

TATA STEEL
#WeAlsoMakeTomorrow



SHAPING THE CONSTRUCTION INDUSTRY THROUGH VALUE ADDED PRODUCTS AND DOWNSTREAM SOLUTIONS



Tata Steel Limited | Tata Centre | 43 Jawaharlal Nehru Road | Kolkata 700071 | India

Toll free no 1800 108 8282

About Tata Steel

We aspire to create value for all our stakeholders

10th largest Steel Manufacturer in the World (based on capacity) Source: World Steel Association

Amongst the **Top 3 global steel companies** and the only company in India to be **gold rated** in the Dow Jones Sustainability Indices (DJSI) Assessment 2017.

Highlights FY 2017-18 (Standalone)

₹60,519 Cr. Turnover | **₹4,170 Cr.** PAT

We are in the business of steel-making for the last 111 years

Established in Jamshedpur, India in the year 1907, Tata Steel is part of the 150-year-old Tata group. Bringing to reality the vision of its founder, J. N. Tata, who inspired the steel and power industry in India, the Tata Steel Group is the 10th largest steel manufacturer in the world and is known to be the hallmark of corporate citizenship and business ethics.



Resource-efficient blast furnaces with high productivity



Tata Tiscon Rebars

We are one of the world's most geographically diverse steel producers

With operations in 26 countries and commercial presence in 50 countries, the Tata Steel Group has a steel production capacity of 27.5 MnTPA (as on March 31, 2018). Tata Steel India has manufacturing units at Jamshedpur, Jharkhand, with a production capacity of 10 MnTPA and at Kalinganagar, Odisha, with a production capacity of 3 MnTPA. In FY 2017-18, our Kalinganagar unit received approvals for expansion to 8 MnTPA. Tata Steel operates with a completely integrated value chain that extends from mining to finished steel goods.

We are driven by innovation, guided by values and poised for the future



Our growth aspirations are supported by efforts to continually improve processes, building efficiency and adding value to our products while meeting stakeholder expectations across the value chain. Our approach to innovation is based on identifying newer technologies and collaborating with innovative people and organisations. In everything we do, we continue to act responsibly by conserving our natural resources, while making sustainable growth possible.

Vision

We aspire to be the global steel industry benchmark for 'Value Creation' and 'Corporate Citizenship'.

We make the difference through:



Our People



Our Policies



Our Offerings



Our Innovative Approach



Our Conduct

1

Mission

Consistent with the vision and values of the founder Jamsetji Tata, Tata Steel strives to strengthen India's industrial base through effective utilisation of staff and materials. The means envisaged to achieve this are cutting-edge technology and high productivity, consistent with modern management practices.

Tata Steel recognises that while honesty and integrity are the essential ingredients of a strong and stable enterprise, profitability provides the main spark for economic activity.

Overall, the Company seeks to scale the heights of excellence in all it does in an atmosphere free from fear, and thereby reaffirms its faith in democratic values.

Values

• Integrity • Excellence • Unity • Responsibility • Pioneering

2

Tata Tiscon - The Reliable Rebar

Tata Tiscon rebars are available in several grades: Tata Tiscon Fe 500D, Tata Tiscon Fe 550D, Tata Tiscon Fe 500S, Tata Tiscon Fe 600 and Tata Tiscon CRS. Tata Tiscon rebars adhere to all the mandatory requirements of the Bureau of Indian Standards IS 1786. They are made in accordance with the TMT process.

Recognitions:

In 2008, Tata Steel India became the first integrated steel plant in the world, outside Japan, to be awarded the Deming Application Prize for excellence in Total Quality Management.

In 2012, Tata Steel became the first integrated steel company in the world to win the Deming Grand Prize instituted by the Japanese Union of Scientists and Engineers.



The Manufacturing Process: TMT

Tata Steel was the first in India to develop Thermo Mechanically Treated (TMT) rebars, using the latest technology from Tempcore, Belgium. The rebars are produced in state-of-the-art plants under the close supervision of high-calibre metallurgists and engineers. The basic steel is made from virgin iron ore through the blast furnace - basic steel making - secondary refining - billet casting route, with minimum impurities.

Quenching: The hot rolled bar leaving the final mill stand is rapidly quenched by a special water spray system. This hardens the surface of the bar to a depth, optimised for each section through formation of martensitic rim while the core remains hot and austenitic.

Self - Tempering: When the bar leaves the quenching box, the core remains hot compared to the surface, allowing heat to flow from the core to the surface, causing tempering of the outer martensitic layer into a structure called 'tempered martensite'. The core still remains austenitic at this stage.

Atmospheric Cooling: This takes place on the cooling bed where the austenitic core is transformed into ductile ferrite-pearlite structure. Thus the final structure consists of an optimum combination of a strong outer layer (tempered martensite) with a ductile core (ferrite-pearlite). This gives Tata Tiscon its unique combination of higher strength and ductility.

