बजरङ्ग STEEL

PRODUCT PROFILE

Structural Steel Solutions

बजरङ्ग TMT | बजरङ्ग ANGLE | बजरङ्ग I-BEAM | बजरङ्ग CHANNEL

SWASTIK
ROLLING MILLS

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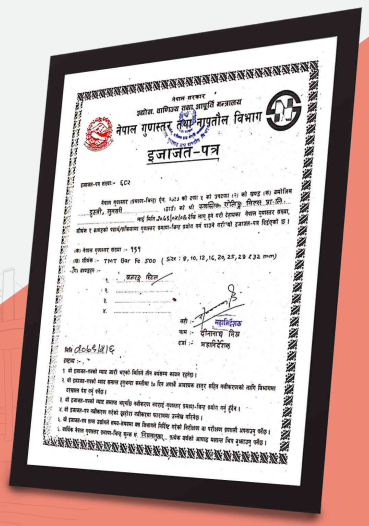
नेपाल गुणस्तर NS 191



बजरङ्ग STEEL


बजरङ्ग स्टील

ABOUT US

Swastik Rolling Mills Private Limited (SRMPL) is an integrated steel mill located in Duhabi, Biratnagar. Established in 2020, with state of the art technology producing the highest quality TMT, ISMB, ISMC, and ISA.

Our production process begins with sourcing the best quality raw materials from the leading producers such as TATA and Reliable India for our Sponge & Pig iron and heavy/selected domestic scrap together with the necessary ferro alloys.

These materials are then melted together at the right proportions in our induction furnaces until the desired temperature is reached after which it is then poured into the Continuous Casting Machine (CCM) which casts Billets of uniform size free of any defects and homogeneous in its properties. The billet is then simultaneously hot rolled and forwarded further through the conveyor to the mills to take its final form as either structural items or MT rebars which comply with the NS standards.

Parallel to the production process, we are very stringent on our quality control regime. Every 30 minutes, random samples are taken to the lab to be tested for compliance in strength and ductility parameters.

At SRMPL, we provide new age rebars with superior properties such as high-strength, bendability, weldability, corrosion & seismic resistance as well as uniform cross section & consistent quality.

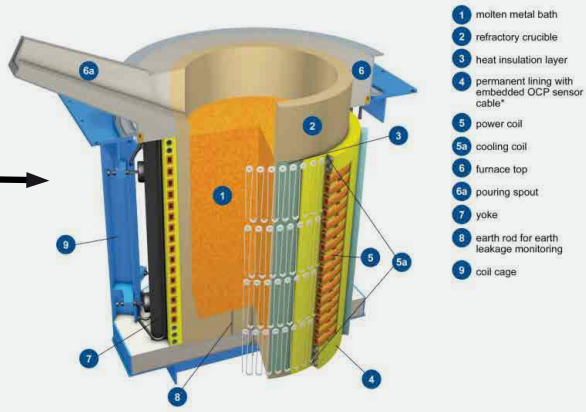
PROCESS FLOW CHART

Ferro Alloys

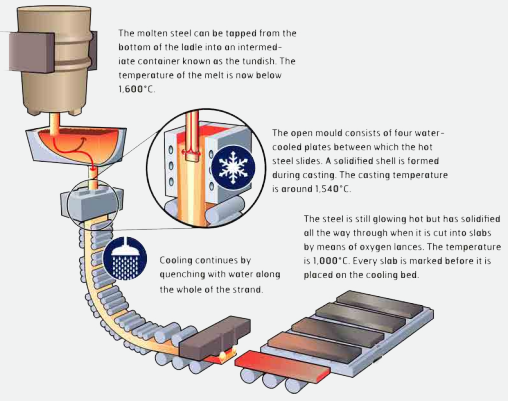
Pig Iron

Scrap

Sponge



Induction Furnace



Continuous Casting Machine (CCM)

