



TOSYALI HOLDING



Tosyali
Holding

www.tosyaliholding.com.tr



2024

About TOSYALI Holding

TOSYALI Holding creates economic and social value over 70 years with nearly 40 facilities and approximately 15,000 employees in 3 continents.

TOSYALI is Türkiye's global steel producer with an annual iron and steel production of nearly 10 million tons. According to the data of the World Steel Producers Association, it ranks 77th among the world steel producers in 2022.

Standing out with its product variety in the iron and steel industry, TOSYALI meets the needs of many industries, from automotive to white appliances, from energy to construction, with its wide product range.

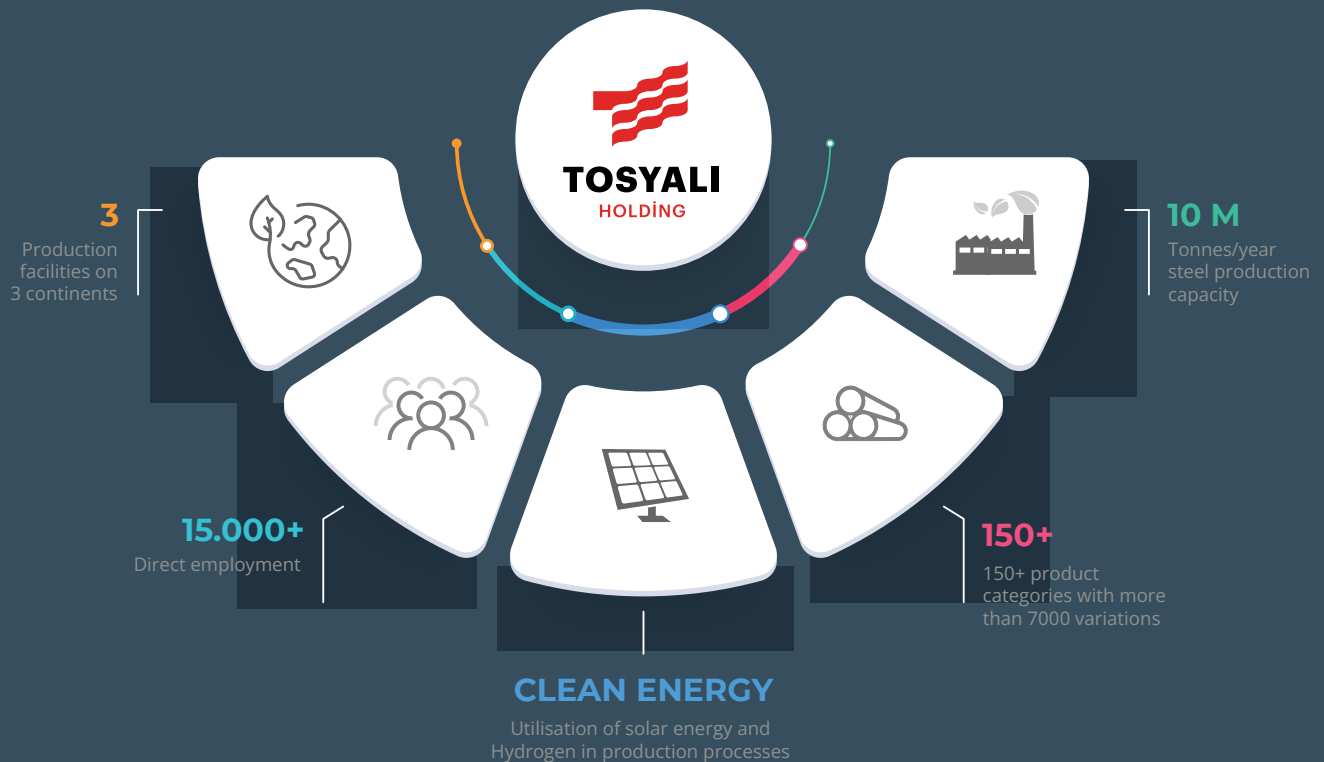
TOSYALI Holding, which has significant investments abroad, has started investment in Angola and Senegal following Algeria operations. One of the largest industrial facilities in Algeria, "TOSYALI Algérie" draws attention as being Turkey's largest industrial investment abroad. Reinforcing its global business capability with foreign partnerships, TOSYALI has been also carrying out successful business partnerships with Japanese Toyo Kohan and US Harsco companies in Türkiye for many years.