Tata Tiscon Fe 500D

Tata Tiscon Fe 500D has been the benchmark of purity and quality in the construction industry

Chemical Properties

Constituent (%)	IS 1786	Tata Tiscon Fe500D*
Carbon (Max)	0.25	0.25
Sulphur (Max)	0.04	0.035
Phosphorous (Max)	0.04	0.035
Sulphur and Phosphorous (Max)	0.075	0.07
Carbon Equivalent (Max)	0.50	0.42
Nitrogen ppm (Max)	120	80

Mechanical Properties

Property	IS 1786	Tata Tiscon Fe500D*
Yield Stress - N/mm ² (Min)	500	520
UTS - N/mm ² (Min)	565	585
UTS/YS Ratio (Min)	1.10	1.12
% Elongation (Min)	16	16
Total % EL at maximum force (Min)	5	5

*Figures in italics are typical values as obtained

Critical for quality test of a rebar

<input checked="" type="checkbox"/> Chemical Properties <input checked="" type="checkbox"/> Bend and Re-bend Test	<input checked="" type="checkbox"/> Physical Properties <input checked="" type="checkbox"/> Rim Uniformity	Tata Tiscon Fe500D conforms to all these tests
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Key Approvals- PGCIL, BRO, EIL, AAI

The Chenani-Nashri tunnel which has been reinforced by Tata Tiscon, is a single-tube bi-directional tunnel. It is India's longest road tunnel and located in Udhampur district of Jammu and Kashmir.

Tata Tiscon Fe 550D

Higher strength rebar from the House of Tata Steel

Chemical Properties

Constituent (%)	IS 1786	Tata Tiscon Fe550D*
Carbon (Max)	0.25	0.25
Sulphur (Max)	0.04	0.035
Phosphorous (Max)	0.04	0.035
Sulphur and Phosphorous (Max)	0.075	0.07
Carbon Equivalent (Max)	0.61	0.45
Nitrogen ppm (Max)	120	80

Mechanical Properties

Property	IS 1786	Tata Tiscon Fe550D*
Yield Stress - N/mm ² (Min)	550	570
UTS - N/mm ² (Min)	600	635
UTS/YS Ratio (Min)	1.08	1.12
% Elongation (Min)	14.5	14.5
Total % EL at maximum force (Min)	5	5

*Figures in italics are typical values as obtained

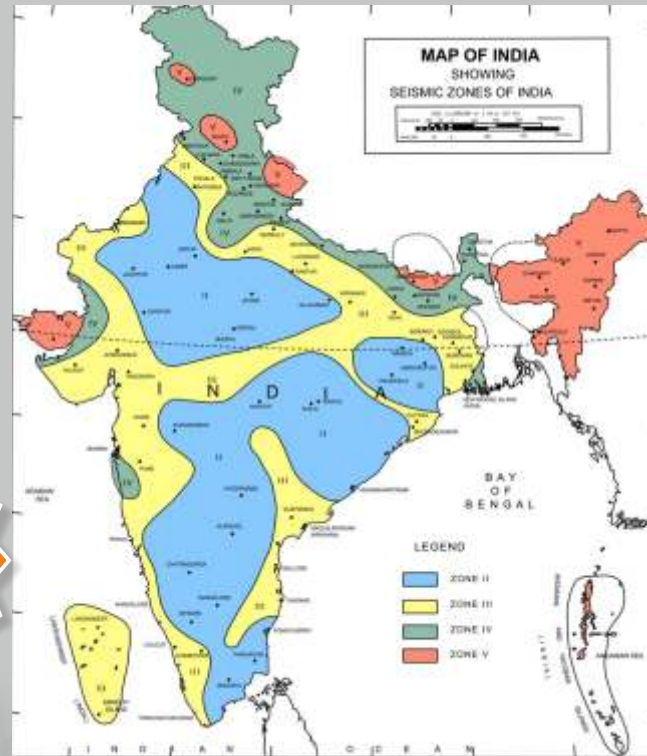
Tata Tiscon 500S

With 54% of the Indian land mass on the highly active Himalayan and Eurasian plates, earthquakes have become a fact of life in India - causing enormous damage and loss of life. Though earthquakes cannot be predicted, the damage they cause can be minimised by the use of seismic-resistant rebar for construction.

**INTRODUCING
THE ALL NEW
TATA TISCON FE500S**

**HIGH
DUCTILITY
REBAR**

**SUITABLE
FOR HIGH
SEISMIC
ZONES**



Introducing highly ductile rebar, ideal for construction in earthquake prone areas falling under seismic zones 3 and above.

Chemical Properties

Constituent (%)	IS 1786	Tata Tiscon Fe500S*
Carbon (Max)	0.32	0.30
Sulphur (Max)	0.04	0.035
Phosphorous (Max)	0.04	0.035
Sulphur and Phosphorous (Max)	0.075	0.07
Carbon Equivalent (Max)	0.61	0.61
Nitrogen ppm (Max)	120	80

Mechanical Properties

Property	IS 1786	Tata Tiscon Fe500S*
Yield Stress (Min)	500	520
Yield Stress (Max)	650	600
UTS/YS Ratio (Min)	1.25	1.25
% Elongation (Min)	16	18
Total % EL at maximum force (Min)	8	8

**Figures in italics are typical values as obtained*

Note: Fe500S also conforms to IS 13920 specifications for seismic zone constructions

IS 13920

Property (%)	IS 13920	Tata Tiscon Fe500S*
UTS/YS Ratio (Min)	1.15	1.25
% Elongation (Min)	14.5	18

Tata Tiscon Fe 600

Tata Tiscon's unique method of manufacturing creates a combination of strength and ductility that conforms to IS:1786. Tata Tiscon Fe600 offers 20% higher Yield Strength (YS) than the Fe500 grade rebar.



