









FROM THE PAST TO THE FUTURE

The journey of Tatmetal with steel started in Karadeniz Ereğli City in 1986.

The journey which started with the trading of foreign and domestic origin flat steel continues in 2 Steel Service Centers; first one founded in 1994 and the second was commissioned in 2005; with differentiated demands of many different sectors mainly automotive, white goods, construction; with cut to length, slitting and forming facilities in a total of 15,000 m² open and 27,000 m² covered area. Within the same period, TATMETAL LTD CO. has been established which was the first step towards cooperate industrial production.

In the following years, TATÇELİK production plants have been commissioned in Ereğli Industrial Zone on 60,000 m² of open and 50,000 m² of covered area; TATMETAL continued investments uninterruptedly with regards to integration, creating added value and diversification of products, and respectively;

In 2007 Pickling Line and 1st Cold Rolling Mill, Annealing Line.

In 2009 Continuous Galvanizing Line 1

In 2013 Temper Mill, Alkaline Cleaning Line and 2nd Cold Rolling Mill.

In 2014 Continuous Color Coating Lines have been commenced operation.

In 2018 Continuous Galvanizing Line 2.

In 2019 Continuous Pickling Line 2.

In 2020 Tandem Cold Rolling Mill. (on construction)

TATMETAL, offering wide range of products with the advantages of integration and extensive sales organization to its customers regarding them as partners, is continuing investments with 100% domestic capital.

TATMETAL realizing production with the brand of TATÇELİK is on production using the latest technology in environment friendly production facilities aiming to support employment and contributing to local communities' and the country's development. Besides, it focuses on education and increasing environmental awareness with social responsibility projects.

TATMETAL confidently walking towards to be a world brand in steel continues its path with dedication to bring "color" to your life.













INTEGRATION



The advantages provided by integration is being reflected to customers as price, time and service quality maintaining customer satisfaction and loyalty by production with modern technologies. The merger of experienced staff and advanced technology provides TATMETAL to serve domestic and foreign markets with a wider range of products.

PICKLING AND OILING LINE

'550,000 tons of annual pickling capacity'





In the pickling line, oxide and scale on the surface of hot coils are being cleaned in hydrochloric acid bath and then coil surfaces are lubricated electrostatically.

Pickling Line Technical Specifications

> Production Capacity : 550,000 tons / year > Thickness : 1.50 to 5.00 mm > Width : 650-1525 mm > Input Coil Diameter : 610 - 850 mm

Acid Regeneration Plant: In this plant, the contaminated acid with a high iron contend collected from the pickling line is decomposed chemically and regenerated for production.









COLD ROLLING LINES

'700,000 tons annual rolling capacity'

Hot Rolled Coil that are cleaned at the pickling line (HRP), is being processed at the cold rolling mill (total 700,000 tons/ annual capacity) to reduce the thickness to desired values.

The homogeneous thickness and high surface quality is maintained at 6 Hi reversing mill with the help of AFC and AGC systems.

Cold Rolling Mill Technical Specifications

> Production Capacity : 700,000 tons /capacity (2 lines)

> Output Thickness : 0.20 to 3.00 mm > Width : 600-1250 mm

> Maximum Coil Weight : 30 tons > Output Coil Inner Diameter : 508 mm







ALKALINE CLEANING LINE

'350,000 tons annually cleaning capacity'

The oil on the steel sheets exiting the Cold Rolling Mill is cleaned by hot Alkaline bath.

Cleaning Line Technical Specifications

> Production Capacity : 350,000 tons / year > Thickness : 0.30 to 2.50 mm > Width : 600-1300 mm

> Maximum Coil Weight : 30 tons > Output Coil Inner Diameter : 508-610 mm







ANNEALING LINE

'250,000 tons annual annealing capacity'

Steel Coils whose physical properties have changed after cold rolling and alkali cleaning process are subjected to heat treatment in Hydrogen-type Annealing furnaces to reach the desired mechanical properties.

In this process, the coils are heat treated subjected to heat generated from natural gas and pure hydrogen gas atmosphere.

