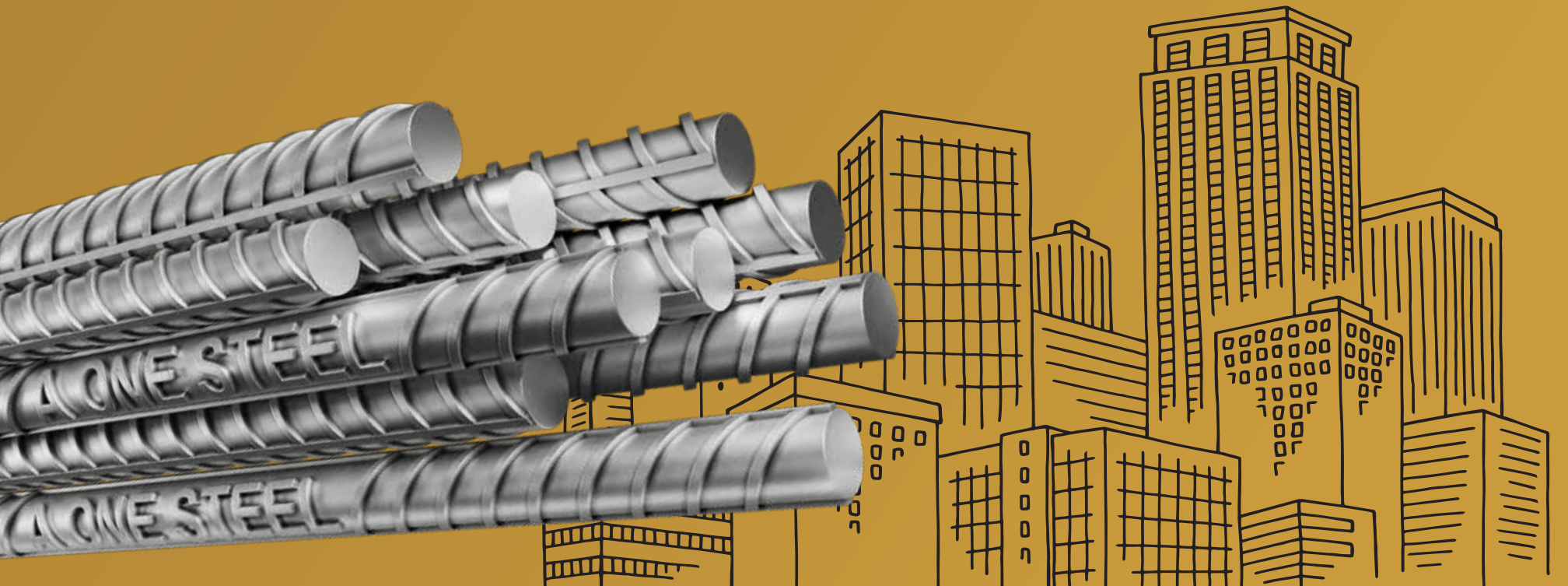
A ONE
STEEL MILLS

Dependable Strength, Unwavering Trust.



Company

INTRODUCTION

A1 Steel: Leading the Way in High-Quality Steel Production

A1 Steel has been a leader in the production of high-quality steel bars in Pakistan. Established with a commitment to contribute to the nation's industrial growth, A1 Steel has consistently set benchmarks by manufacturing steel bars that meet international standards through the use of advanced technology and continuous innovation.

Our vertically integrated facility, with a production capacity exceeding 100,000 tons per annum, leverages premium imported scrap and an energy-efficient green-induction furnace to produce top-grade billets. This meticulous process ensures that our Deformed Supreme, Flexible Elite, and Earthquake Resistance Re-Bar meet stringent American and British standards.

A ONE STEEL MILLS

Delivering High-Quality, Sustainable Steel Solutions for Pakistan's Future

Mission

We aspire to lead Pakistan's steel industry by pioneering innovation and consistently delivering value to our clients. Our commitment extends beyond products to fostering long-term, healthy relationships built on trust and excellence.

Vision

We envision a future driven by continuous innovation and the integration of environmentally friendly production processes. Committed to upholding our promises and adhering to the highest ethical standards, we strive to build enduring relationships with our clients.

Steel Making Process

The company maintains its high production standards through a meticulous and rigorous manufacturing process. Premium-quality scrap is sourced and melted in our state-of-the-art, environmentally friendly Green Furnace.

The molten steel is then transferred to Continuous Casting Machines (CCMs), where it is transformed into hardened billets, ready for the re-rolling process. Throughout this process, the chemical composition is closely monitored to ensure the production of high-quality prime billets. These billets are subsequently hot-rolled and conveyed to our automatic mill, where they are expertly converted into steel bars. This integrated vertical approach enables the company to efficiently produce superior steel bars.

Scrap

We source high-quality scrap, including HMS1, HMS 1&2, and ISRI, from various regions worldwide, primarily Europe. Our facility is equipped with heavy-duty cranes for efficient scrap transfer. Industrial magnets are utilized to convey the scrap into our induction furnace for melting.

Electric Induction Furnace

Scrap is loaded into our furnace using industrial buckets, where it is melted and transformed into prime billets. Throughout this process, we meticulously monitor the chemical composition—including Carbon, Manganese, Phosphorus, Sulfur, and Silicon—to ensure the billets meet international standards.

CCM

Scrap melted in the induction furnace is processed through the Continuous Casting Machine, which precisely converts the molten material into billets for the steel-making process.