Rebar samples are tested at NABL accredited Tata Steel Laboratories

Key Approvals - CIDCO, Maharashtra

Chemical Properties

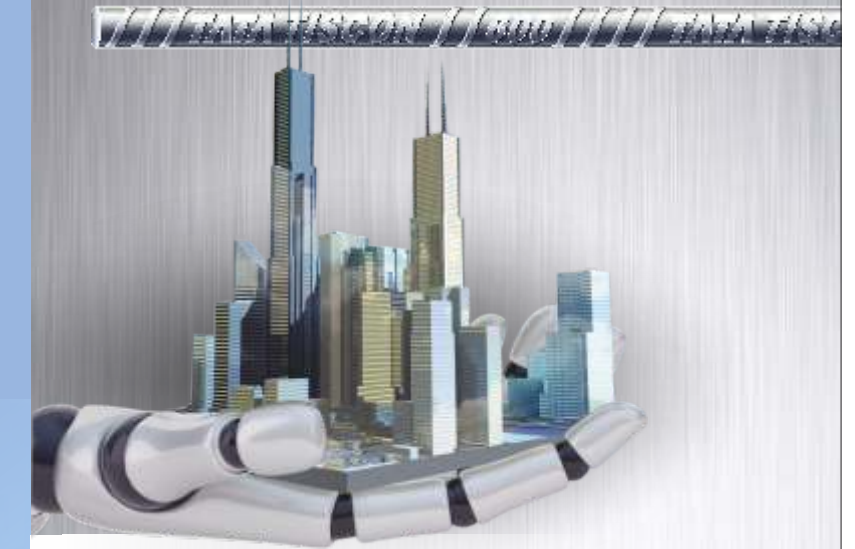
Constituent (%)	IS 1786	Tata Tiscon Fe600*
Carbon (Max)	0.30	0.30
Sulphur (Max)	0.04	0.035
Phosphorous (Max)	0.04	0.035
Sulphur and Phosphorous (Max)	0.075	0.07
Nitrogen ppm (Max)	120	80

Mechanical Properties

Property	IS 1786	Tata Tiscon Fe600*
Yield Stress - N/mm ² (Min)	600	620
UTS - N/mm ² (Min)	660	680
UTS/YS Ratio (Min)	1.06	1.10
% Elongation (Min)	10	12

**Figures in italics are typical values as obtained*

**SUPER STRENGTH
HAS A NEW NAME
TATA TISCON Fe600**

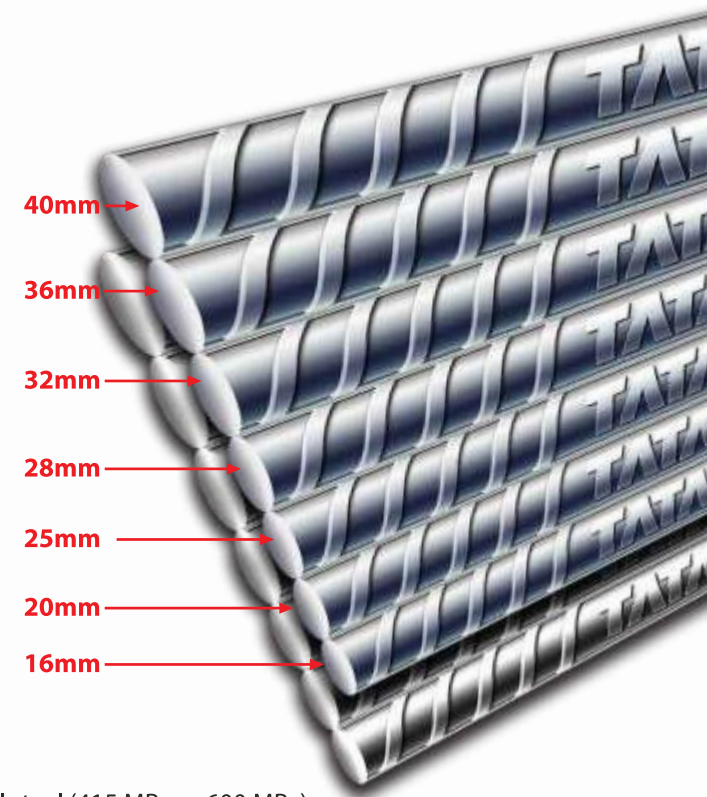


**Applications:
High Rise Buildings and Heavily Reinforced Members
at Infrastructure Sites**

Upcoming TRIL IT SEZ, Gurugram has used Fe600 high strength rebars to reduce congestion and steel consumption.