Annealing Line Technical Specifications

> Production Capacity : 250,000 tons / year

> Number of Base : 16 > Number of Furnace : 8 > Number of Cooling Bell : 8





TEMPER MILL

'500,000 tons annual tempering capacity'

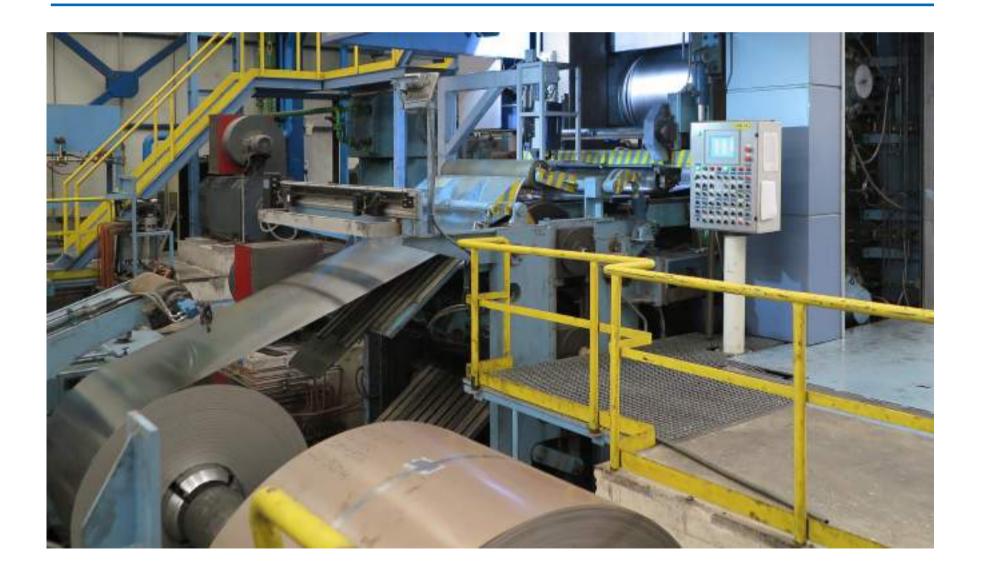
Cold Rolled Coils (CR) exiting Annealing Furnace are directed to 4Hi Temper Mill to maintain homogenized mechanical properties and high surface smoothness.

Wet Tempering by spraying lubricant as well as dry tempering can be performed.

Temper Rolling Technical Specifications

> Production Capacity : 500,000 tons / year > Thickness : 0.30 to 3.00 mm > Width : 600-1300 mm

> Maximum Coil Weight : 30 tons > Output Coil Inner Diameter : 508-610 mm







CONTINUOUS GALVANIZING LINE 1

'350,000 tons annual galvanizing capacity'



The unannealed coils (CRF) reduced down to the desired thickness, carried to the galvanizing line and coated with zinc with the desired coating thicness by continuous galvanizing process.

Continuous Galvanizing Line Technical Specifications

> Production Capacity: 350.000 tons / year

> Thickness : 0.30 - 2.00 mm > Width : 800 - 1.250 mm

> Maximum Coil Weight : 25 ton

> Output Coil Inner Diameter : 508 - 610 mm

> Coating Type : No spangle, bright,

> Coating Limits (both surface): 80 - 350 gr/m²

> Coating Finish : Cr3+Cr6
> Surface Types : A , B



CONTINUOUS GALVANIZING LINE 2

'450,000 tons annual galvanizing capacity'



The unannealed coils (CRF) reduced down to the desired thickness, carried to the galvanizing line and coated with zinc with the desired coating thicness by continuous galvanizing process.

Continuous Galvanizing Line Technical Specifications

> Production Capacity: 450.000 tons / year

Thickness: 0.25 - 3.00 mmWidth: 800 - 1.250 mmMaximum Coil Weight: 27 ton

> Output Coil Inner Diameter : 508 - 610 mm

> Coating Type : No spangle, bright,

> Coating Limits (both surface): 60 - 600 gr/m²

> Coating Finish: Cr3+Cr6 > Surface Types: A, B, C

> Cr Free, Anti fingerprint, non organic coating







CONTINUOUS COLOR COATING LINE

'220,000 tons/year coating capacity'

In the color coating line, polyester, PVDF, PVC plastisol, polyurethane and polyamide coating applications and metal via PE and PVC lamination film applications are performed.

