis Device
- Portable Hardness Device
- Portable Ultrasonic Examination Device- GE
- Zwick Roell Notch Impact Test Device

There are also two devices for measuring water pollution and control regulations suitability of waste water.

- Thermoreactor Device
- Spectrophotometer Device

Calibrations of measurement devices are carried out by national and or international accredited institutes.

Verifications of measurement devices are carried out with international accreditation certificated verification samples.



Test Name	Standard	Device Capacity
Chemical Analysis	TS EN ISO 14284	1-23 Element (Fe, C, Sİ, Mn, P, S, Cr, Mo, Ni, Al, Co, Cu, Nb, Ti, V, W, Pb, Sn, B, Ca, Zr, As, Bi)
Tensile Test	TS EN ISO 6892-1	0,5-250 kN (ZWICK) (0-300 mm)
Brinell Hardness Test	TS EN ISO 6506-1	0,0625-3Ton (62,5-300 kgf)
Rockwell Hardness Test	TS EN ISO 6508-1	For HRC 29,42-1471 N (3-150 Kgf)
Jominy Test	TS 1381 EN ISO 642	-
Grain Size Measurement	ASTM E112	-
Micro Cleanliness Analysis	DIN 50602 ASTM E45	-
Macro Etching Test	ISO 17639	-
Decarburization Measurement	TS 3142 EN ISO 3887	-
Microstructure Analyses	-	-

Certifications

Hasçelik Quality policy defines main rules for work application methods.

Quality Management Systems, which are founded within this scope, guarantees quality goals to be achieved in every field of manufacturing. Hasçelik employees are working for continually improving product and service quality in line with determined goals.

With this purpose in Hasçelik,

IATF 16949 Quality Management System Certification has been available.

ISO 9001 Quality Management System Certification has been available.

ISO 45001 Occupational Health and Safety Management System Certification is available.

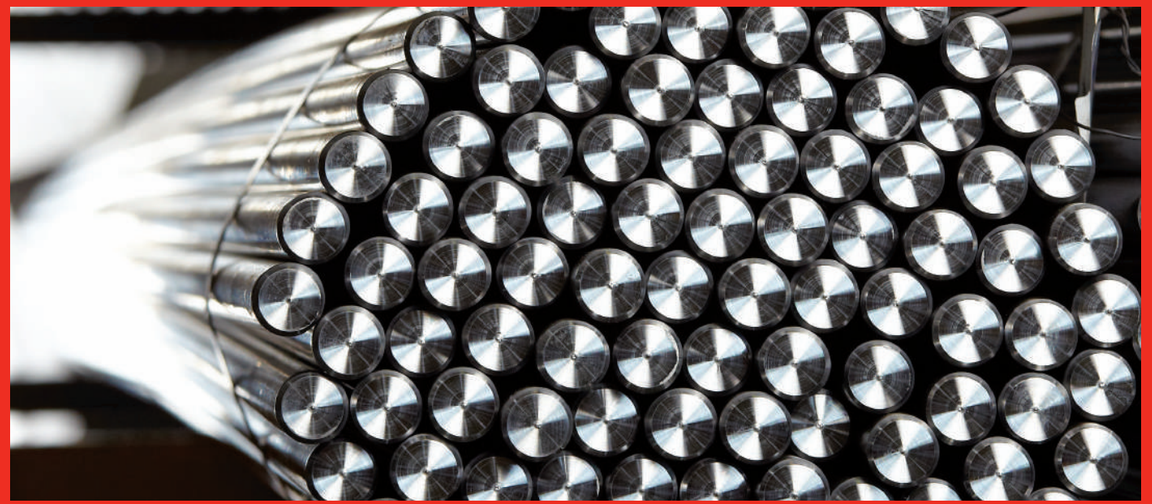
ISO 14001 Environmental Management System Certification has been available.

ISO 27001 Information Safety Management System Certification has been available.

Bright Steel

Bright Special Steel Production Center

IATF 16949 certified Hasçelik Cold Processing Center is one of the most modern bright steel production facilities in Europe with an annual production capacity of 200,000 tons. Various cold processes such as peeling, grinding, sandblasting, cold drawing, coil drawing, chamfering and crack control get carried out with integrated crack control lines. Cold drawn coils, cold drawn bars, ground and peeled bars can also be delivered 100% crack tested on client demands.