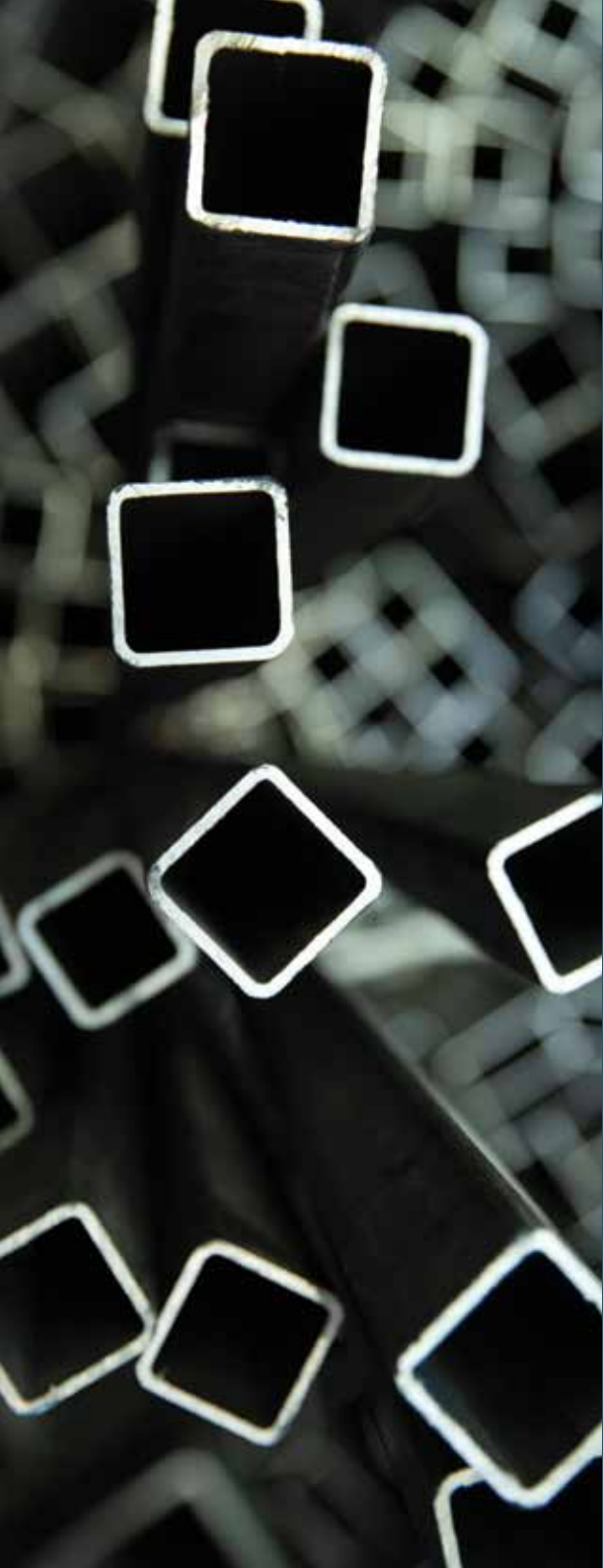
GREEN STEEL

TOSYALI Holding, which has made significant investment in sustainability, technology, and innovation, aims to be one of the leading companies in green steel production and to reduce its carbon footprint level by developing and by using the highest technologies; such as the world's largest DRI (Directly Reduced Iron) facility used in its production in Algeria and Quantum Furnace, which will be used for the first time in Türkiye in its production facility in İskenderun, Türkiye.

Having international knowledge in the management and operation of industrial zones, TOSYALI is planning port investments in Erzin, in addition to ongoing port operations in Iskenderun and Algeria.

TOSYALI Holding also continues its activities in the industrial zone management both in Türkiye and in Africa. For more information, you can visit www.tosyaliholding.com.tr





QUANTUM FURNACE
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HIGH TECHNOLOGY
HIGH TECHNOLOGY
DECARBONIZATION
DECARBONIZATION
SUSTAINABILITY
SUSTAINABILITY
DRI
DRI
ZERO CARBON
ZERO CARBON
GREEN STEEL
GREEN STEEL
INVESTMENT
INVESTMENT
PRODUCT DIVERSITY
PRODUCT DIVERSITY



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INTERNATIONAL OPERATIONS

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SUSTAINABILITY FRAMEWORK

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TOSÇELİK

ERW BORU ÜRETİM TESİSİ

TOSÇELİK Profil ve Sac is Europe's Largest ERW Pipe and Hollow Section producer. TOSÇELİK Profil ve Sac aims to produce value-added products with a sustainability-oriented approach, making a difference in the steel industry since the day it was founded. The company supplies its wide range of products to the global market, reaching across 6 continents and nearly 100 countries.

Its R&D Center established for the first time in the Osmaniye region, is the center of research and development of all production facilities of TOSYALI Holding.

