

Engineers | Consultants | Manufacturers | Exporters

The Name
Speaks for itself

Catering All Types of Hot Steel Rolling Mills

To Produce TMT Bars, Light Medium & Heavy Structural Steels













Steel Trade Kings

An ISO 9001:2015 Certified Co.

Company Profile







BRIEF DESCRIPTION

Based in Punjab, We, Steel Trade Kings, are a prominent Engineers, Consultants, Manufacturers & Exporters of precisely engineered Equipment & Machinery for entire Steel Sector.

Our uncompromising attitude towards Quality, Client Satisfaction, On-Time Delivery Schedules AND After Sales support, coupled with our transparent trade practices have helped us to carve a special niche for ourselves in today's highly competitive & cut-throat Business scenario. The brainchild of an experienced veteran, our Company has earned a remarkable market share in its domain by offering an unmatchable assortment of engineering goods at highly economical prices to the huge manufacturing fraternity.

Our Raw Materials, sourced from reputed Designated Vendors confirm to the prevailing International Standards, thus witnessing high demand in both the Domestic and International Markets. On the strength of our professional ethics and customer oriented approach, we have achieved a respectable position for ourselves in the Industry, enabling us to share a long lasting relationship with all our valuable clients.

EMERGENCY SERVICES

We can provide following emergency services as well, for which relevant details will have to be furnished by the concerned Unit in advance.

- Plant & Machinery breakdown handling services on call round the clock
- ✓ Arrangement for spares to handle the breakdown in shortest possible time
- Preparation for assemblies for break-down handling in Rolling Mills

The subsequent pages will give you just a glimpse of products we have in store for you. Believe us, this is just a glimpse, there's a lot more in our bag.

INFRASTRUCTURE



MANUFACTURING FACILITIES

We have a well-equipped Machine Shop spread on an area of overall 36,000 Sq. Ft. (covered area 25,000 Sq. Ft. and Administrative Block 5,000 Sq. Ft.) with Heavy Duty and Precision Machine Tools, having a Material Handling Capacity up to 25 M.T., with experienced and qualified staff for operation and supervision.

The machinery available includes Boring Machines, Vertical Turret Lathes, Gear Hobbing Machines, Center Lathes, Planning Machines and Plano Milling Machines, Shaper Machines, Radial Drilling Machines and Slotting Machines. Other important Equipment includes MIG Welding Machine, Arc Welding Sets (Air Cooled), Gas Cutting Sets, Profile Cutter, Hack-Saw Machines & complete Measuring Instruments.



APPLICATIONS OF HOT STEEL ROLLING MILLS MANUFACTURED BY US:

STK manufactures Steel Rolling Mill Plants & Machinery for the rolling of TMT Bars & Wire Rod in Coils, Squares / RCS, Rounds, Flats, Hexagonal, Light, Medium & Heavy Structural Sections, Angles, T-Irons, Window Sections, H-Beams, C-Channels, I-Beams, HR Strips up to 410 mm, with a production capacity of up to 50 Tons per Hour. By Virtue of rich and vast experience of the promoter himself and with his team of technical staff in this field, we have established our name both in Indian and Overseas markets. The Company also has a well-organized working structure to facilitate Smooth and Hurdle free flow of material.

CONSULTANCY:

Our Consultancy & Engineering Division can handle Customer requirements promptly and suggest best possible solutions with various alternatives. Once the customer's needs are identified, we can provide the most economical Mill Layouts resulting in high productivity and product quality. We lay special emphasis on Specific Fuel & Power Consumption and ensure environment friendly pollution free facilities. We also undertake technology upgradation and modernization of existing Mills for Higher Productivity, Better Quality, Fuel & Power Efficiency and Reduction in Environment Pollution.