Metallic, pearlescent, wrinkle, powder dye effect application, wood, granite and alike design applications can be produced.

These products are extensively used in roofing and cladding, white goods, electronics, packaging, decoration, lighting and automotive sector.

Coatable Metals

- > Hot Dip Galvanized
- > Electro-Galvanized
- > Galvalum
- > Aluminum
- > Tin Plate [Chrome and Tin Plate]

Continuous Color Coating Line Technical Specifications

> Production Capacity : 220,000 tons / year > Thickness : 0.20 to 1.20 mm > Width : 800 - 1300 mm

> Maximum Coil Weight : 11 tons

> Input Coil Inner Diameter : 508-610 mm > Output Coil Inner Diameter : 508 mm

Product Types

- > Pre-painted Metal Coil or Sheet
- > Film Laminated Metal Coil or Sheet
- > Protective Film Pre-painted and Laminated Coil or Sheet



CONTINUOUS COLOR COATING LINE

APPLICABLE PAINTS

Top Coat

- > Standard Polyester PE
- > Super Polyester SPE or HPE
- > PVDF
- > Polyurethane PU
- > Polyurethane Polyamide PUPA (PURPA)
- > Plastysol PVC
- > EpoxyPhenolic EPF

Primer

- > Polyester PE
- > Polyurethane PU
- > Acrylic ACR

Back Coat

- > Epoxy EPX
- > Epoxy Polyester EPP

AREAS OF CONSUMPTION

Roof Corrugated Sheet, Roof Panels, Facade Panels Cold Storage Panels, Door Panels Rain Ducts, Roofing Accessories Container Production, Composite Panel Production Advertising and Traffic Signs Ceiling Panels, Lightning Fixtures Electric Cabins, HVAC Terminals

Heating Radiators

Automotive Industry Inner and Lateral Roof Coatings

Refrigerator Panels

Washing Machine Panels

Refrigerator Deep Freeze Panel (Aluminum)

LCD and LED TV Back Panel

Industrial Freezer Body Housing

Chest Freezers Outer Panel Production

Drying Machine Back Panel

Drum Top Cap Production

Automotive Sub Contractors (Trunk inner sheet, Horn diaphram, front panel etc.), Caravan Production Train and Subway Wagon Inner sheets

Sun blind systems

TYPES OF COATING

POLYESTER COATING

Polyester coating is the most widely used technology on the coated metal market because of its optimum performance and cost efficiency.

The technology provides Standard UV protection with optimum corrosion resistance with coating thickness of 20µ on top of 5µ of primer coating.

PVDF COATING

PvDF technology is based on thermoplasticity and it is the best application for maintaining colours and brightness for long-term due to its high UV-resistance property.

The typical application thickness is $20-25\mu$ but double or triple layers are also possible which makes very color and brightness options possible without any UV-resistance loss.

PLASTISOL COATING

Plastisol technology is another thermoplastic application in the industry. This technology has a unique property of high thickness applications.

The standard application thickness is 200μ and lowest 100μ is also possible if required.

PET LAMINATION COATING

PET lamination technology provides a wide range of colour and texture with low-dirt pick up and easy cleaning properties with thickness 15-40µ.

PVC LAMINATION COATING

PVC lamination technology provides a wide range of colour and texture with good flexibility and hardness that is also suitable for deep drawing and has the thickness $100-200\mu$.

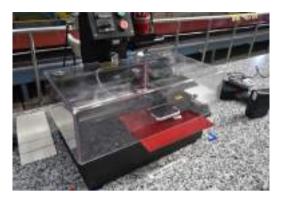
PUR-PA COATING

PUR-PA technology provides excellent scratch and corrosion resistance due polyamide particles presented in its structure.