Pipes and profiles produced in TOSÇELİK Profil ve Sac Production Facility are using this facility's own flat steels that has relatively much lower carbon footprints compared to industry averages. Thanks to the renewable energy resources, high scrap usage in the production and R&D efforts; TOSÇELİK Profil ve Sac positions itself as the HRC & ERW pipe producer with one of the world's lowest carbon footprint. Furthermore, TOSÇELİK Profil ve Sac remains committed to industry leadership, continuing investments that not only benefit the company but also contribute positively to the sustainable world.



TOSÇELİK Profil ve Sac



TOSÇELİK Flat Structural Steel Production Facilities

Situated in the Osmaniye Organised Industrial Zone, the complex comprises a steel mill dedicated to the production of liquid steel, a billet production facility specializing in the manufacturing of input materials for long products, a slab production facility focused on creating input materials for flat products, a hot sheet rolling mill for the production of hot flat products, oxygen production facility, dedusting unit, and water treatment facilities.

The facility, equipped with a dedusting unit to mitigate the emission of dust and gas into the environment, is noteworthy for its comprehensive environmental features. Dust emissions in this facility are maintained at half of the standards set by the European Union, underscoring its commitment to environmental sustainability.

TOSÇELİK Iskenderun ERW Steel Piping and Hollow Sections Production Facilities

The manufacturing facility located in the Iskenderun Organised Industrial Zone commenced operations with the production of ERW welded industrial pipes and hollow sections. Over time, it evolved into an integrated production facility through strategic investments, notably including the establishment of the TOSÇELİK Galvanised Pipe Production Facility and the TOSÇELİK Natural Gas Pipe Production Facility. Presently, the company's diversified production matrix encompasses industrial pipes, water and gas pipes, as well as square, rectangular, and specialized hollow sections.

TOSÇELİK Osmaniye ERW Steel Piping and Hollow Sections Production Facilities

The facility, bearing the title of "the largest pipe factory established in a single phase in Europe," is situated on 353,659 square meters of land in the Osmaniye Organized Industrial Zone. Serving both domestically and internationally, with a focus on the United States, Europe, and Middle Eastern countries, the company employs high-end technology to provide a wide range of products to the industry. These offerings include pipes coated with EPOXY, PE, PP, and PU, precision and mechanical pipes, pressure-purpose pipes, as well as heat-treated pipes and hollow sections.

TOSÇELİK Dilovası ERW Steel Piping and Hollow Sections Production Facilities

The Dilovası ERW Pipe and Hollow Sections Production Facility employs advanced technology and adheres to certified quality assurance standards in the production of ERW pipes and hollow sections. Through strategic investments, the facility has expanded its product range to include CR (cold-rolled) pipes, hollow sections, and special-shaped hollow sections.



Products

Pipes

- Water and Gas Pipes
- Natural Gas and Oil Line Pipes
- Industrial Pipes
- Scaffolding Pipes
- Boiler Pipes
- Casing, Tubing and Drill Rod Pipes
- Galvanized Pipes
- Threaded Pipes
- Heat Treated and Hot-Finished Pipes
- Primer Coated Pipes
- Polyethylene and Polypropylene Coated Pipes



Products

Hollow Sections

- Rectangular and Square Hollow Sections
- Special Shaped Hollow Sections
- Heat Treated and Hot-Finished Hollow Sections
- Galvanized Hollow Sections
- Primer Coated Hollow Sections



TOSÇELİK Spiral Boru produces spiral pipes with an annual capacity of 500.000 tonnes; $\text{\O} 8.62''$ - 128'' range up to 28 mm wall thickness can be produced in a very wide range.

Spiral welded steel pipes are produced and coated in accordance with API, API Q1, ISO, EN, DIN, NFA, AWWA, BS standards.

Pipe production has been examined and certified by all international institutions that require competence in the sector.