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MILL STANDS

The stand mainly consists of a pair of precisely machined housings confirming to below said vertically in its central slot position. The middle roll is fixed whereas the top and bottom roll are kept vertically tractable in order to generate the desired roll gap while rolling the stock. The rolls are allowed to rest in mild steel machined chocks with replaceable bearings chocks

- >> 210 MM PCD TO 610MM PCD)
- >> 2 ROLL/3 ROLL/4 ROLL TYPE
- >> FIBRE TYPE / ROLLER BEARING TYPE / MULTI ROW BEARNING TYPE











PINION STAND (210 MM PCD TO 610 MM PCD) 2 HI / 3 HI

A Pinion Gearbox is used to transmit Power from Reduction Gearbox to Mill Stands without transmit Power from Reduction Gearbox to Mill Stands without affecting the speed, thereon reducing the direct load on Reduction Gearbox.









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REDUCTION GEAR BOX

A Reduction Gearbox is used to reduce an input speed of the prime mover (motor) to a slower output speed in order to transmit higher power or increase output torque, as often demanded by the Rolling Mill. It is a wheel work consisting of a connected set of rotating gears by which power is transmitted & motion and torque is changed.

- >> 300 PCD TO 2100 PCD
- >> SINGLE STAGE OR MULTISTAGE
- >> SINGLE INPUT SINGLE OUTPUT OR MULTIPLE OUTPUT
- >> REDUCTION GEARBOX OR REDUCTION-CUM-PINION GEARBOX











COLD SHEARING MACHINES



HOT SAW For online cutting of Medium & Heavy Steel Sections (Blade Dia upto 2000 mm)



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FLYING SHEARS & CONTINUOUS SHEARS

FEATURES

The cutting Blade is typically mounted on a carriage that moves either parallel to the product flow or at an angle across the product flow. The Flying Shear drive accelerates the carriage to synchronize with the line speed, at this point the cut Blade be activated. The carriage then decelerates and returns to its original position ready to cut again. There are also many other similar applications where a carriage must be synchronized at line speed and these can also be accommodated using Control Techniques' Flying Shear control software.









CRANK SHEARS & COBBLE SHEARS



FUNCTIONING

- >> These shears work as start-stop-shears and adopt the crank-and-rocker principle of operation.
- Whilst performing the shearing operation the knives are almost perpendicular to the stock to be cut.

APPLICATIONS

These shears are suited for front and tail end cutting, crop/cut sections at slower speeds in Roughing Mills.





TAIL BRAKERS

FEATURES

Tail breaker is installed after the flying shear and before cooling bed to reduce the velocity of the TMT bars. It runs through DC or AC variable drives. The Rolls are separated through pneumatic cylinder control. It consists of steel fabricated body, pneumatic cylinder, top and bottom rocker arms and rollers.



Cantilever Type Pinch Rolls at Pre & Post Quenching Box are essentially required because of:

- » Maintaining the constant quenching time.
- >> Drawing the short back end.
- >> Improving the straightness of the bars in case of small diameters.





TMT QUENCHING BOX

TMT Quenching is a game changing technology that has stormed the Indian Steel Industry. The Introduction of the concept of Quenching and Self-tempering Rebars, ended the Standard Indian practice of using Cold Twisted Deformed bars among Top Steel Bar manufacturers in the country. On account of its simplicity, low-cost, ease in operation and capability of producing high strength deformed bars, Quenching has gained immediate global acceptance.



INNER PARTS OF QUENCHING BOX





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PLATE SHEARING MACHINE

>> Single Stroke Cutting Capacity upto 50 mm thickness & 2100 mm wide



>> Scissor Type, Cutting Capacity Up To 75mm







BILLET SHEARING MACHINE: FOR BILLETS / BLOOMS UPTO 250 MM





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GEAR COUPLINGS (RANGING FGC 5 TO FGC 16):

A Gear Coupling is used for transmitting torque and power between two shafts. It is of compact assembly capable to deliver high rupturing loads at high speeds. The design of these couplings such that it will accommodate angular, off set or combined angular off set misalignment with in allowable ratings and permits axial float or thermal expansion of connected shafts.



