



**STAR STEELS**



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01

# About Us

## About Us

Star Steels Limited is one of the leading manufacturers of Steel Products in Ghana and West Africa. Built on the values of reliability and quality, Star Steels has become one of the most trusted suppliers to the construction industry in Ghana. With a production capacity of over 500 MT per day, Star Steels can provide consistent and dependable supply for your projects.

Run by an international team of professionals with a cumulative experience of more than 300 years in the metals manufacturing industry, Star Steels manufactures quality steel that is compliant not only with Ghanaian standards, but also with international standards. Given our management's rich experience in specialised steelmaking globally, we bring world-class levels of service and quality to Ghana.

We are one of Ghana's few integrated manufacturers - with full control over the steelmaking process - right from scrap up to finished products. Our in-house melt shop allows us to monitor chemistry and quality from the beginning up to the end.

*Our steel is used to construct over **25 million square feet every year** - a responsibility we take very seriously. As your trusted partner, we promise **strength & safety** everyday.*

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# Products

## Star TMT (High Tensile) Rebars

### Star TMT (High Tensile) Rebars

Star Steels' primary product is its unique High Tensile Star TMT Rebar. With tightly controlled chemistry, thermo-mechanical treatment, Star TMT stands out from other steel rebar and provides enhanced safety for your buildings.

**Size Range:** Diameter: 8, 10, 12, 16, 20, 25, 32 mm

Length: 12 meters

Other sizes available upon request

All sizes comply with Ghanaian standards and are subject to allowed tolerances

#### Chemical Composition:

Carbon (C)	Manganese (Mn)	Sulphur (S)	Phosphorus (P)
0.30% max	0.60% min	0.05% max	0.05% max

#### Physical Properties:

**Yield Strength:** 500 N/mm<sup>2</sup> (Minimum)

**Ultimate Tensile Strength:** 550 N/mm<sup>2</sup> (Minimum)

**Elongation:** 14% (Minimum)

#### Thermomechanical Treatment (TMT):

The TMT quenching process increases the strength of the rebar. Through water-cooling, the material's surface layer is converted to a strong, tough, tempered martensite while the core remains ductile. Star Steels uses state-of-the-art, patented German technology for its quenching process.



## Wire Products

## Wire Products



Star Steels is one of the leading manufacturers of steel wire products in Ghana. Manufactured using state of the art machinery, our wire products are a symbol of strength and durability.

### Binding Wire

Whether you need it for securing rebar in construction projects or for bundling and packaging, our binding wire provides reliable performance and ease of use.

### Common Nails

Our common nails are designed to provide superior holding power and durability, making them perfect for a wide range of construction and woodworking applications.

**Sizes Available:** 1 inch to 5 inches in length

### Features :

- Excellent tensile strength
- High resistance to corrosion
- Flexible and easy to handle
- Uniform thickness and smooth finish

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# Comparison Chart



## Comparison Chart

Properties	Star TMT	Other Rebar
<b>INTEGRATED PRODUCTION</b>	Full control over melting and rolling quality	Not all rebars in Ghana are manufactured by a fully integrated process
<b>THERMOMECHANICAL TREATMENT</b>	Every rebar undergoes thermo-mechanical quenching for enhanced strength	May have lower tensile strength due to the absence of the quenching process
<b>BENDABILITY</b>	Star TMT Rebar can be bent and rebent without cracking or any surface defects	Many rebar can crack under bending and re-bending conditions
<b>WELDABILITY</b>	Star TMT can be welded without any problems and displays high bond strength	Often rebar can crack at the point of welding if its chemistry is not properly controlled

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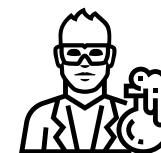
# Production Process



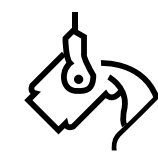
Scrap metal is sourced for recycling from local community



Scrap is heated to 1500 celsius in an induction furnace until it melts and impurities evaporate



A dedicated chemist checks the molten metal's quality and adds necessary elements



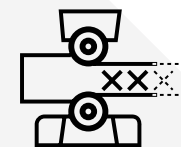
Molten Metal is then poured into an automatic continuous casting machine



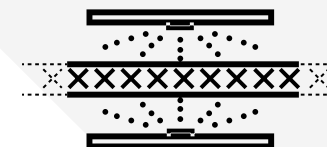
Scrap is hereby converted into Steel Billets of uniform and consistent quality



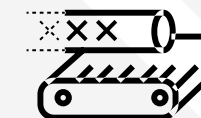
Steel Billets are reheated to 1200 celsius to improve malleability



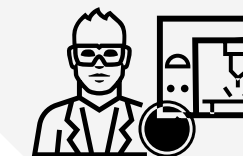
Hot billets are passed through a series of rolls at up to 60 kmph to form and structural products in various sizes



TMT Rebar is passed through a licensed Thermex quenching system - German technology for producing high tensile steel



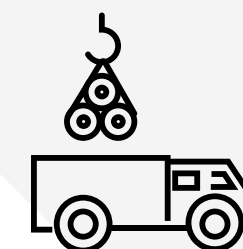
Finished material is then allowed to slowly cool down to achieve the desired physical properties




Every single piece of finished product is visually inspected before dispatch. A sample is tested in our laboratory every 15 mins



Finished products are bundled and labeled neatly for easy dispatch and transportation





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# Quality

## Quality

In order to consistently manufacture steel bars that can withstand the roughest of environments and that exceed international quality standards, Star Steels Ltd. operates an in-house physical and chemical laboratory to continually monitor quality standards. Production samples are systematically tested periodically to ensure that they adhere to our stringent criteria.

Equipped with state of the art thermo-mechanical treatment (TMT) facilities, Star Steels is one of the few companies in Ghana that manufactures high-grade steel even while maintaining a low Carbon, Sulphur and Phosphorus content. This ensures high bendability without compromising on yield strength.

*We test our production **every 15 minutes** to ensure that every piece of steel coming off our lines is of the **highest quality.***





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# Responsibility

## Responsibility

Star Steels aims to be a responsible citizen of Ghana and provide strength and safety not just through its steel, but also through its wider social efforts. In line with our commitment towards social responsibility, we conduct various programs to uplift the society of Ghana.

**Environment:** As a recycling company, Star Steels uses waste scrap as its raw material - reducing its carbon footprint. Moreover, we have installed one of the largest fume extraction systems in the country, ensuring that all waste gases are properly cleaned and treated before they are released into the environment.

**Education:** We believe that education is the backbone of every country's socio-economic growth and development. We conduct various programs for university students to visit our factory and learn about factory operations and steelmaking. Such practices will allow Ghana to slowly become self-dependant and reduce the need for expatriate workers.

**Culture:** Along with the economy, culture is essential strength for any country. Ghana's rich and diverse history is to be celebrated. We facilitate and sponsor various cultural programs for Ghanaian people to showcase their colourful history.



## Contact Us

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