



SINCE 1986

# LALL

600 XR

# STEELS

रिश्ता मजबूती का



LALL STEELS

600 XR

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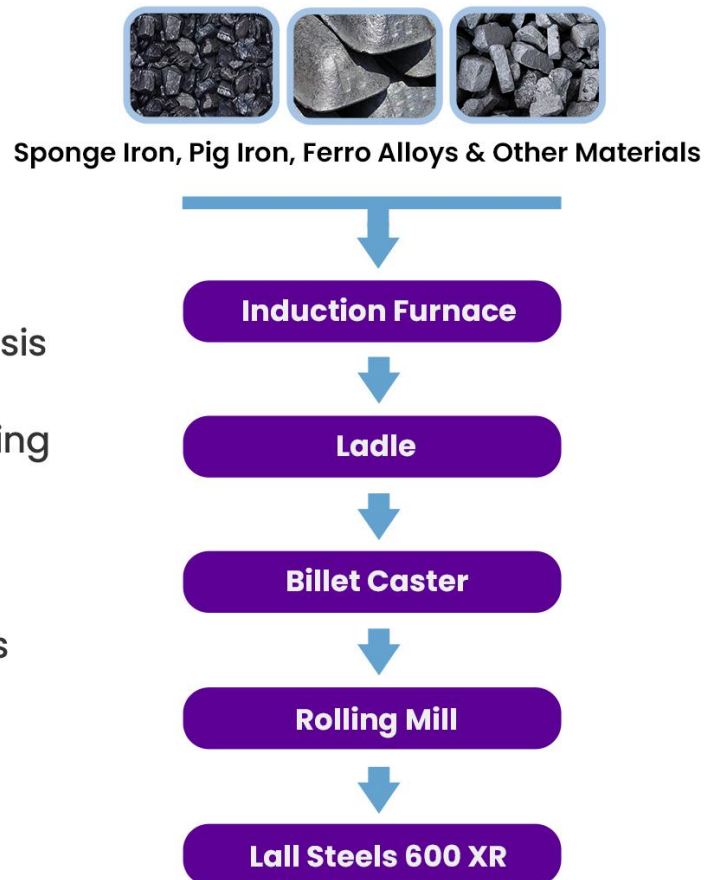
# MANUFACTURING PROCESS & QUALITY CONTROL



PRODUCTION PROCESS

## Quality Checkpoints

1. Chemical analysis of Sponge Iron & Pig Iron
2. Chemical analysis of Ferro Alloys & Other Materials
3. Chemical test of liquid metal
4. Temperature check, Chemical analysis and Visual inspection of billets
5. Temperature monitoring while entering rolling mill division
6. Machine cutting and Bundling
7. Section weight analysis
8. Final Physical and Chemical analysis of TMT rebar





# COMPARISON CHART

( BIS Specifications vs Lall Steels )