FLYWHEEL (RANGING 4 MT TO 12 MT WEIGHT)

A Flywheel is heavy metal wheel attached to a drive shaft, having most of its weight concentrated at the circumference. Main function of flywheel is to reduce speed fluctuation by storing extra energy during part load as kinetic energy and same is released during overloading. By slowly increasing the speed of a flywheel a small motor can store up energy which enables the motor to perform a function for which it is ordinarily too small. Shaft calculations incorporate a high safety factor and are validated by bending and torsion stress analyses.







SECTION STRAIGHTENING MACHINES (STK 210 TO STK 610) FOR ANGLES, CHANNELS, H-BEAMS, I-BEAMS, FLATS ETC.





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DEFINITE / INDEFINITE CHILLED ROLLS

The working surface of Dynamic Rolls shows the white graphite free structure consisting of eutectic carbide and transformed austentite. This gives a hard layer which confers good resistance to wear. The core and neck are made upon steel shaft in specialized double poured centrifugally cost chill Rollers barrels. Compared to grey iron, white Dynamic Rolls is less soft, strong and incapable of withstanding high dynamic stresses, but owing to its greater hardness, has better wear-resistance, and has high compressive strength. It retains a fair proportion of its strength at elevated temperature, for example, in hot rolling. These make excellent work steel re-rolling mills, semi-automatic or Automatic plants, Wire roll plants, TMT plants, Roughing mill Rollers, Intermediate mill Rollers for two, three and four-high mills, turning out of high grade ferrous and non-ferrous sheet and strip or section. High Alloy Dynamic Rolls have proved well.



DOUBLE POURED INDEFINITE CHILL ROLLS

These rolls have hard alloy iron on the working layer and soft grey iron or SG iron core depending upon the application. The shell matrix with proper distribution of carbides and graphite imparts high wear resistance, stability in shape and good surface finish. The softer core ensures good mechanical properties and resistance to thermal & mechanical loads.

| Hardness | C | Mn | Si | P | S | Ni | Cr | Мо | Uts kgmfinim2 |
|----------|-----------|-----------|---------|-----------|----------|-----------|-----------|---------|---------------|
| 50-60 | 2.9513.00 | 0.6210.93 | 1.05.55 | 0.15 Max. | 0.06 Max | 1.1011.50 | 0.8511.25 | 0.30145 | 35-45 |
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ADAMITE ROLLS



Adamite Rolls are basically alloy steel rolls (a kind of high carbon steel) having hardness ranging from 40 degrees shore c to 55 degrees shore c with carbon percentage ranging from 1.35% to 2%. These rolls are primarily supplied for initial stands, where wear resistance is important along with considerable strength and toughness, adequate heat treatment is very much necessary to achieve requisite wear resistance along with strength and toughness, the roll contains carbides, and therefore the wear resistance is obviously improved comparing with hypo-eutectoid and eutectoid steel, to obtain excellent comprehensive properties modification is conducted with special rare-earth or other powerful agent, then through a multi-stages heat-treatment process, that consists of briquette carbides dispersed in the matrix of palletized pearlites can be gained, which perform well on strength, toughness and hot crack resistance. Apart from that a vast range of S.G Iron rolls is also available in a range of: 50, 60, 65, 70, 75 and 80 shore D. These admite rolls offer higher durability and life to clients.

| Symbol | Hardness ill (ShC) | C | Mn | Si | Cr | Ni | Mo |
|--------|--------------------|---------|----------|---------|---------|---------|-----------|
| ASB-40 | 45-50 | 1.4-1.8 | 0.6-1.40 | 0.3-1.0 | 0.8-1.5 | 0.5-1.2 | 0.2-0.4 |
| ASB-45 | 45-50 | 1.6-2.8 | 0.6-1.40 | 0.3-1.0 | 1.0-1.8 | 0.7-1.5 | 0.2-0.4 |
| ASB-50 | 50-55 | 1.6-2.2 | 0.6-1.40 | 0.3-1.0 | 1.2-2.0 | 1.0-1.5 | 0.25-0.45 |



S.G. ROLLS

Spheroidal Graphite Iron Rolls (S G Iron) is considered as one of the most versatile roll materials nowadays. It is produced by a small proportion of magnesium added to the melt as nickel-magnesium or alternative alloy, or as pure magnesium. In S G Iron Roll, the free carbon takes the shape of spheroids or nodules, thereby eliminating the notch effect of flake graphite and improving upon the mechanical properties of the cast iron.