Availability

It is available in the following sizes: 16mm, 20mm, 25mm, 28mm, 32mm, 36mm and 40mm.



Tata Tiscon Fe600 – More Benefits Than One

Tata Tiscon Fe600 rebars offer 45%* higher strength than conventional steel (415 MPa vs 600 MPa).

This results in:

- **Reduction of steel consumption:**
Redesigning the structure using Fe600 rebar, reduces the steel requirement for a project by up to 25%*
- **Reduction in labour cost:**
Less steel to handle and hence labour costs are lower by up to 15%*
- **Reduction in congestion:**
Higher strength requires lesser bars (section-area) to carry similar loads resulting in lesser congestion improving the quality of construction
- **Faster progress:**
Lesser steel handling and lower congestion enables faster project completion
- **Industrial reliability:**
More flexibility and efficiency in design



Normal rebar

**EXTRA STRENGTH
REDUCED STEEL USAGE
MORE SAVINGS**



Tata Tiscon Fe600

*Varies from case to case

Corrosion Resistant Super Ductile Rebars (CRSD)

CORROSION - THE DEVIL WITHIN

Corrosion is the most deadly enemy of concrete structures. Wherever there is humidity, corrosion sets in steadily and destroys slowly, attacking houses, bridges, dams, industrial plants and just about any construction that has used concrete reinforced with steel. The peril of corrosion is detrimental to the inner strength of any concrete structure.

TATA TISCON CRSD - THE CORROSION FIGHTER

Tata Tiscon CRSD keeps corrosion at bay and protects the life of your structures. Tata Tiscon's Corrosion Resistant Super Ductile Rebars (CRSD) are best suited to resist both corrosion and damages caused by earthquakes. The Tata Tiscon CRSD with Fe500D properties fights salinity in the air, sea-water, ground water, moisture and acid particles in the air. Ordinary rebars on the other hand have a shorter life span.



TATA TISCON CRSD - AVAILABILITY

The unique protective chemistry of CRSD rebars not only resist corrosion but also prolongs the life of concrete structures. Tata Tiscon CRSD Fe500D (grade of IS 1786:2008) rebars are available in the following sizes: 8mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm, 28 mm, 32 mm, 36 mm, 40 mm

Chemical Properties

Constituent (%)	IS 1786	Tata Tiscon Fe 500 CRSD*
Carbon (Max)	0.25	0.20
Sulphur (Max)	0.04	0.035
Phosphorous (Max)	0.04	0.035
Sulphur and Phosphorous (Max)	0.075	0.07
Carbon Equivalent (Max)	0.50	0.45
Nitrogen ppm (Max)	120	80
Corrosion resistant elements (Cu + Cr + Mo + P+Ni) (Min)	0.4	0.40

*Figures in italics are typical values as obtained

Corrosion Resistant Index - 1.30

Tata Tiscon Fe500 CRSD conforms to IS 1786 specifications for chemical and mechanical properties.

TATA TISCON CRSD - ADVANTAGES

- Longer life- Corrosion resistance is achieved by improving steel's chemistry
- External coating is not required - No 'Coating Holiday' effect
- No extra operation required during fabrication

**CRSD
FIGHTS
CORROSION**

Applications:
Construction exposed to coastal, marine, corrosive, and saline underground environment

Build your project with superior corrosion-resistant rebars

Key Approvals - CIDCO, NDMA, BHEL

BENEFITS OF CRSD OVER EPOXY & CPCC

The various differences between TATA TISCON CRSD, CPCC and Epoxy Coated Rebar art listed below.

Parameters	Tata Tiscon CRSD	Cement Polymer Composite Coating (CPCC)	Epoxy Coated Rebar
Corrosion Resistance Technology	Enhanced inherent immunity with special alloying addition	External coating that behaves more like a blanket cover	External coating that behaves more like a blanket cover
Surface preparation	Not required	Surface cleaning efficiency is a critical factor	Not required
Coating holiday effect	No coating holiday effect due to inherent corrosion resistance	Detection and elimination of all coating holidays under suspicion. Pits and discontinuities can lead to severe pitting & corrosion at the uncoated site	Pits and discontinuities in the epoxy film can lead to accelerated corrosion at the uncoated site
Bond strength with concrete	Better bond strength with concrete	Bond strength may not be high due to external coating	Lesser bond strength compared to CRS due to external coating
Welding	No special care is required	Coating gets damaged during welding	Not advisable for welding as coating gets damaged during welding
Fabrication (Cutting)	Normal practice as conventional rebar	Chances of cracking/flaking of coating while cutting	Chances of cracking/flaking of coating while cutting
	No protection required at bare cut end due to inherent immunity	Corrosion can initiate from exposed cut ends	Corrosion can initiate from exposed cut ends
Bending	Normal practice just as for conventional rebar	There are chances of the coating getting removed during bending. Bending to be completed prior to coating	There is a chance that the coating may get disbonded during bending if quality of coating is not proper
Handling	No special handling required	Extensive special handling required	Special handling required on-site to avoid coating damages
Final inspection and repair on-site	Not required	Quality control is difficult. Final inspection is required to repair all the visible damages. Labour intensive and needs close monitoring	Inspection on-site recommended to detect and repair all the visible coating damages
Usage of tie wire, couplers	Uncoated tie wire/couplers can be used on-site	Pre-coated tie wire/couplers to be used	Pre-coated tie wire/couplers to be used

Dholera Smart City ensures excellent connectivity through rail, road, express highway, international airport, metro and port which collectively links the city on both national and global front. Tata Steel has supplied corrosion resistance rebar in Dholera Smartcity Project.