TOSÇELİK Spiral Boru



Products

- Natural Gas Pipes
- Petroleum Pipes
- Water Pipes
- Port Piling Pipes

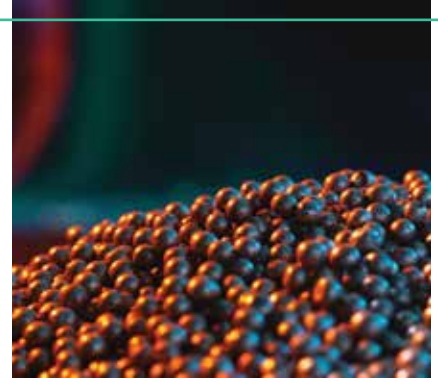
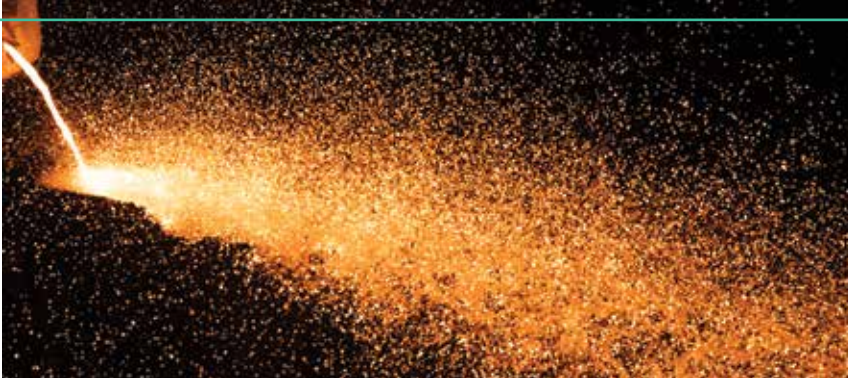
TOSÇELİK Granül is the biggest steel shot producer in Türkiye and one of the top two global low carbon steel shot producers in the world.

KOTAR, the commercial brand of TOSÇELİK Granül is a product developed as a result of our successful R&D studies in 2017. KOTAR is as hard as high carbon steel shot and longlasting as low carbon steel shot.

We feel the pride of exporting KOTAR steel shot to more than 30 countries in 5 continents as of 2023 aiming to achieve further growth and improvement each coming year.



TOSÇELİK Granül



TOSÇELİK Granül Product Variations

Kotar group products are prepared by considering all kinds of surface cleaning needs of customers and responding to different demands. Special Kotar working mixtures can be produced for the processes of our customers.



Wire Rod and Rebar production facilities are active on an area of 90.000 square metres with a capacity of 700.000 tonnes/year.

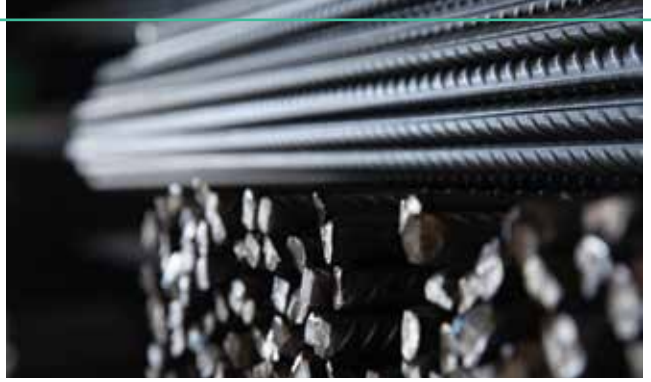
Our facility enables the production of wire rod in the $\text{Ø}5,5\text{-}25$ range, rebar in the $\text{Ø}12\text{-}\text{Ø}32$ range and ribbed wire rod in the $\text{Ø}8\text{-}\text{Ø}16$ range.

Having Türkiye's first TMB (Twin Module Block) system, the plant is able to produce with low ovality and high surface quality.

The plant, which has the ability to produce in all quality and norms, has the longest conveyor in Türkiye.



TOSYALI Filmaşın ve İnşaat Demiri



Products

- Wire rod
- Rebar



TOSYALI İskenderun Steel Production Facility contains the “MOST”s in many categories. Today, the facility, built on an area of 500 thousand square meters, is the most compact facility not only in Türkiye but also in the world, with an annual production capacity of 4 million tons.

We produce 500 different grades of steel using the most advanced technologies in the facility, which has the world’s fastest slab casting machine. In this facility, which will put us ahead in global competition in compliance with Industry 4.0, we operate Quantum Arc Furnaces that consumes less electrical energy for the first time in Türkiye.



TOSYALI Demir Çelik



Products

- Hot rolled steels suitable for cold rolling and galvanizing
- Hot rolled low carbon steels suitable for cold forming
- Non-alloyed general structural steels
- Non-alloyed general structural steels suitable for galvanizing and bending
- Non-alloyed general structural steels suitable for galvanizing in accordance with class 1 standard
- General structural steels suitable for cold forming, bending and plastering
- Steels resistant to atmospheric corrosion
- High-strength dual-phase steels suitable for cold forming
- High-strength dual-phase wheel steels suitable for cold forming and plastering
- High-strength dual-phase hot rolled steels suitable for cold rolling
- Boiler steels / Boiler pipe steels / Pressure pipe steels / Oil pipe steels
- Oil pipe steels desired with standard yield tensile strength rate
- Oil pipe steels suitable for srm pipe production or normalization
- Oil drill pipe steels
- Hot rolled steels suitable for cold rolling for electrical steel production