Bright Steel Manufacturing Facility

Industries we are serving:

- Automotive (OEM/Aftermarket)
- Aviation
- Defense
- Machinery
- Household Appliances
- Fastener
- Mining
- Agriculture

Our services:

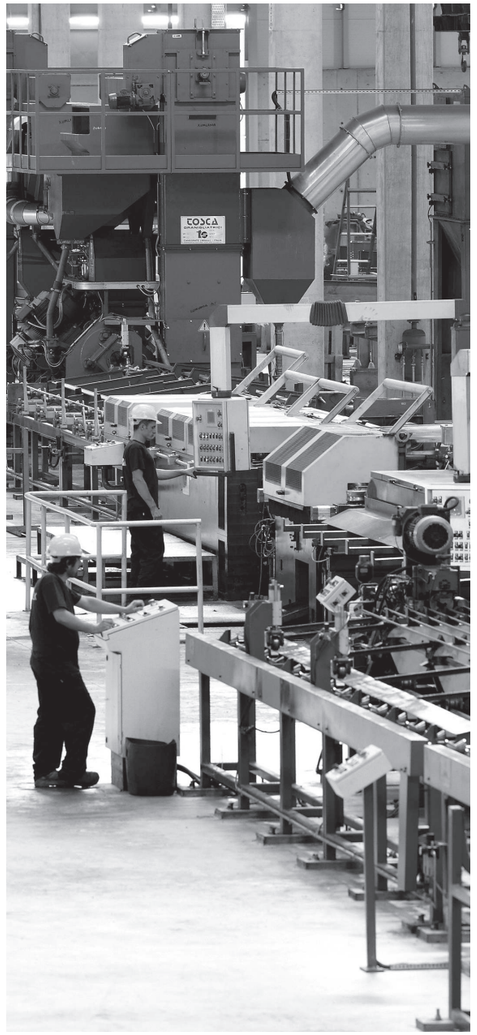
- Cut-to-Length and wooden box packing
- Plastic strip for surface sensitive products based on demands
- Special and protective packing and encasement for sensitive products based on client demands
- Door to door delivery for export customers (international customs clearance)
- Storing abroad “Just in Time “ delivery from warehouse

HASÇELİK A.Ş. as so far, we have carried out exports to 70 countries on 5 continents with the brand of HASÇELİK.

One of Europe’s Most High - Tech Facility

Coil Drawing Lines	**Round**	5 - 42 mm
	Hexagonal	5 - 40 mm
Bar Drawing Lines	**Round**	18 - 100 mm
	Hexagonal	17 - 60 mm
Peeling Lines	**Diameter Range**	Ø 20 - 60 mm h9; Ø 65 - 160 mm h10
Grinding Lines	**Diameter Range**	Ø 20 - 150 mm h9, h8, h7
Cutting Lines	**Round**	Ø 25 - 90 mm
	Hexagonal	15 - 80 mm
		Lmin = 1,3 Lmax : 7,3 m
		± 2 mm tolerance cutting capacity
Crack Control Lines	**Round**	5 - 60 mm
	Hexagonal	8 - 65 mm

*** Capacity 200.00 tons per year**



Coil Drawing Lines

Bright Steel Manufacturing Facility

100% Integrated Crack Control On Production Line

Round	5 - 42 mm
Hexagonal	7 - 40 mm

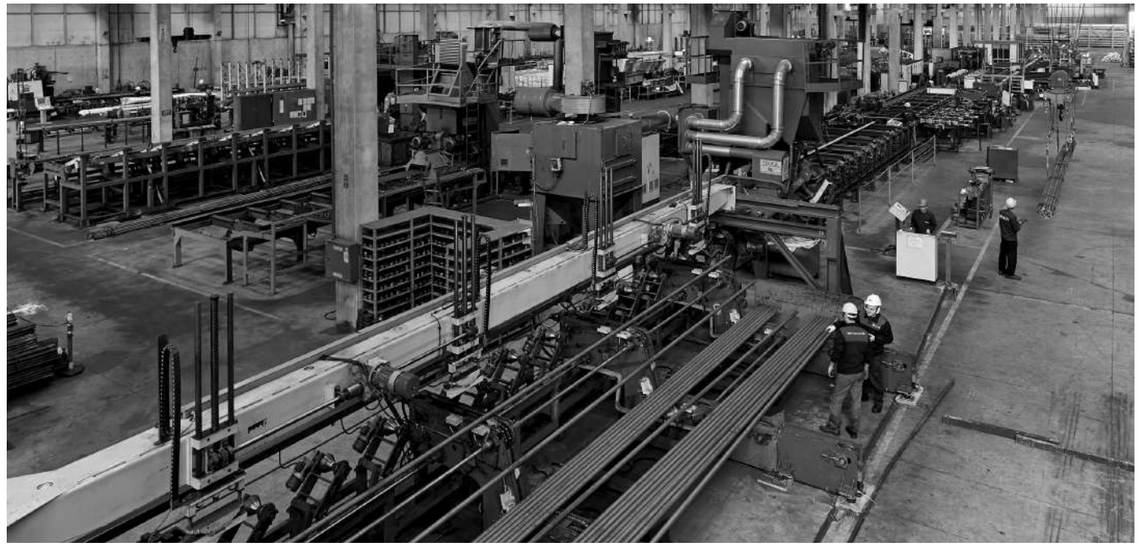
Online Crack Control Unit
C1, C2, C3, C4