The common application thickness is 20μ however this technology is suitable for higher thickness applications up to 50μ .



CONTINUOUS COLOR COATING LINE



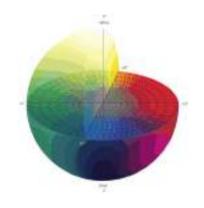
BRIGHTNESS

GLOSS VALUE	BRIGHTNESS LEVEL
0 - 20	MAT
20 - 40	SEMI MAT
40 - 60	SEMI BRIGHT
60 - 80	BRIGHT
80+	EXTRA BRIGHT



COLOR DETECTION

Spectro Photometer
Developped Desk Top and Mobile terminal

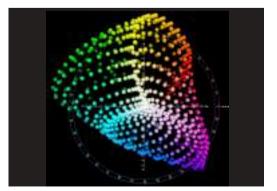


COLOR MATCH

The Color description is given by CIE Lab format (Commission Internationale'de L'Eclairage) of 3D graph as on left.

L value shows deviations; from pure white to black, b value from yellow to blue A value from red to green.

CIE standard defines color with L, a, b values.



The color deviation is given as ΔE and formulated as the square root of the sums of the squares of these deviation values

 $\Delta E = \{ (\Delta I)^2 + (\Delta a)^2 + (\Delta b)^2 \} 1/2$

L value is from 0 to 100 And generally a and b values are from – 128 to+ 127



TATMETAL EXPANSION PLAN

WE ARE INCREASING OUR PRODUCTION VOLUME

Objective of our company, manufacturing all products in accordance with quality standards, is to carry further ahead the added value towards our country by increasing customer satisfaction and capacity.

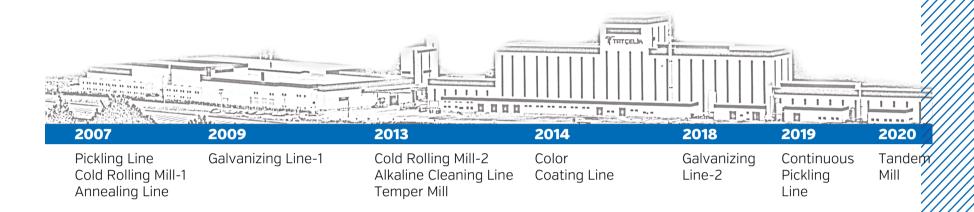
In line with this objective and to increase our galvanized steel production capacity, our investments continue for the second galvanizing facility with a capacity of 450,000 tons. The plant is in operation since April 2018. As this facility becomes operational, our company's galvanized steel production capacity will increase from 350,000 tons/year to 800,000 tons/year. This investment will help our company to reinforce its position in rapidly growing domestic galvanized sheet market and become one of the big players of the market.

In addition, with the investment of Continuous Pickling Line (1.500.000 tons annual capacity) and planned to be commissioned in Q1 of 2019, the demand for hot rolled pickled coil to be increased and sales will be offered to the automotive market.

Continious Pickling Line will be converted to a PLTCM Line with the commissionning of Cold Rolled Tandem Mill on Q1 2020 with an annual capacity of 1.500.000 tons.



TATMETAL IS IN A TWO PHASE EXPANSION PLAN



1. Phase

Color Coating Line capacity increased to 220,000 tons on January 2018.

Second Galvanizing line commissioned with a capacity of 450,000 tons in 2018 (in production from April 2018) that increases the total annual coated steel capacity to 800.000 Mtons

The Annealing capacity will be increased to 250.000 Mtons by Q4 2019 adding 6 base on top of existing 10 annealing furnace bases.

2. Phase

Continuous Pickling Line contracted with a capacity of 1.500.000 tons by Q1 2019 (production started on April 2019)

Tandem Line contracted with a capacity of 1.500.000 tons by Q1 2020 to have the same Rolling capacity as a PLTCM line

STEEL SERVICE CENTER - 1

Steel Service Center-1 is operating on 10,000 square meters of closed area on a total 15,000 square meters area in 4 halls. In Steel Service Center-1 cut to length and slitting operations are performed.

