

**TATA STEEL**

 WeAlsoMakeTomorrow

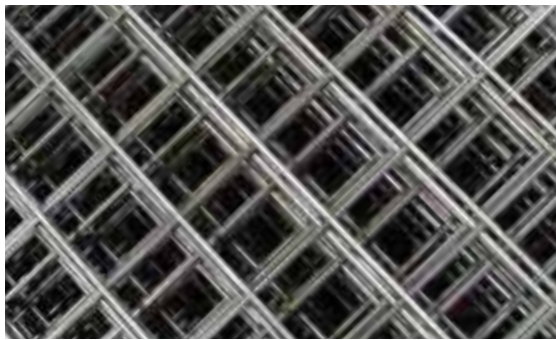
**Sm@rt/FAB**



**BUILD SMART BUILD EASY**

INDIA'S FIRST BRANDED WELDED WIRE FABRIC

# Sm@rt/FAB



Smartfab, India's first branded welded wire fabric (WWF) is the latest inclusion to our downstream portfolio. The cold-worked, ribbed, electrically fused wire fabric is used for concrete reinforcement. Our solutions help you optimize steel usage and save time and costs.

## ENSURING FAST AND EFFICIENT CONSTRUCTION



Faster Construction



Reduce Labour  
Efforts and Costs



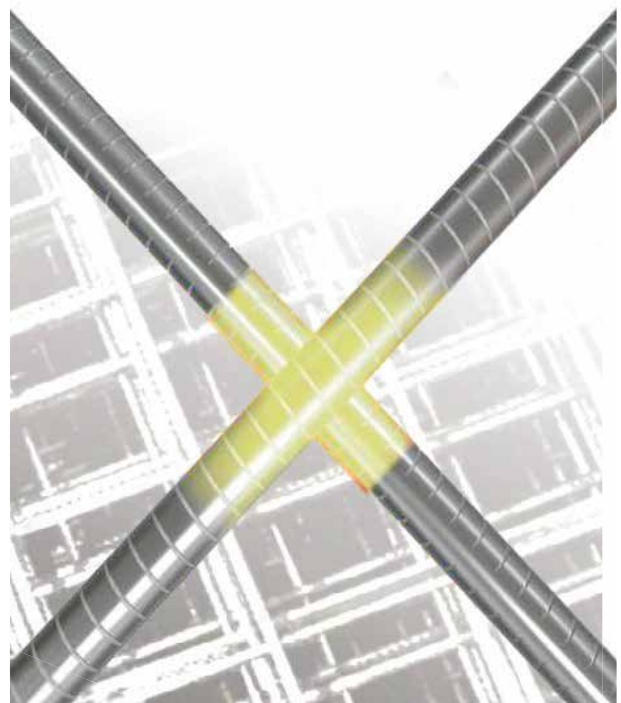
Reduce Material  
Costs



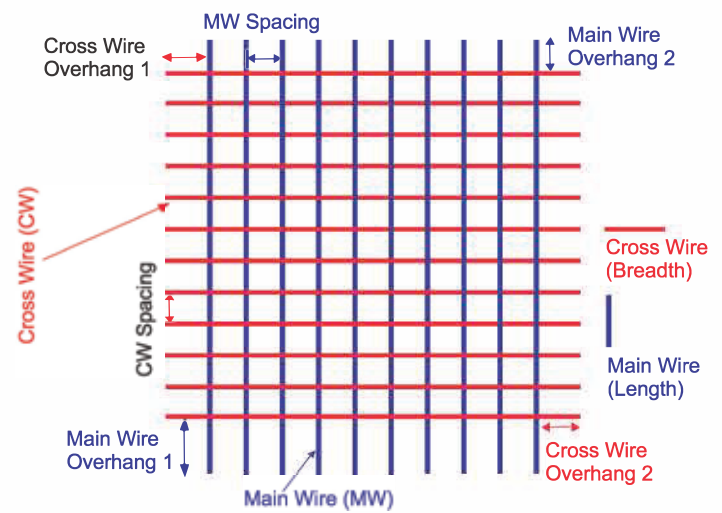
Better Quality  
Assurance



Easy Site  
Management







Standard Sm@rtFAB Sizes		
Type A	Square Fabric	200 mm main wire spacing / 200 mm cross wire spacing
Type B	Rectangular Fabric	100 mm main wire spacing / 200 mm cross wire spacing
Type D	Small Square Fabric	100 mm main wire spacing / 100 mm cross wire spacing
Type E	Square Fabric	150 mm main wire spacing / 150 mm cross wire spacing

Available in:

- (i) interval of 0.1 mm
- (ii) For wire dia 2 mm to 5 mm: In rectangular grids from 25 mm to 300 mm at spacing possible in multiples of 5mm
- (iii) For wire dia 5 mm and more: In rectangular grids from 75 mm to 300 mm at spacing possible in multiples of 5 mm
- (iv) Fabric Size: Upto 2.4 meter (width) x 6 meter (length)

Features:

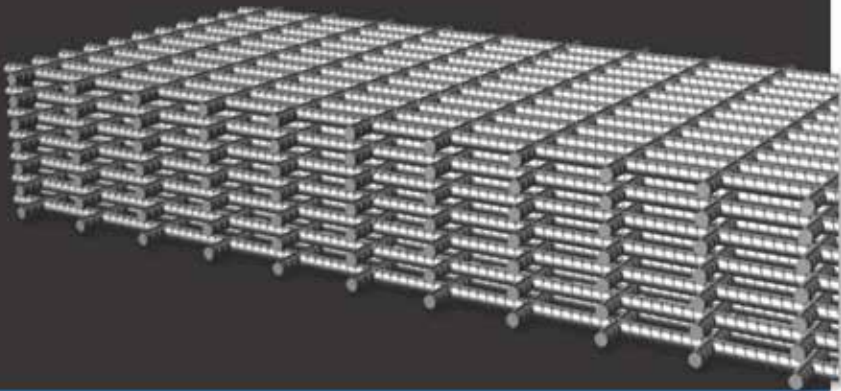
- Welded by electrical fusion
- Accurate spacing guaranteed
- Conforms to IS 1566 (hard drawn steel wire fabric) and IS 432-2 (steel)

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

Desired physical property	Unit	Min value as per IS 432-2	Achieved 550 Gr Properties
UTS	N/mm <sup>2</sup>	570	585
Proof Stress (0.2%)	N/mm <sup>2</sup>	480	550
Elongation	%	7.5	10
Shear Strength	0.25 times of YS => as per IS 1566 with test method of IS 4948		

Desired Chemical composition - %	C	Mn	P	S
Min	0.03	0.3	-	-
Max	0.13	0.60	0.05	0.05

# Technical DETAILS



Product Code	Wire Spacing		Wire Diameter		Cross Sectional Area		Mass per Area
	Main mm	Cross mm	Main mm	Cross mm	Main mm <sup>2</sup> /m	Cross mm <sup>2</sup> /m	Kg/m <sup>2</sup>
A6/6	200	200	6	6	141	141	2.22
A7/7	200	200	7	7	193	193	3.02
A8/8	200	200	8	8	251	251	3.95
A9/9	200	200	9	9	318	318	4.99
A10/10	200	200	10	10	393	393	6.17
A11/11	200	200	11	11	475	475	7.46
A12/12	200	200	12	12	566	566	8.88
D6/6	100	100	6	6	283	283	4.31
D7/7	100	100	7	7	385	385	6.04
D9/9	100	100	9	9	636	636	9.99
D10/10	100	100	10	10	786	786	12.33
D11/11	100	100	11	11	951	951	14.92
D12/12	100	100	12	12	1131	1131	17.76
E6/6	150	150	6	6	189	189	2.96
E7/7	150	150	7	7	257	257	4.03
E8/8	150	150	8	8	335	335	5.26
E9/9	150	150	9	9	424	424	6.66
E10/10	150	150	10	10	524	524	8.22
E11/11	150	150	11	11	634	634	9.95
E12/12	150	150	12	12	754	754	11.84