Bar Drawing Lines

Special Design Integrated Bar Drawing

Round	18 - 100 mm
Hexagonal	17 - 80 mm

Special Flat X Square Manufacturing Is Available.
* Please contact our sales team

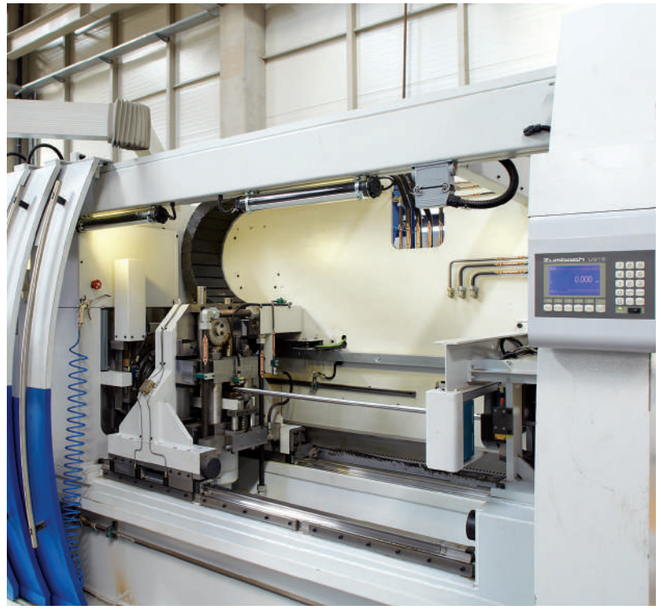


Peeling Lines

Bright Steel Manufacturing Facility

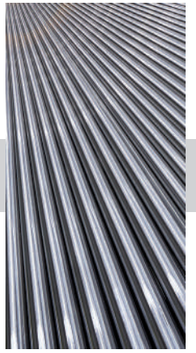
Surface Crack - Free Products

Diameter Range	Ø 20 - 160 mm h9



Grinding Lines

Diameter Range	Ø 20 - 150 mm h9, h8, h7



Cutting Line

Extra

Round Hexagonal	Ø 15 - 90 mm 15 - 80 mm Lmin = 1,3 Lmax = 7,3 ± 2mm tolerance cutting capacity
Round Hexagonal	Ø10 - 65 mm 10 - 65 mm Lmin = 0,2 Lmax = 1,5 ± 0,5 mm tolerance cutting capacity

Crack Control Line

Bright Steel Manufacturing Facility

Automotive Sector's Reason For Preference OEM Approved Surface Crack - Free Product

Round	5 - 60 mm
Hexagonal	8 - 65 mm
Standard	EN 10277 - 2018

Class 1
Class 2
Class 3
Class 4

Circograph & Defectomat & Demagnetization

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Quality

Our Laboratory Equipment

Our examination, testing and measuring devices that are being used in our laboratories:

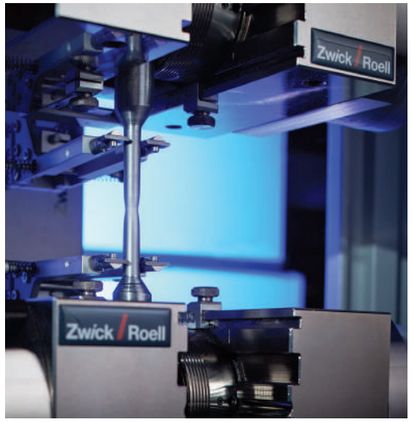
- Spectral Analysis Device-Oxford Instruments
- Tensile Device- Zwick / Roell
- Brinell Hardness Measurement Device BMS 3000-OBPC
- Rockwell Hardness Measurement Device Mitutoyo HR-300
- Optical Microscope Olympus
- Jominy Test Setup
- Specimen Cut, Mounting, Grinding and Polishing Devices
- Portable Spectral Analysis Device
- Portable Hardness Device
- Portable Ultrasonic Examination Device- GE
- Zwick Roell Notch Impact Test Device

There are also two devices for measuring water pollution and control regulations suitability of waste water.

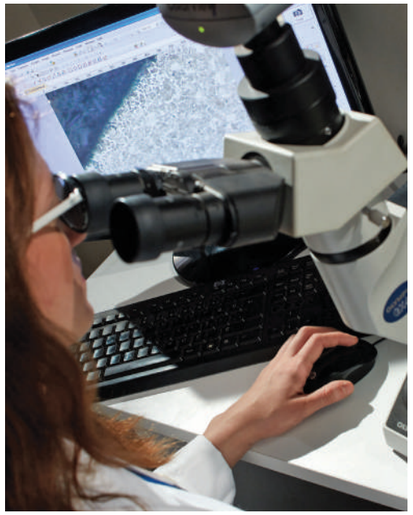
- Thermoreactor Device
- Spectrophotometer Device

Calibrations of measurement devices are carried out by national and or international accredited institutes.

Verifications of measurement devices are carried out with international accreditation certificated verification samples.



Test Name	Standard
Chemical Analysis	TS EN ISO 14284
Tensile Test	TS EN ISO 6892-1
Brinell Hardness Test	TS EN ISO 6506-1
Rockwell Hardness Test	TS EN ISO 6508-1
Jominy Test	TS 1381 EN ISO 642
Grain Size Measurement	ASTM E112
Micro Cleanliness Analysis	DIN 50602 ASTM E45
Macro Etching Test	ISO 17639
Decarburization Measurement	TS 3142 EN ISO 3887
Microstructure Analyses	-



Production Range

Steel Group	Grade
Carbon	C10 (SAE 1010)(BS 040A10),C18, C22 (SAE 1020)(BS080A15), C30, C30E, Ck30 (SAE 1030)(BS 080M30), C35 (SAE 1035)(BS080A32)(BS080A35), C40 (SAE 1040)(BS 080M40), C45R, C45 (SAE 1045)(BS 080M46)(BS 060A47), C50E, Ck50, C50R, Cf53 (SAE 1050), C60 (SAE 1060), C70(SAE 1070), C80D (SAE 1080), 1090
Case Hardening	16MnCr5(S) (SAE 5115), 20MnCr5(S) (SAE 5120), 20NiCrMo2 (SAE 8620), 17CrNiMo6, 20MoCr4
Heat Treatable	42CrMo4 (SAE 4140), 41Cr4 (SAE 5140), 41CrS4, 34CrNiMo6 (SAE 4340),
Spring	60SiMn5, 55Cr3 (SAE 5155), 51CrV4 (SAE 6150), 60SiCr7 (SAE 9262), 55Si7
Free Cutting Steels	11SMn30, 1213, 11SMn37, 1215, 10S20, 11SMnPb30, 12L13, 11SMnPb37, 12L14
Micro Alloyed	30MnSiVS6, 38MnSiVS5, 20MnV6, SAE 1141, SAE 10V45
Construction Steels	S235JR (St37-2), S275JR (St44-2), S355JR, S355J0 (St52-3), S355J2G3 (St52-3N), E295 (St50-2), E335 (St60-2), E360 (St70-2)

Cross Section	Finish	Size	Norm
Round (Ø) Hexagonal (H)	Cold Drawn Bars	Ø 20 - 100 / h9 - h11 Hex 20 - 80 / h11	EN 10278
	Cold Drawn Coils	Ø 5 - 42 / h9 - h11 Hex 7-40 / h11	EN 10278
	Grinded Bars	Ø 20 - 150 / h7-h8-h9	EN 10278
	Crack Controlled Free Cutting	Ø 5 - 60 Hex 8 - 65	EN 10277-1

Hasçelik

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Contact Us

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