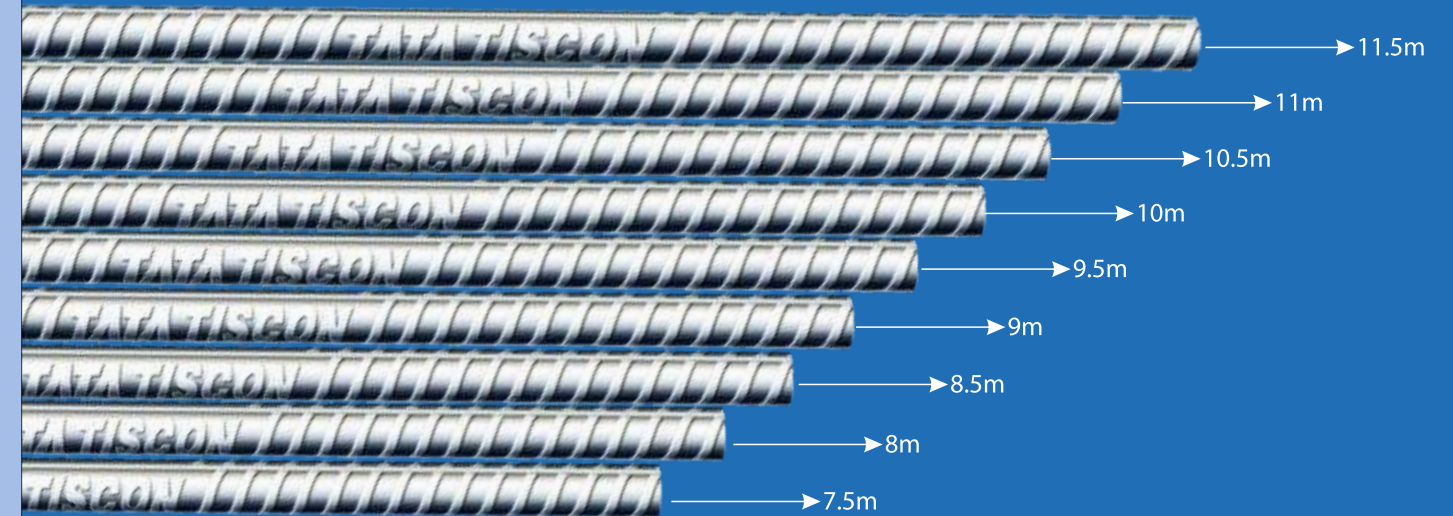
11

Tata Tiscon 36/40mm Rebar

Tata Steel offers high grade rebars for heavy construction like Metro Rail, Tunnels, Bridges etc.

Customised length rebars of Tata Tiscon

Available in lengths of 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11 and 11.5 meters. Use of these rebars helps in steel optimisation and wastage reduction resulting in huge savings.



Bogibeel, India's longest rail-cum-road bridge at 4.9 km, is an engineering marvel. Tata Tiscon Super Ductile and Customised Length Rebars were used in its construction.

12

Tiscon Readybuild: Customised Rebar Solutions for Hassle Free Construction



Adding to the long list of innovations in products, solutions and services, the latest offering from Tata Tiscon is Tiscon Readybuild, a rebar downstream solution that offers customised rebar solutions at construction sites across India through dedicated Readybuild Centres.

The offerings are –

- **Ready to use Cut & Bend rebars:** Customisation of rebars in required shapes by cutting and bending them at required angles, in accordance with the given project's specification.
- **Cut & Bend rebars with Couplers:** A coupler is a hollow mechanical member, used to join two rebars. Both the ends and the inner surface of the coupler are threaded which helps in joining the rebars. Currently, rebars are tied together end-to-end with a wire resulting in wastage of the lap length.
- **Centralised BBS service:** Tiscon Readybuild also offers a service of developing Bar Bending Schedules (BBS) for customers based on their structural drawings.

Ready to use rebar technology:

- Recommended by Border Road Organisation (BRO)
- Included in CPWD DSR (Delhi Schedule of Rates)
- Recommended by the expert committee on best practices and road construction set by MoRTH, GoI (Tambe Committee, May 2016)

Ready for every construction need

Tiscon Readybuild customised rebar solutions are suitable for every construction segment.