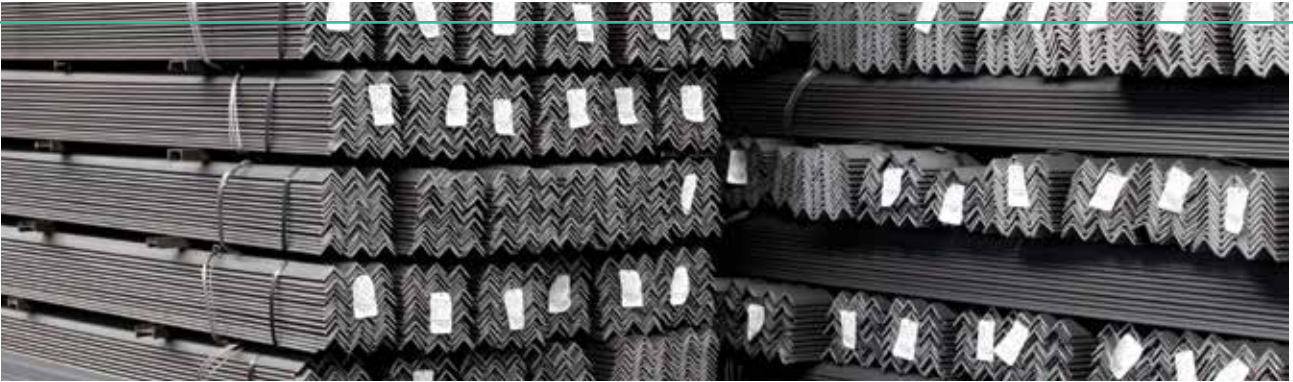


The annual production capacity of TOSYALI Demir Çelik Production Facilities, built on an area of approximately 18,000 square metres, is 550,000 tonnes/year.

All quality system documentation is monitored and controlled using the QDMS system and all kinds of information about the products are recorded in the SAP system database.




TOSYALI Demir Çelik



Products

- Angle group
- UPN profile group
- IPN profile group
- IPE profile group



TOSYALI Toyo Çelik A.Ş., which started its operations in 2017 as a joint venture between TOSYALI Holding's and Toyo Kohan, one of Japan's and the world's leading companies. TOSYALI Toyo provides services on an area of 500 thousand m² in Osmaniye Organized Industrial Zone.

Having an annual rolling capacity of 1.2 million tons, TOSYALI Toyo produces Türkiye's first advanced technology and high value-added flat steel. In the product range; TOSYALI Toyo, which tinplate, galvanized, pre-painted, cold-rolled, pickled hot-rolled product, is the only manufacturer in Türkiye that can reduce the thickness to 0.12 mm in width of 1,300 mm in tin products and 0.20 mm in other cold-rolled iron and steel products.

TOSYALI Toyo has been exporting to nearly 80 countries across the World. Toyo offers advanced technology steel products to the most important sectors of today's world such as automotive, building construction, food packaging and heating-cooling-ventilation, while making people's lives easier and improving their quality of life.

Being aware of its responsibility towards nature and future generations, TOSYALI Toyo carries out clean and environmentally friendly production in compliance with ISO 14001 with the R&D projects it carries out for the purpose of green steel production.





Products

- Pickled Hot-Rolled Products
- Cold-Rolled Full Hard Products
- Cold-Rolled Products
- Tinplate Products
- Hot Dip Galvanized Steels
- Pre-Painted Products



Türkiye's global iron and steel leader TOSYALI Holding and the global industrial company Harsco Environmental (NYSE: HSC) established the recycling facility as a joint venture to recycle 1.2 million tonnes of slag waste annually into the economy through both metal recovery and raw material for industries such as road construction, cement production and fertiliser production.



TOSYALI HARSCO



Fields of Use

- Recovering
- Paving Stones Made from Slag
- Concrete Blocks Made from Slag
- Port Concrete Block and Tetrapod Constructions
- Railway Ballast
- Asphalt Production
- Road Embankment and Infrastructure
- Cement Industry
- Fertilizer

TOSYALI Algérie, Algeria's one of the biggest private investment and largest exporter outside the hydro-carbon sectors, also stands out as Türkiye's largest industrial investment abroad. Founded in 2007, TOSYALI Algérie has become one of the leading integrated complexes not only in Africa but also in Europe in terms of high technology usage and the world's most efficient production in terms of energy.