In these rolls the graphite is in the form of spheroids produced by suitable inoculation. Most nodular iron rolls are chill cast resulting with a hard working layer and softer nects. The alloy content is accurately controlled to give fine and well distributed graphite nodules and refined carbide in generally pearlitic or bainitic / martenstic matrix. The Higher alloy content Cr-Ni-Mo makes the rolls more tougher & wear resistant.



| Symbol | Hardness ill (ShC) | C | Mn | Si | Cr | Ni | Mo |
|--------|--------------------|-----------|---------|---------|---------|---------|-----------|
| SGP-45 | 45-50 | 2.8-3.4 | 0.3-1.0 | 1.5-2.3 | 0.3-0.8 | 1.2-1.8 | 0.2-0.4 |
| SGP-50 | 50-55 | 3.0-3.6 | 0.3-1.0 | 1.5-2.3 | 0.3-0.8 | 1.2-1.8 | 0.2-0.4 |
| SGP-60 | 60-65 | 3.10-3.70 | 0.5-1.0 | 1.3-1.8 | 0.5-1.0 | 1.5-2.5 | 0.30-0.60 |

FORGED ROLLS

Forging where in the material is hammered according to the customers sizes & requirements is a process in which the ingot is heated in the furnace & then forged. the forging process help in cohesiveness and strength by elongation of the grain structure, which results in material having much higher load bearing capacities as compare to casted material. Heat treatment is done in normalizing / annealing furnace and forgings are ultrasonically tested thereafter. We have the capacity to supply a single piece up to 7000 kg. in plain carbon steel such as M. S., Class-2, Class-3, EN-8, EN-9 & EN-42, EN-31, EN-19, EN-24, EN-41b, EN-353, EN-25, EN-18 etc.

These forged rolls are basically used for rolling purpose in industries where Girders, Channels, Angles are manufactured.







Normal Pinch Rolls are essentially required as per requirement

- >> To maintain the speeds of the travelling bar
- >> To match the speed of the Entry & Exit of Mill Stands



OIL LUBRICATIONS SYSTEM





HIGH PRECISION BEARING CHOCKS & PLUMMER BLOCKS













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TRANSMISSION EQUIPMENT & SPARES



CARDON SHAFT



UNIVERSAL SPINDLES



CONVERSION SPINDLES



UNIVERSAL COUPLING



C.I.WOBBLER COUPLING



WOBBLER



SPROCKETS



ROLLER GUIDE BOXES, TWIST PIPES & ENTIRE SPARES

















INFRASTRUCTURE























FEW OF OUR ESTEEMED CLIENTS































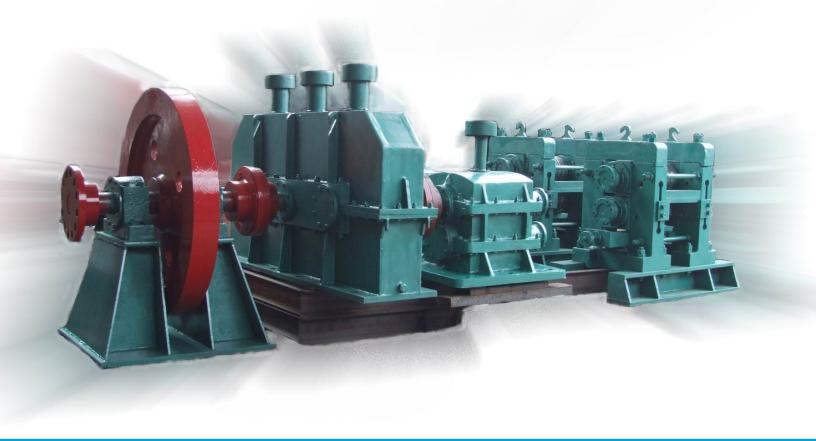






Many More...





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