Infrastructure

Bridges & Flyovers, Dams, Power Projects, Wind Farms, Metros, Airports, Ports, Government Bodies and others



Industrial

IT Parks, Industrial Units, Commercial Projects and others



Housing & Commercial

Residential Units & Complexes, Mass Housing Projects, Malls, Hospitals, Colleges and others



Basket of benefits

Tiscon Readybuild offers customised rebar processing solutions to ensure hassle-free construction



Manage space effectively

On Time In Full delivery (OTIF) of tailor-made rebars helps in managing space efficiently



Ensure top quality

High quality rebars are customised in the exact shape and size as per requirements



Simplify procurement

Timely availability and hassle-free delivery makes the procurement process simple and easy



Easy inventory management

With Tiscon Readybuild, there is no need to store rebars beforehand on site. Moreover, Readybuild Tags make identification easy for immediate use



No wastage, no worries

Zero wastage on site eliminates disposal needs



Absolute Precision

The exact angle of bend is achieved and exact shapes are delivered according to the working schedules and in individualized bundles



Safety

Lesser cutting & bending work at sites provides greater safety to workers



Project completion on time

The time saved in the process of using customised rebars ensures that the projects are completed on time



Minimise labour involvement

Lowers labour involvement at site thereby reducing labour cost and manual errors



7 day delivery

The entire kit is delivered in cut and bend form within 7 days of finalisation of BBS/Order



Swedish home furnishings major IKEA opened its first store in India, Hyderabad. IKEA is known for sharing design inspiration & smart solutions to make life at home easier. Tiscon Readybuild cut and bend rebars have been used in the construction of its Hyderabad store.

Tiscon Readybuild Cut and Bend Services with Couplers

Lapping of rebar is the most common method of reinforcement bar joints. Two bars are laid parallel to one another over a certain lap length and tied together with the help of a binding wire.



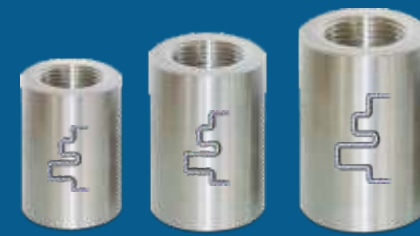
Problem with lapping practice

With an additional length required for lapping of rebars, the practice leads to an extra usage of rebar and increases congestion possibilities at lapping junctions when concrete is poured. Also, the task of holding and tying the bars together is labour intensive and time consuming.

Lapping can be avoided with Couplers

What are Couplers?

Couplers are hollow mechanical members. These are threaded inside and are screwed on to the two rebars which are to be joined to form a robust mechanical joint.



Couplers

Solving the problem with Tiscon Readybuild Couplers

In another first for an Indian steel producer, Tata Steel has introduced mechanical couplers, to be used along with Tata Tiscon rebars for avoiding lapping and the losses incurred hence.

As provisioned in IS 456:2000, mechanical coupling options could be used to join two rebars.

Area of application

1. Wall to slab connection
2. Beam to column connection
3. Column-lap replacement
4. Raft foundations
5. Future extensions/additions
6. Precast elements



Yet another first for Tata Steel - Currently, there is no other steel player offering Couplers in India

Did you know?

- Couplers are available in SKU range from 16 to 40mm

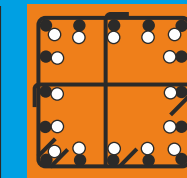
Key Approval - BHEL

Benefits of using Couplers

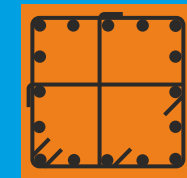


Reduced Rebar Usage

- Lap lengths of the order of 40-50x Diameter, which cannot add any value structurally, are avoided
- Usage of binding wires and difficult handling is avoided



Lapping



w/o Lap

Reduced Congestion

- Smooth flow of concrete during pouring and hence, sound structural integrity
- Ideal Steel ratio ensures optimum steel in structural member cross section



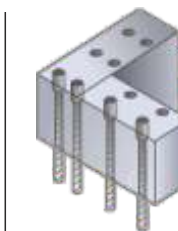
Higher Structural Integrity

Mechanical Joints are less dependent on the concrete for load transfer



Faster Construction

Reduced handling and faster assembly ensures quicker installations



Easier Future Extensions

- Couplers can be installed as provisions for future extensions
- A coupler eliminates the undesired look of extended rebars and the huge amount of concrete breaking required during extension



Independently tested and certified by IIT Delhi

Tiscon Readybuild cut and bend rebars with BBS service and couplers were supplied to the upcoming IORA Tower project by Goshar Ventures

What is Tiscon Readybuild BBS Service?