TOSYALI Algérie started to produce steel products by the second half of 2013. This production has made a significant contribution to decrease import to the country by meeting the fastly growing Algeria's construction needs. Today, TOSYALI Algérie has become the continent's largest integrated facility that provides direct employment for nearly 6000 people, producing DRI, pellet, billet/bloom, coil/hank, reinforced bars, wire rod and spiral pipes for the construction sector, the transport of hydrocarbons, automobile industry and shipbuilding.

Moreover, TOSYALI Algérie has been listed among the facilities that produce green and environmentally friendly steel in the world, thanks to its (DRI) technology. TOSYALI Algérie, which has the world's largest DRI production facilities with an annual capacity of 2.5 million tons and the world's largest arc furnace working with DRI, broke the world record two years in a row by reaching a production figure of 2.23 million tons in 2020 and 2.28 million tons in 2021. When the new second DRI investment is completed, TOSYALI Algérie will be the company with the world's largest twin DRI facility with a total capacity of more than 5.25 million tons/year.

TOSYALI Algérie, whose fourth stage of the fifth stage investment is ongoing, will turn into an industrial facility with a flat and long product capacity of 8.5 million tons/year, of which 7.5 million tons will be from an integrated mining facility, when all stages are completed.

Tosyalı Algérie, World's Unique Twin Mega DRI Towers is taking firm steps towards becoming one of the world's leading facilities in green steel production with a lower carbon footprint as an independent production complex that has the ability to operate with 100% hydrogen, with zero emission, fully integrated with its own port.



TOSYALI ALGÉRIE



Products

- Reinforced Bars
- Wire Rod
- Spiral Pipe
 - Natural Gas & Petroleum Pipes
 - Water Pipes
 - Port Piling Pipes
- Billets



TOSYALI ALGÉRIE







TOSYALI Angola has started operation in 2020. In Angola, we continue our efforts to supply raw materials for steel production and to invest in iron ore mines. We have started investments in the region in order to operate iron ore mines in the Kassinga Region, one of the largest iron ore reserves in Angola. With 2 billion tons of iron ore reserves in the region, we initially aim to produce 2 million tons of iron ore concentrate and lump ore.

Subsequently, we plan to produce concentrated high grade ore with an annual capacity of 5 million tons. In the long term, we aim to reach an annual iron ore processing capacity of 10 million tons.



TOSYALI ANGOLA



SUSTAINABILITY FRAMEWORK



TOSYALI HOLDING



TOSYALI for a Sustainable Life...

The pioneer of green steel production in our country and in the world.

Steel is everywhere, in our buildings, our cars, the products we use, our roads, infrastructure and superstructure... In the center of life, in the center of the future...

Green steel, which we produce with new generation technologies, clean energy sources such as solar and hydrogen, and sustainability-oriented R&D projects and innovations, will be one of the leading players in the construction of a more carbon-free world and will inspire other industries for a more sustainable production. Steel is in the center of life today, will be at the forefront of transformation tomorrow and will be in the center of life in the future.

With the green steel we produce by bringing the technologies and innovations of the future to the present, we will continue to work for a more livable world by saying **TOSYALI for a Sustainable Life.**



TOSYALI for a Sustainable Framework

With our efforts in the areas of **Responsible Ecosystem Management**, **Carbon-Free Steel** and the **Future of the Business**, we are moving relentlessly towards becoming an innovative, preferred and exemplary global company that shapes the steel industry.

TOSYALI Holding Our Sustainability Goals

2023

We will start using hydrogen as a fuel in some stages of our production.

2023

We aim to increase our employee engagement rate from 71% to 80%

2025

We will recycle 60% of the water we use.

2025

The electricity we procure from our own generation through our planned SPP investments will account for 50% of our total electricity use.

2026

We aim to have the infrastructure in place for 100% hydrogen use in all our facilities.

2030

We aim to reduce our employee turnover rate of 5.47% and our talent pool turnover rate of 10.90% to 3.5%.

2030

We want to increase our female employee ratio from 3.77% to 7%.





Leading green steel producer TOSYALI, with its preparation for the new regulations of the Paris Climate Agreement, is also the leader in **Green Transformation**.

TOSYALI Green Transformation Action Plan

TOSYALI accepts the global goals of the Paris Climate Agreement and takes all actions that will transform all its operations to achieve these goals.

TOSYALI GREEN TRANSFORMATION ACTION PLAN



Reducing the carbon footprint of our existing facilities



Carbon footprint reporting and documentation



New investment strategies suitable for green transformation



Renewable energy production



Circularity and recycling

How Does TOSYALI Achieve Green Steel Production?