Billets

These precisely hot-rolled billets, the primary raw material for steel rebars, are now ready for direct rolling in the mill.

Rolling Mill

The hot-rolled billets are transported via conveyors to our automatic rolling mill, where they are transformed into steel rebars.

Cooling Bed

The hot steel rebars are transferred to our 120-foot cooling bed, where they are carefully cooled and precisely cut to length, either per foot or according to customer specifications, before being prepared for bundling.

Dispatch

Before dispatch, steel rebars are carefully weighed and bundled. To ensure compliance with international standards, random testing is conducted in our in-house laboratories, with any rejected pieces promptly separated. Each bundle is then labeled with our tag, signifying it is ready for dispatch.

Product

Supreme (Astm A-615)

Minimum Yield Strength: **60,000 PSI (420 MPA)**
Minimum Tensile Strength: **80000 PSI (550 MPA)**
Bar Elongation: **8-10%**

Flexible Elite (Astm A-706)

Minimum Yield Strength: **60,000 PSI (420 MPA)**
Maximum Yield Strength: **78000 PSI(540 MPA)**
Minimum Tensile Strength: **80,000 PSI (550 MPA)**
Tensile to Yield Strength Ratio **> 1.25**
Bar Elongation: **12-14%**

Earthquake Resistance Re-Bar (BS4449_G500)

Minimum Yield Strength: **72,500 PSI (500 MPA)**
Minimum Tensile Strength: **88,000 PSI (607 MPA)**
Revised British Standard **2016**
Elongation Minimum= **12.5%**

Features:

- Suitable for all types of construction
- Manufactured from high quality billets
- As per Global Standards
- Uniform gauge and overall dimensions

Imperial Sizes

Bar Designation Number	Diameter/Bar Size		Standar Weight		Expected Length Per Ton		Elongation Min
	Inches	MM	Kg/M	Kg/Ft	Meters	Feet	
(10) 3	0.375	9.5	0.560	0.171	1786	5857	%9
(13) 4	0.500	12.7	0.994	0.303	1006	3300	%9
(16) 5	0.625	15.9	1.552	0.473	644	2114	%9
(19) 6	0.750	19.1	2.235	0.681	447	1468	%9
(22) 7	0.875	22.2	3.042	0.927	329	1079	%8
(25) 8	1.000	25.4	3.973	1.211	252	826	%8
(29) 9	1.128	28.7	5.060	1.543	198	648	%7
(32) 10	1.270	32.3	6.404	1.952	156	512	%7
(36) 11	1.410	35.8	7.907	2.411	126	415	%7
(43) 14	1.693	43.0	11.380	3.470	88	288	%7
(57) 18	2.257	57.3	20.240	6.171	49	162	%7
(64) 20	2.500	63.5	24.840	8.488	40	118	%7

Metric Sizes

Bar Size Diameter (mm)	Standar Weight		Expected Length Per Ton	
	Kg/M	Kg/Ft	Meters	Feet
10	0.617	0.188	1621	5316
12	0.888	0.271	1126	3694
16	1.578	0.481	634	2079
20	2.466	0.752	406	1330
25	3.853	1.175	260	851
28	4.834	1.474	207	679
32	6.313	1.925	158	520
36	7.990	2.436	125	411
40	9.865	3.008	101	332
50	15.410	4.698	65	213
60	22.200	6.768	45	148

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Product

BILLETS

Billets are intermediate steel products from which reinforcement bars are rolled. At A1 Steel, we produce our own billets to ensure consistent physical and mechanical properties in our rebars. We use premium quality raw materials to manufacture our billets, which are both corrosion-resistant and high in tensile strength. Our billets adhere to international standards, including ASTM A615, ASTM A706, and BS 4449: 2016.

We also manufacture steel bars tailored to custom-made orders, ensuring that each product meets the specific requirements and preferences of our clients.

Universal Testing Machine (Utm) Lab

At UTM lab, we are dedicated to ensuring that every steel bar produced meets the most stringent standards of strength and durability. Through a series of rigorous tests and advanced precision analysis, we evaluate the material's integrity at every stage of production. By identifying potential weaknesses and verifying compliance with industry benchmarks, we empower manufacturers to consistently deliver high-quality steel products that stand the test of time.

Our state-of-the-art equipment and expert technicians are at the forefront of innovation, ensuring that each bar is reliable, resilient, and fit for the toughest applications. With a steadfast commitment to excellence, UTM lab plays a crucial role in maintaining product integrity, giving clients the confidence to meet and exceed the demanding requirements of modern construction and engineering projects.

UTM lab is used to test tensile strength (pulling), compressive strength (pushing), flexural strength, bending, shear, hardness, and torsion, providing essential data for material design and quality materials.

CNC Notching Machine

The CNC Notching Machine is a vital tool for precision and efficiency in steel bar processing. Designed to deliver accurate notching with minimal material waste, this advanced technology ensures consistent quality and performance in every bar. Its automated control system allows for precise customization, increasing productivity while reducing errors and downtime.

By integrating this machine into the manufacturing process, steel bar producers can enhance product reliability and meet the rigorous demands of modern construction and engineering standards.

In-House Laboratories

Product quality is rigorously maintained through our in-house laboratories. One laboratory is dedicated to monitoring billet production, where samples are tested to ensure the chemical composition meets international standards. Another laboratory focuses on performing strength tests to ensure compliance with American and British standards, as per client requirements.

Clients

A ONE STEEL MILLS

Deals in all kind of Steel Products

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