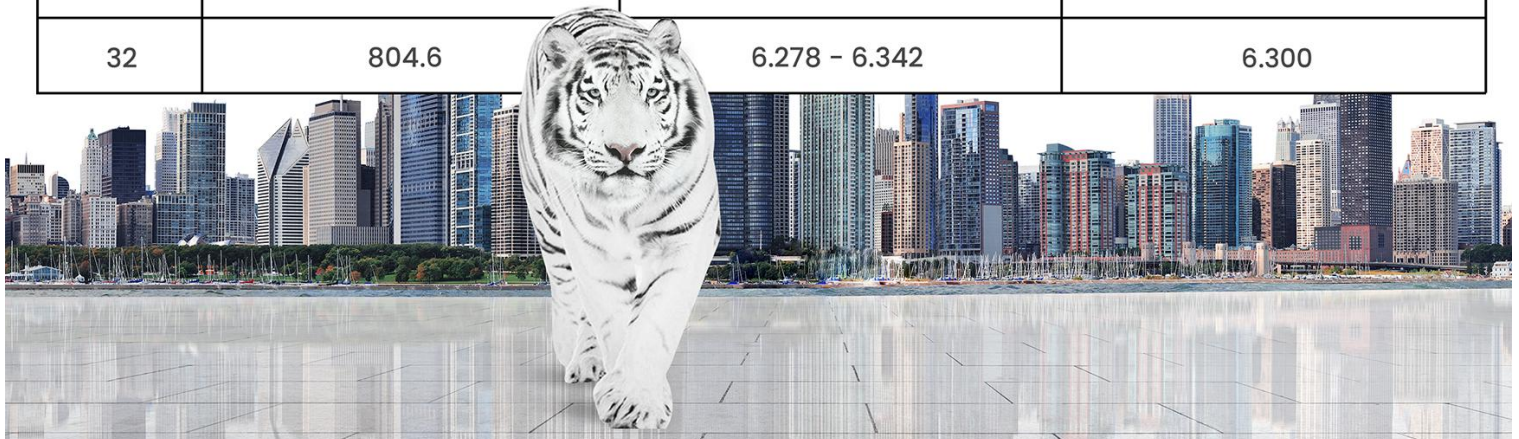
Mechanical Properties	IS 1786 (MIN.)		LALL STEELS (MIN.)	
	Fe 500	Fe 600	Fe 500	600 XR
0.2 Percent Yield Stress - YS (N/mm <sup>2</sup> )	500	600	540	635
Elongation Percent	12	10	24	20
Tensile Strength (N/mm <sup>2</sup> )	545	660	632	725

Chemical Properties	IS 1786 (MAX.)		LALL STEELS (MAX.)	
	Fe 500	Fe 600	Fe 500	600 XR
% Carbon(C)	0.300	0.300	0.180	0.190
% Sulphur(S)	0.055	0.040	0.037	0.034
% Phosphorous(P)	0.055	0.040	0.038	0.035
% Sulphur & Phosphorous	0.105	0.075	0.072	0.065

## WEIGHT TOLERANCE

DIAMETER (MM)	CROSS SECTIONAL AREA (MM <sup>2</sup> )	IS 1786	Lall Steels 600 XR
8	50.3	0.393 - 0.397	0.394
10	78.6	0.614 - 0.620	0.615
12	113.1	0.884 - 0.892	0.886
16	201.2	1.572 - 1.588	1.580
20	314.3	2.458 - 2.482	2.465
25	491.1	3.831 - 3.869	3.841
28	615.8	4.806 - 4.854	4.820
32	804.6	6.278 - 6.342	6.300





# WHY LALL STEELS 600 XR?



- Made with 100% billets only; with hot charging and German Thermal Technology for world class quality
- Made with Tungsten Carbide rolls for smooth finish and shine
- World class RO water systems used for enhanced shine & smoothness
- Every lot of raw materials and finished goods tested in dedicated physical and chemical laboratories
- World class CNC Notching Machine being used for enhanced high quality ribs on TMT Rebar



## SIGNIFICANCE OF XR

**XR – Signifies Extra Enhanced Characteristics (X) of Rebar (R) compared to ordinary TMT Rebars. Few of them are as follows:**

**XR (Extra Ribs):** We emphasize on more number of ribs per unit length compared to ordinary TMT bars in the market which considerably enhances the bondability with concrete

**XT (Extra Tensile):** Due to very high purity of raw materials being used while manufacturing of Lall Steels 600 XR, the tensile strength gets considerably enhanced leading to better construction strength compared to ordinary TMT bars

**XCR (Extra Corrosion Resistance):** Our TMT rebars are highly corrosion resistant due to proper alloying, usage of highly pure raw materials and RO filtered water

**XF (Extra Flexibility):** Our TMT rebars provide better flexibility for enhanced durability of construction

**XCE (Extra Cost Effective):** Less usage required compared to ordinary TMT bars; resulting in considerable amount of savings