1

THE USE OF
HIGH
TECHNOLOGY

2

RENEWABLE
ENERGY
INVESTMENTS

3

R&D
STUDIES FOR
DECARBONIZATION

4

CIRCULAR
ECONOMY
& WASTE
MANAGEMENT

1) The Use of High Technology

The first Quantum Furnace of Türkiye is in TOSYALI İskenderun

We have implemented highest Technologies around the world in TOSYALI Demir Çelik İskenderun Facility investment in İskenderun 2nd Organized Industrial Zone, which is Türkiye's largest industrial investment and started production in 2023. With the commissioning of the facility, we became the first user of Quantum Furnace technology in Türkiye, which provides lower electrical energy consumption. With our sustainability-oriented investments, we produce in this facility with a **70% lower carbon footprint than blast furnaces and 20% lower than traditional arc furnaces.**

TOSYALI Algérie producing with Less than world's DRI emission average

Thanks to the production with **high technology** and **hot charging** at our TOSYALI Algérie DRI facility, we produce with carbon emissions below the world DRI emission average.



2) Renewable Energy Investments

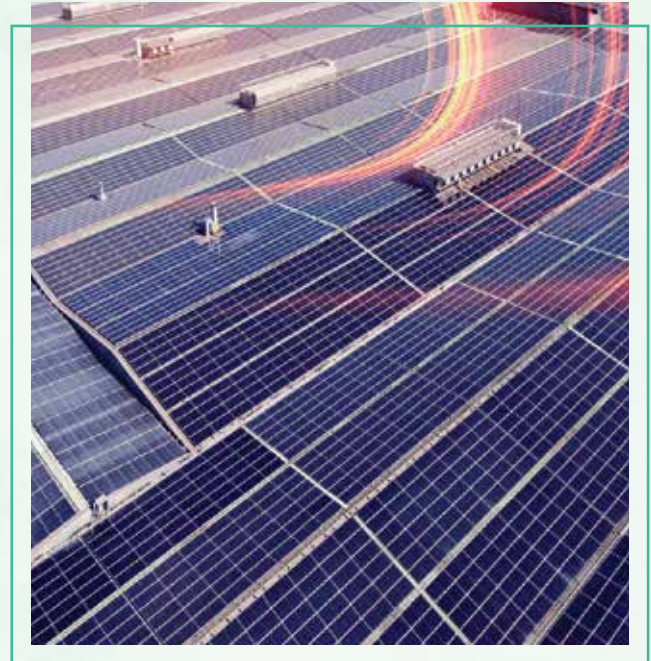
With the Solar Power Plant project that we initiated simultaneously in all our facilities, we reached **235 MW** installed power by the end of 2023, being **one of the largest rooftop Solar Power Plant in the world**. With this project, we have also become one of the facilities that produce the cleanest and greenest steel in the world.

The purlin connection technique applied in the installation and the use of state-of-the-art materials have made this project a rooftop solar power plant built with the world's newest technology.

Our R&D Center also made a significant contribution to this project with its innovative studies on reducing the static load of the system on the roofs with the panel holders it designed.

Our project is among the best examples in the world in terms of energy efficiency, thanks to its design that allows electricity to be generated using a double-sided surface and to benefit from sunlight at the highest level.

One of the most important features of our project is that it prepares the production to consume hydrogen instead of fossil fuels in iron and steel production. We will establish an integrated green energy system by using some of the electricity we will obtain from SPP for hydrogen production in the next stage.



3) R&D Studies for Decarbonization



- In the last 5 years, we have implemented more than 100 projects focused on sustainability in our ministry-approved R&D Center.
- We made progress in reducing our carbon emissions by making process improvements with these projects.
- Some of these projects contain **globally a first**.