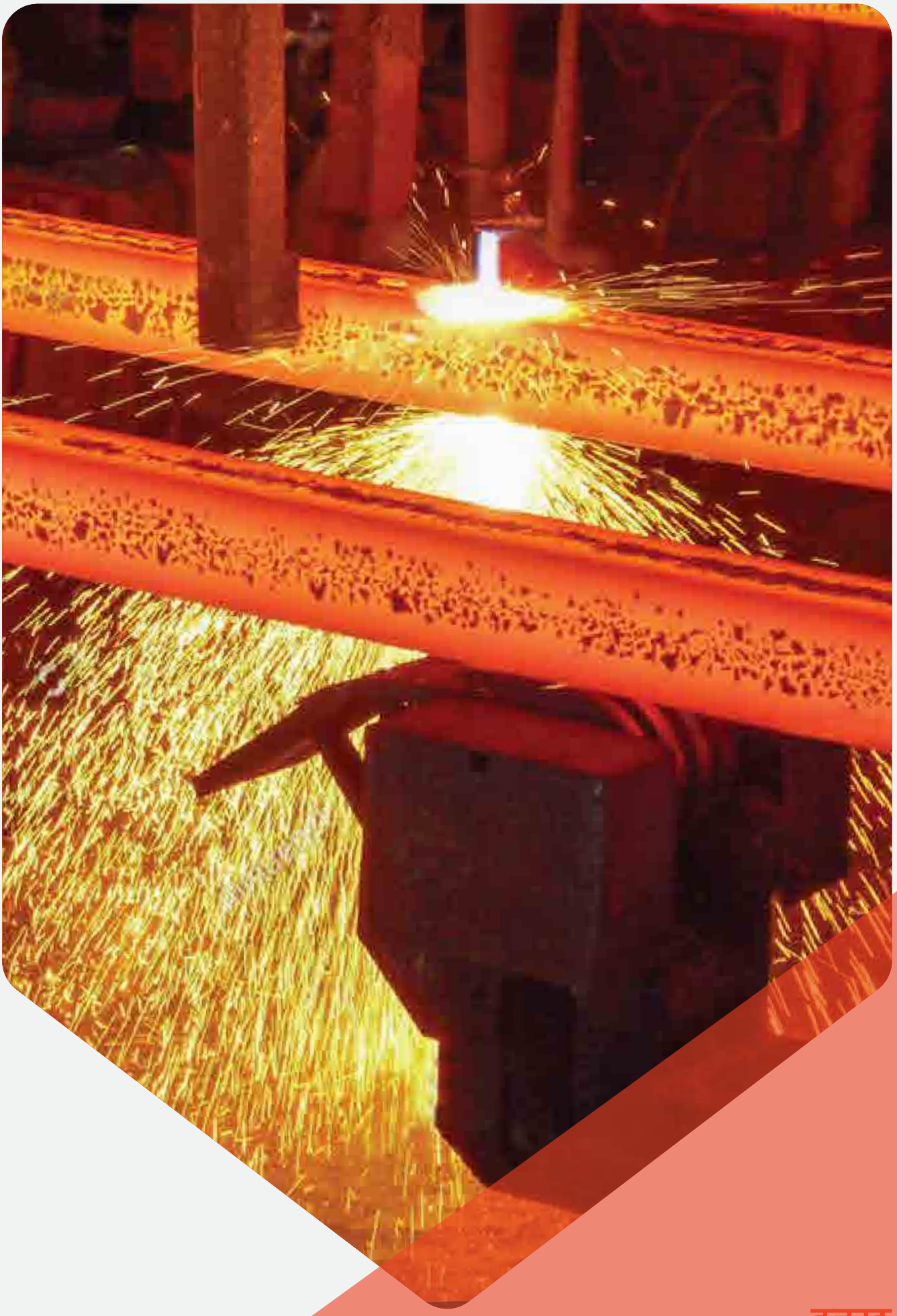
Section Mill
(I-Beam, Channel, Angle)

TMT Mill
(TMT Steel)

MS BILLETS

It is a square cross-sectional metal that is created directly by the process of continuous casting where the liquid steel flows from a furnace to the caster through a copper mold tube. The surface of MS Billets is clear without any scabs or laps due to the smooth copper mold surface. The impure gases in the liquid steel escapes during the solidification process and the chemical alloys are uniformly spread because of the continuous casting technology.

TMT bars produced from continuous casting MS Billets show a remarkable consistency of properties because of the high tensile strength and elongation.



BAJRANG TMT

TMT (Thermo Mechanically Treated) bar, or Rebar, is described as a high-strength reinforcement bar with a tough outer core and soft inner core. This is achieved by a quenching and tempering process which allows the outer surface to cool much faster than the inner core thus resulting in a harder martensitic outer surface while the inner core cools slowly resulting in a ductile inner core.

Concrete/Cement has good compressive strength but poor tensile strength and that's why TMT bars are needed to reinforce the concrete. The ribs on the surface of the TMT provides enhanced anchorage in concrete structures so as to hold it in place and avoid slippage of the concrete from the reinforced bars. Therefore, choosing the correct TMT bars will prove to be detrimental to the quality of the building as it bears the burden of heavy-weight structures and also the aftermath of natural calamities as it can absorb huge amounts of energy.

Bajrang TMT bars are manufactured in advanced process plants in Nepal and are NS-certified conforming to NS 191-2046 specifications for Fe 500 grade. The product is tested and certified by Nepal Bureau of Standards (NS) and comes with the assurance of quality that is the hallmark of the Bajrang brand.