Tiscon Readybuild can develop Bar Bending Schedules (BBS) for customers based on their structural drawings helping better optimisation

Tiscon Readybuild brings QUALITY BBS helping in better optimisation
The Bar Bending Schedule is created from

- AutoCAD drawings
- Structural drawings in PDF format
- Structural drawings in hard copy format



Network of Tiscon Readybuild Service Centres

Tiscon Readybuild Centre Office Addresses



EAST

BHUBANESHWAR

Sagar Business Pvt. Ltd. (READYBUILD CENTRE)

Badapokhari, Bhagatpur Via Kotasahi (TANGI),
OCL Kapilas, Manufacturing Works Approach Road,
Cuttack - 754022, Odisha
Mob: +91 7381057303
email: info@sagarbusiness.in, shyamal@sagarbusiness.in

GUWAHATI

SM Corporation Ltd

Abhyapur, Amingaon, North Guwahati,
Guwahati-781031, Assam
Mob: +91 9435048008

JAMSHEDPUR

Pasa Resources P Ltd.

M-1 (Part), Phase 6, Adityapur Industrial Area,
Gamharia, Jamshedpur - 832108, Jharkhand
Mob: +91 9234668100

DHANBAD

Shri Ram Sales

Mouza Tilabani, Tundi Road, Govindpur,
Dhanbad - 828109, Jharkhand
Mob: +91 9204857623

KOLKATA

Bluemoon Commercial Pvt. Ltd.

Jaladhulagori, Sankrail, Howrah - 711302, West Bengal
Mob: +91 9831022362

PATNA

BMW Enterprises

NH-30, Baikathpur, Near BP Petrol Pump, Fatuha,
Patna - 803205, Bihar
Mob: +91 9934121111

SILIGURI

Bluemoon Commercial Pvt. Ltd.

c/o, Sri Balaji Infrastructure, Mouza Dabgram, Street no. 5,
Pargana-Baikunthapur, near Ma Shakti kanta (E. M. Bypass),
Siliguri- 734008
Mob: +91 9831022362

NORTH

DELHI

Daga Trading Co. Pvt. Ltd.

Prithla Dhatir Road, Village Prithla,
Palwal, Haryana - 121102
Mob: +91 9810026055

JAIPUR

Vikas Steel Traders

Plot NO. DTA-002-002, PO. Mahindra World City,
Tehsil Sangarer, Jaipur - 302037, Rajasthan
Mob: +91 9982221216

GHAZIABAD

Vikrant Ispat Udyog

C-179/1, Bulandshahar Road Industrial Area,
Ghaziabad - 201001, Uttar Pradesh
Mob: +91 9811022458
email: vikrantipsat@rediffmail.com

KANPUR

KPJ Distributors

Chak No 1989, Bevine Marg Village, Umaran,
Near Rania Industrial Area, Kanpur, Uttar Pradesh,
Mob: +91 9839425522

LUDHIANA

Krishna Business Associates

Village: NNichi Mangli, Near Old Octroi Post,
Chandigarh Road, Ludhiana, 141010, Punjab
Mob: +91 9814116088
email: kbatatatiscon@gmail.com

WEST

AHMEDABAD

Sachi Solutions Pvt. Ltd.

Survey No 712, 6 km from Bakrol Cross Road
to Dholka Road, Nanachapra, Taluka - Daskroi, Ahmedabad -
382210, Gujrat
Mob: +01 9825016193

MUMBAI

Indu Corporation Pvt. Ltd.

Plot No. A-1, MIDC, Taloja, Pin - 410208, Maharashtra
Mob: +91 9821155000

SKM Constra

Plot No B1-B7, Dhruv Logistic Park, Ghot Camp, Koynavele, Near
MIDC Taloja, Panvel, Maharashtra,
Mob: +91 9820883446

PUNE

B. Odhavji & Company

Plot No I-31, Domestic Tariff Area, Khed City, Village Kanhersar,
Pabal Road,
Taluka Khed, Pune-410505, Maharashtra
Mob: +91 9922440775

INDORE

SKM Steels Ltd.

Hatkesh Vihar, Gram Kelod Kartal, Khandwa Road, Indore - 452020
Madhya Pradesh
Mob: +91 8770683455
email: amitabh@skmsteels.com

NAGPUR

Savitriprakash Processing Works

Steel & H/W Warehousing Soc. Ltd
Kh.No 58,59,60, Kapsi Khurd, Bhandara Road, Nagpur - 440008,
Maharashtra
Mob: +91 9823249659
email: spwtiscon@gmail.com

SOUTH

BENGALURU

G K Ispat Pvt. Ltd.

Plot No 100 to 106, 4th Phase, Malur Industrial Area,
Malur Taluk, Kolar Dist: 563130, Karnataka
Mob: +91 9945761378 & 9845015997
email: ip@gksteels.com

HYDERABAD

Samrat Irons Pvt. Ltd.

SY No 359, Chandapur Village, Hathnoor Mandal, MedakDist,
Telangana - 502296
Mob: +91 9849911299

HUBLI

Indian Mineral Company

M.T. Sagar Industrial Estate, Hubli - 50030
Mob: +91 984451084 & 9742223401
email: bimal@indianmineral.com

CHENNAI

Tata Steel Limited

2/31, Thatchur Koot Road, Panjeti, Ponneri, Thiruvellur
SPC: Nbc Weldmesh Private Limited, Chennai, Tamil Nadu 601204
Mob: +91 044 66960057

Sm@rtFAB offers welded wire fabric for concrete reinforcements

Sm@rtFAB, India's first branded welded wire fabric(WWF), is the latest inclusion in our downstream portfolio.