62 million kg of CO₂ emissions were prevented with these projects

4) Circular Economy & Waste Management



TOSYALI Harsco, Türkiye's first 'Steel Recycling' company

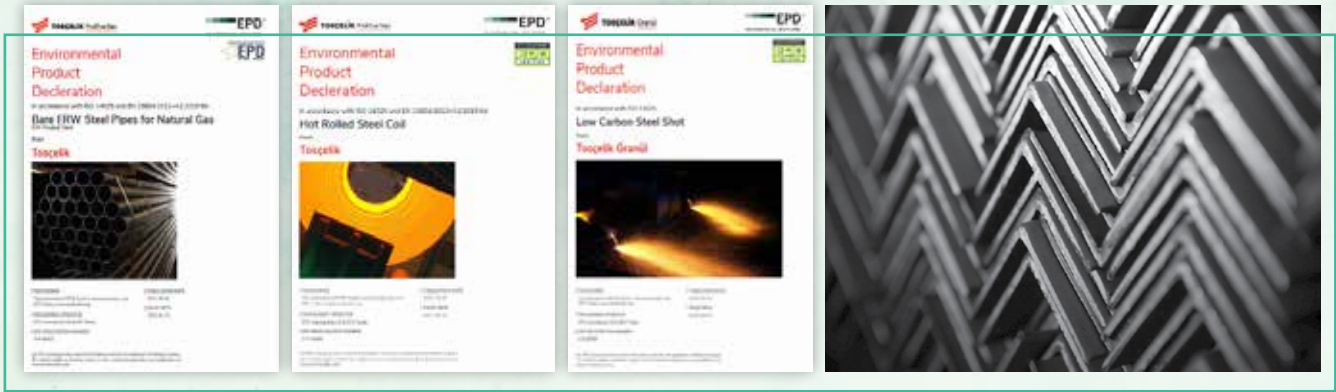
TOSYALI Harsco is our joint venture with American Harsco Corporation (NYSE: HSC) which is **Türkiye's first 'Steel Recycling' company**. It continues its operations in 3 facilities, in Osmaniye & Dilovası in Türkiye and in Algeria.

With TOSYALI Harsco, we recycled 405,000 tons of slag in 2022.

Our Product Based Emission Values

We continue to invest in decarbonization efforts focusing on **green steel** by saying “**TOSYALI for Sustainable Living**”. As TOSYALI Holding, we produce products with a low carbon footprint through our efforts towards decarbonization. By using high technologies, generating energy from renewable energy sources and producing with a high scrap rate, we produce approximately 50% less carbon emissions than the average carbon footprint values.

Product Name	Company	GWP Total in EPD Document (kgCO _{2e} Corresponding to 1 Ton of Product)
Hot Rolled Steel Coil	Tosçelik Osmaniye Rolling Mill	624
Rebar Mill	Tosyalı Filmaşın ve İnşaat Demir Üretim San. A.Ş.	680
Bare ERW Steel Pipes	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	711
Bare ERW Steel Pipes for Natural Gas	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	744
Bare Steel ERW Hollow Sections	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	710
Coated ERW Steel Pipes for Natural Gas	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	756
Hot Dip Galvanised ERW Steel Pipes	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	825
Powder Epoxy Coated ERW Steel Pipes	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	755
Shop Primer Painted ERW Steel Pipes	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	721
Shop Primer Painted Steel ERW Hollow Sections	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	709
Three Layer Polyethylene (PE) Coated & Flow Coat Liquid Epoxy with Solvant (two component liquid epoxy) ERW Steel Pipes	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	712
Three Layer Polyethylene (PE) Coated ERW Steel Pipe	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	725
Three Layer Polypropylene (PP) Coated & Flow Coat Liquid Epoxy with Solvant (two component liquid epoxy) ERW Steel Pipes	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	723
Three Layer Polypropylene (PP) Coated ERW Steel Pipes	Tosçelik Profil ve Sac Endüstrisi A.Ş. (ERW)	725



Product Name	Company	GWP Total in EPD Document (kgCO ₂ e Corresponding to 1 Ton of Product)
Spiral Welded Steel Pipe	Tosçelik Spiral Boru Üretim Sanayi A.Ş. (Osmaniye)	709
Cement Mortar - Spiral Welded Steel Pipes	Tosçelik Spiral Boru Üretim Sanayi A.Ş. (Osmaniye)	742
Flow Epoxy Coated Spiral Welded Steel Pipes	Tosçelik Spiral Boru Üretim Sanayi A.Ş. (Osmaniye)	750
Fusion Bonded Epoxy Coated Spiral Welded Steel Pipes	Tosçelik Spiral Boru Üretim Sanayi A.Ş. (Osmaniye)	745
Polyurethane Coated Spiral Welded Steel Pipes	Tosçelik Spiral Boru Üretim Sanayi A.Ş. (Osmaniye)	718
Three Layer Polyethylene Coated Spiral Welded Steel Pipes	Tosçelik Spiral Boru Üretim Sanayi A.Ş. (Osmaniye)	745
Three Layer Polypropylene Coated Spiral Welded Steel Pipes	Tosçelik Spiral Boru Üretim Sanayi A.Ş. (Osmaniye)	745
Wire Rod	Tosyalı Filmaşın ve İnşaat Demir Üretim San. A.Ş.	694
Ribbed Wire Rod	Tosyalı Filmaşın ve İnşaat Demir Üretim San. A.Ş.	708
Profile	Tosyalı Demir Çelik San. A.Ş.	672
Equal Angles	Tosyalı Demir Çelik San. A.Ş.	677
Low Carbon Steel Shot	Tosçelik Granül San. A.Ş.	648

All our production processes in all of our companies are certified with the TSE ISO 14001 Environmental Management System Certificate.







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