Slitting Line

> Production Capacity : 120,000 tons / year > Thickness : 1.50 to 4.00 mm > Width : 20.00 - 1.525 mm

1. Cut to Length Line

> Production Capacity : 150,000 tons / year > Thickness : 4.00 to 20.00 mm > Width : 500-2000 mm > Length : 1000-8000 mm

2. Cut to Length Line

> Production Capacity : 80,000 tons / year > Thickness : 1.50 to 6.00 mm > Width : 500 - 1,700 mm > Length : 500 - 6,000 mm

3. Cut to Length Line

> Production Capacity : 100,000 tons / year > Thickness : 1.00 to 4.00 mm > Width : 500-2000 mm > Length : 500 - 6,000 mm





STEEL SERVICE CENTER - 2

Steel Service Center-2 operates 16,000 square meters closed area on a total area of 26,000 square meters consisting of 4 halls. In Steel Service Center-2, Cold Rolled, Hot Dip Galvanized and Painted galvanized Coils cut to length, slitting, forming and packaging operations are carried out.

1. Slitting Line

> Production Capacity: 70,000 tons / year > Thickness: 0.30 to 1.50 mm > Width: 20 - 1,250 mm

1. Cut to Length Line

> Production Capacity: 60,000 tons / year > Thickness: 0.30 to 1.50 mm > Width: 350-1500 mm > Length: 350-3000 mm

1. Trapeze Line

> Production Capacity: 50,000 tons / year
> Thickness: 0.28 to 1.20 mm
> Width: 860, 1,060 mm
> Length: 500 - 12,000 mm
> Form: 27/200 mm
> Edge Feature: Straight, knurled

Corrugating Line

> Production Capacity: 50,000 tons / year > Thickness: 0.27 - 0.80 mm > Width: 875 mm

> Length : 1.000 - 5,000 mm

2. Slitting Line

> Production Capacity: 120,000 tons / year > Thickness: 0.30 to 3.00 mm > Width: 20-1650 mm

2. Cut to Length Line

> Production Capacity: 90,000 tons / year > Thickness: 0.30 to 2.50 mm > Width: 350-1600 mm > Length: 400 - 4,000 mm

2. Trapeze Line

> Production Capacity : 50,000 tons / year > Thickness : 0.28 to 1.20 mm > Width : 860, 1,060 mm > Length : 2000 - 14,000 mm > Form : 27/200 mm > Edge Finish : Straight, knurled

Ridge

> Production Capacity: 1,800 tons / year > Thickness: 0.30 to 1.20 mm > Form: 27/200 mm





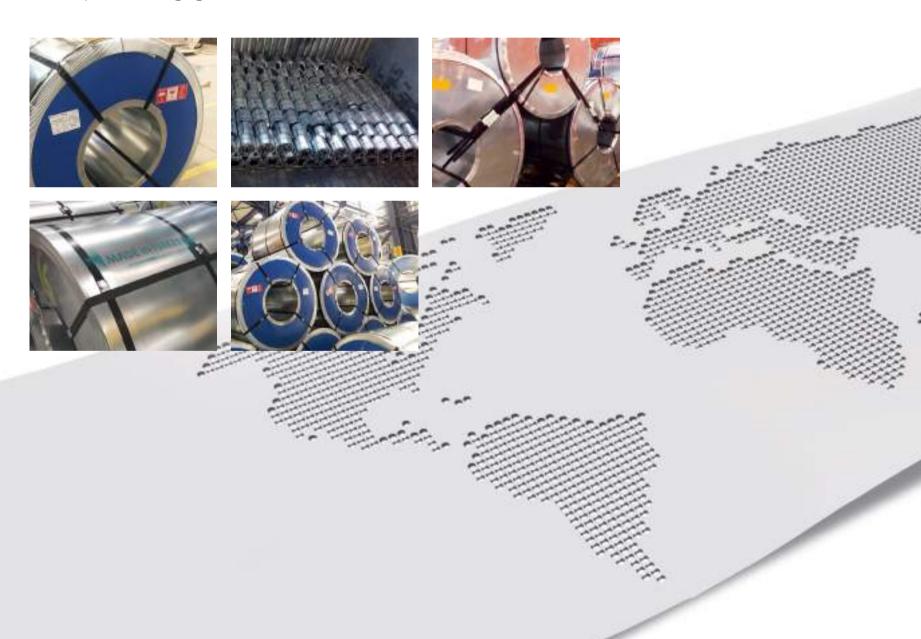
EXPORT

TATMETAL exports to various countries in the world.