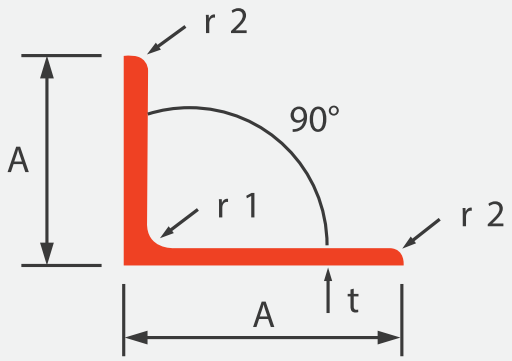
Weight Table per Meter for TMT

Bar Size	Weight Tolerance	Weigth/Meter (Kg)	Minimum Weight (Kg)	Maximum Weight (Kg)
8 mm	± 7%	0.395	0.367	0.422
10 mm	± 7%	0.617	0.573	0.66
12 mm	± 5%	0.888	0.843	0.932
16 mm	± 5%	1.580	1.501	1.659
20 mm	± 3%	2.470	2.395	2.544
25 mm	± 3%	3.850	3.734	3.965
28 mm	± 3%	4.830	4.685	4.974
32 mm	± 3%	6.310	6.120	6.499

BAJRANG ANGLE

These sections come in right angles with vertical legs. They may be equal or unequal in the length depending on the project. A lot of construction projects make use of angle sections for stability. They can withstand internal stresses and do not buckle under the weight of the whole building. They can easily adapt to suit the distinct need of a particular activity.

ANGLE DIMENSION DETAIL



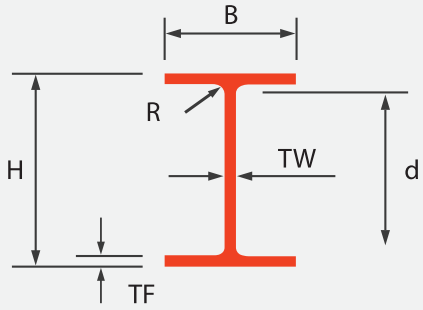
Particular	Weight/Mtr (In Kg)	Dimensions (In mm)			
		A	t	r 1	r 2
40x40x3	2.0	40	3	5.5	Should be reasonably square
40x40x5	3.0	40	5	5.5	
40x40x5	3.7	50	5	6	
65x65x6	5.7	65	6	6.5	
75x75x6	6.9	75	6	7	

BAJRANG I-BEAM

Two horizontal planes, known as flanges which are connected by one vertical component, make up an I-beam, as the shape of the connection creates an uppercase “I” in the cross section. The upper and lower flanges of an I beam have a slope, making the flanges thin outside and thick inside.

The I-beam is the most commonly used beam in structural steel builds. The design and makeup contribute equally to making an I-beam capable of handling a variety of heavy loads. Because of the impressive load bearing capabilities, I-beams are widely used in construction.

I-BEAM DIMENSION DETAIL



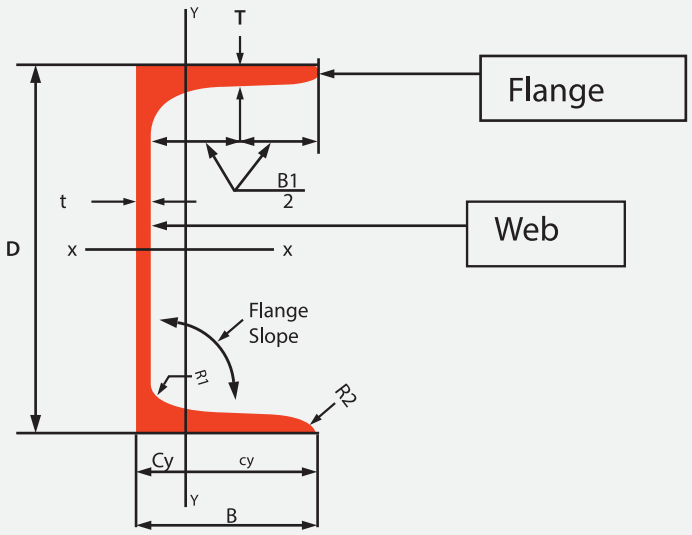
Particular	Weight/Mtr (In Kg)	Dimensions (In mm)				
		H	B	TW	TF	R
MB 100	8.9	100	50	4.7	7	9
MB 125	13.3	125	65	4.9	8	10
MB 150	15.0	150	75	5	8	10

BAJRANG CHANNEL

While I-beams are strong, they're not always easy to incorporate into your fabrication. The problem is that you only have two parallel faces to mount to. Mounting to a face parallel to the web means adding angle to the flanges. C-section channel overcomes this by moving the web out to one edge of the flanges, changing the cross-section from an "I" to a "C" in the process.

C-section thus has three flat surfaces for mounting to. It's still strong, although this geometry does give up a little of the rigidity of the I-beam. Against that, though, it avoids the use of brackets or angle. That saves money, time and weight.

CHANNEL DIMENSION DETAIL



Particular	Weight/Mtr (In Kg)	Dimensions (In mm)						
		D	B	t	T	R1	R2	α
MC 75x40	7.10	75	40	5	6	6	2.4	96°
LC 75x40	5.84	75	40	4	5	5	2.4	94°
ULC 75x40	4.17	75	40	3.5	4	3.5	2.4	93.5°
MC 100x50	9.56	100	50	5.5	7	8	2.4	96.5°
LC 100x50	8.35	100	50	5	6	7	2.4	95°
ULC 100x50	6.44	100	50	4	5	6	2.4	93.5°
MC 125*65	13.70	125	65	6	8.1	9.5	2.4	96°
MC 150*75	16.80	150	75	6	9	10	2.4	97.5°