It is a cold-worked, ribbed, electrically fused wire fabric, that can be used in concrete reinforcements, leading to optimum steel usage close to actual design, thus reducing steel intensity and leading to cost and time savings.

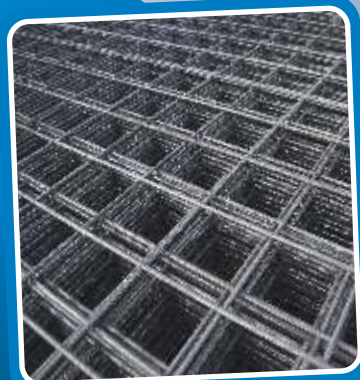
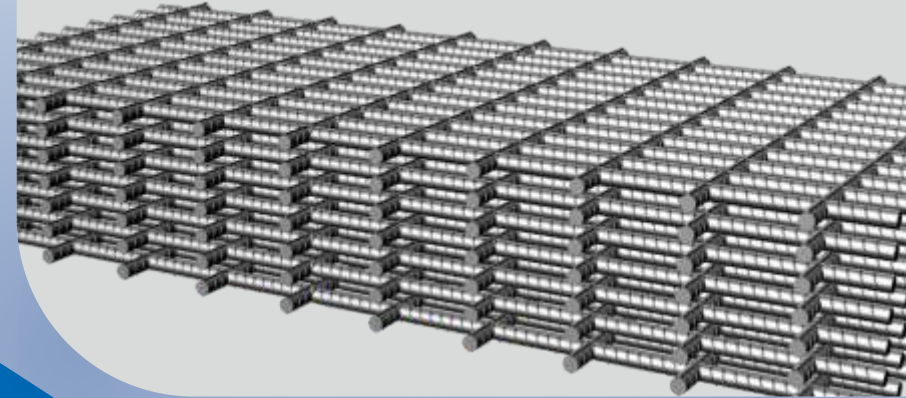
Welded Wire Fabric (WWF) is a premium offering by TATA Steel – a company that has a legacy and expertise of over 100 years, the best quality steel and the most dependable service.

Benefits:

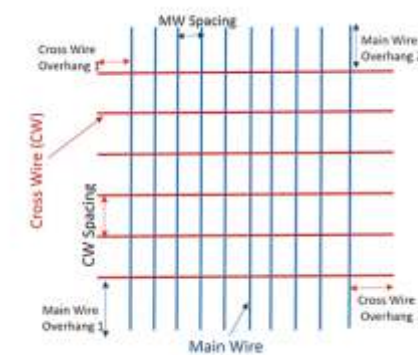
- Increase in speed of construction
- Material cost reduction
- Labour productivity enhancement
- Effective site management
- Better quality assurance

Applications:

- Slab reinforcements in industrial warehouse flooring, multi-level car parking and commercial & residential buildings
- Roads and Airport Tarmacs
- Tunnel Lining
- Irrigation: Canal Lining and Hume Pipes
- Gabions and Retaining Walls



Sm@rtFAB has been used in the construction of upcoming Sands InfinIT at SmartCity Kochi by Tata Projects. Sands Infra is the IT wing of LuLu Group International. The 32 storeyed twin tower project when completed will be the tallest IT building in Kerala



Standard Sm@rtFab Sizes

Type	Fabric Type	Spacing
Type A	Square Fabric	200mm main wire spacing / 200mm cross wire spacing
Type B	Rectangular Fabric	100mm main wire spacing / 200mm cross wire spacing
Type D	Small Square Fabric	100mm main wire spacing / 100mm cross wire spacing
Type E	Square Fabric	150mm main wire spacing / 150mm cross wire spacing

Available in:

- **Wire Diameter:** From 2mm to 12mm at an interval of 1mm
 - a) From 2mm to 4.9mm (plain WWF in roll form)
 - b) From 5mm to 12mm (ribbed WWF in flat customized sheets)
- **Spacing interval:** In rectangular grids from 75mm to 300mm at an interval of 5mm
- **Fabric Size:** Up to 2.4 meter (width) x 6 meter (length)

Features:

- Usage of electric fusion welding
- Spacing accuracy is guaranteed
- Produced as per **IS 1566** (Hard drawn steel wire fabric for concrete reinforcement) with steel complying to **IS 432-2**

Physical and chemical properties of Welded Wire Fabric (WWF) is determined based on IS specifications

Desired Physical Property	Unit	Min Value as per IS 432-2	Achieved 550 Gr Properties
UTS	N/mm ²	570	585
Proof Stress(0.2%)	N/mm ²	480	550
Elongation	%	7.5	10
Shear Strength	0.25 times of Ys=> as per 1566 with test method of IS 4948.		

Desired Chemical Composition - %	C	Mn	P	S
Min	0.03	0.30		
Max	0.13	0.60	0.05	0.05

WE **IMAGINE**
INNOVATE
BUILD for creating value
for our customers