TATMETAL, with its TATÇELİK brand, is increasing its brand value and credibility, reaching different sectors and becoming priority preferences of its overseas users.

EXPORT PACKAGING

Bulk Shipment Packaging



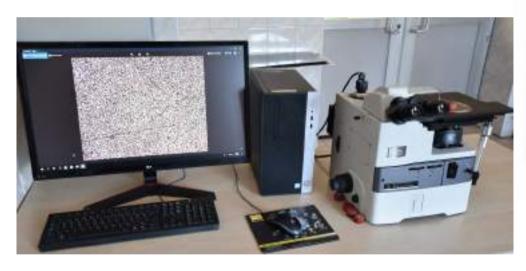


QUALITY CONTROL

The laboratory units of TATÇELİK; microstructure, mechanical properties (tensile, yield, elongation), surface hardness and chemical composition of the products are tested.

Also, when used in production processes and directly effect to quality for all processes and chemical analysis of external processes doing in chemical laboratories.

Color Coating line laboratory unit; thickness, color and gloss values, resistance against chemicals, cracking resistance during bending and rapid deformation, deep drawing sticking resistance are tested.













QUALITY IS NOT A QUESTION MARK, BUT A COMMON SENSE AND STANDARD FOR TATMETAL FAMILY...

TATMETAL products taking part in many items are the priority choice of our industrial manufacturers making their production with the same quality concept.



AWARDS ON ENVIRONMENTAL AWARENESS

Tat Metal's environmental awareness is appreciated by various authorities and honored with the awards received at the national and international platforms.

are tested.

INDUSTRIAL ENERGY EFFICIENCY COMPETITION PROJECT "SENVER" AWARD

We have applied for "Industrial Energy Efficiency Competition Project" by Ministry of Energy and Natural Resources with "Cold Rolling Mill-2 Air Knife Project" which we have engaged in Cold Rolling Mill-2 plant. The leading companies of our country which our company is competing with, are also in the final.

The project is presented to the evaluation jury on 7 March 2018. After the evaluation of the finalist companies by the jury, our project was awarded the first prize in this energy efficiency competition.

Our award was presented at the award ceremony held on 29th March 2018 in Istanbul Lütfi Kırdar Convention and Exhibition Center within the scope of 9th Energy Efficiency Forum and Fair events.

In this competition, which we attended for the second time and last year, we won the first prize by competing with the leading industrial organizations of our country.







LOW CARBON HERO AWARD

Tat Metal has been awarded with the Low Carbon Hero Award, a prestigious award, at "Environmental Performance Sustainability Indicators and Environmental Management" at the Istanbul Carbon Summit, which was organized every year by the Sustainable Production and Consumption Association hosted by the Istanbul Technical University (ITU) with the support of the Ministry of Environment and Urbanization.

In the awards ceremony held at Istanbul Technical University on April 26, 2018 within the context of the V. Istanbul Carbon Summit activities, the award was presented to TATMETAL A.Ş.









QUALITY CERTIFICATES









TS 822 GALVANIZED CORRUGATED SHEET



EN 10169 PREPAINTED STEEL



EN 10130 COLD ROLLED STEEL



EN 10346 GALVANIZED STEEL



ISO / IEC 27001:2013



OHSAS 18001:2007



ISO 14001:2015



EN ISO 9001:2015



IATF 16949:2016



EN ISO 50001





INTERNATIONAL STEEL STANDARDS

HOT ROLLED STEELS

HOT ROLLED STELLS								
EN10111	DIN 1614-P2		ASTM A1011					
DD 11	StW22		CSTypeB					
DD 12	RRStW23		DSTypeA					
DD 13	StW24		DSTypeB					
EN 10025-P2-06	EN 10025-90	DIN 17100-80	ASTM A1011					
S 185 JR	Fe 310 0	St 33	St 33					
S 235 JR	Fe 360 B	St 37-2	SS Gr33					
S 275 JR	Fe 430 B	St 44-2	SS Gr40					
S 355 JR		St 52-2	SS Gr50					
10149-P2-99	10149-P2-95	SEW 092						
S 315 MC	S 315 MC	QSTE 300 TM						
S 355 MC	S 355 MC	QSTE 360 TM						
S 420 MC	S 420 MC	QSTE 420 TM						
S 460 MC	S 460 MC	QSTE 460 TM						

COLD ROLLED STEELS

SAE J403-01	ASTM A1008								
1006	CSTypeA								
1008	-								
EN 10130	EN 10130	DIN 1623-P1-83	ASTM A1008	JIS G3141					
DC 01	Fe P01	St 12	CS TypeB	SPCC					
DC 03	Fe P02	RRSt 13	CS TypeB	SPCD					
DC 04	Fe P03	St 14	ASTM A 620 CD DDQAK	SPCEN					
EN 10268-06	EN 10268-06								
H240 LA	H240 LA								
H280 LA	H280 LA								
H320 LA	H320 LA								
H360 LA	H360 LA								
H400 LA	H400 LA								

ZINC-COATED (GALVANIZED) STEELS

EN 10346-09	EN 10327-04	EN 10142-91	ASTM A653	JIS 3302				
DX51D+Z	DX51D+Z	Fe P02 G Z	CS TypeA	SGCC				
DX52D+Z	DX52D+Z	Fe P03 G Z	CS TypeB-C	SGCD1				
DX53D+Z	DX53D+Z	Fe P05 G Z	FS TypeAB	SGCD2				
DX54D+Z	DX54D+Z	Fe P06 G Z	DDS TypeB	SGCD3				
DX56D+Z	DX56D+Z	Fe P07 G Z	EDDS					
DX57D+Z	DX57D+Z	Fe P07 GZ	EDDS					
	EN 10326-04	EN 10147-92	ASTM A653	JIS 3302				
S220GD+Z	S220GD+Z	Fe E 220 G	SS Gr230					
S250GD+Z	S250GD+Z	Fe E 250 G	SS Gr255	SGC340				
S280GD+Z	S280GD+Z	Fe E 280 G	SS Gr275	SGC400				
S320GD+Z	S320GD+Z	Fe E 320 G	ASTM A53 HSLAS Gr.340	SGC440				
S350GD+Z	S350GD+Z	Fe E 350 G	HSLAS Gr.380 Class 2	SGC490				
S390GD+Z	S390GD+Z	Fe E 390 G						
S420GD+Z	S420GD+Z	Fe E 420 G						
S450GD+Z	S450GD+Z	Fe E 450 G						





THETHE

HEAD OFFICE

Kilclikbakkalkoy Mh. Roya Sok. No:12-18 Kat-20.

No: 100 - 34750 | Atasimhr / Istanbul | TURKEY

P. +90 (216) 574 08 28 | Fax. +90 (216) 574 31 21

STEEL SERVICE CENTER 1

Böllotek Köyü Kriz, Eregli,

Zonguldek / TURKEY
P+90 372 318 00 27-29 | Fav: +90 (372) 318 00 30

COLD ROLLING, GALVANIZING AND PAINTING FACILITY

Organize Sanayi Bölgesi Kdz. Eregli, Zonguldak / TURKEY P: +90 (372) 334 37 30 (Fex: +90 (372) 334 37 39

www.cakirogluofset.com.tr

STEEL SERVICE CENTER 2

Harrza Fakini: Köyli: Kitz, Eregli. Zongutdak / TURKEY P: +90 372 334 35 85 i Fax: +90 (372) 334 34 92