## ADDITIONAL SERVICES OF SMARTFAB

Tata Steel's Unique product & Service Differentiation

- Design consultancy through dedicated structural consultants contracted by Tata Steel
- Complete supply chain solution from wire rod to mesh at site
- Test certificate along with each consignment
- After sales support eg. Placement drawing



# Manufacturing TECHNOLOGY



Sm@rt FAB is a ready-to-use solution that aims at improving productivity standards in construction.

## PRODUCT MANUFACTURING TECHNOLOGY

Sm@rtFAB is manufactured using state-of-the-art machine and technology with Tata Steel's quality assurance.

Different stages of the manufacturing process is detailed below:

### COLD WORKING:

Increases tensile strength with wire rods made of low carbon steel SAE1008 to 1015 (IS7887 Grade 3-7).

### RIBBING:

Better bond with concrete and controls cracks. Ribbing benefit is mostly for overhang regions of a weld mesh.


### ELECTRIC FUSION WELDING:

A semi-automatic and precise welding machine is capable of delivering welds at calculated joints with electrical resistance that generate ample amounts of heat to create the weld.


## PACKAGING

Every bundle is provided with tags for easy identification and traceability.

Each tag carries Tata Steel and Sm@rtFAB logo along with detailed dimensions of the welded wire fabric



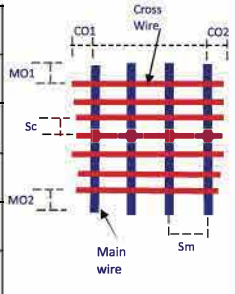
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5/5/150/150

Sheets: \_\_\_\_\_

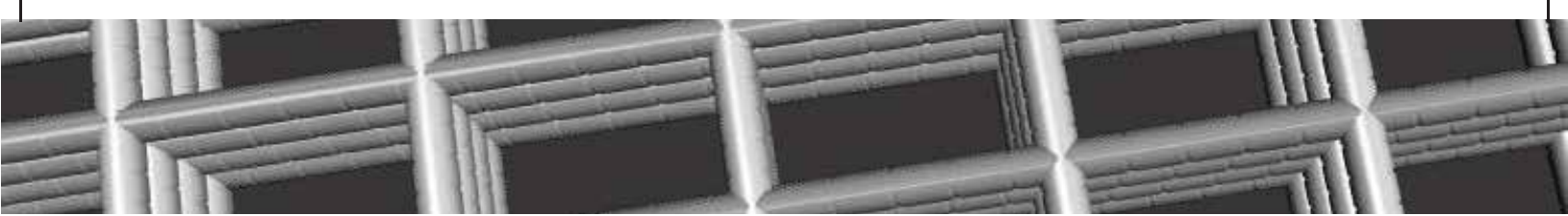
Dm/Dc	5/5
Dimensions	3000x2100
Sm/Sc	150/150
Mo1/Mo2	150/150
Co1/Co2	125/125
Nm/Nc	13/19



ABC Company

N = Number of wires; D = Diameter of wires





# Smart **FEATURES**

**HIGH QUALITY STEEL:**

Made of IS 432-2 grade steel with low impurities and for better welding

**BETTER CONCRETE BONDING:**

The ribbing pattern, uniform spacing and welding ensures better bonding with concrete

**IMPROVED CRACK RESISTANCE:**

Uniform displacement between each wire and welding joints optimizes load capacity

**BETTER QUALITY CHECK:**

Each batch of WWF goes through detailed quality checks and are delivered with a test certificate

**CONTROLLED MANUFACTURING:**

Our wide range of wire diameters and factory-made processes ensure a uniform standard of production

**CUSTOMER FIRST APPROACH:**

Simply order and the finished product will be delivered at site

# ADVANTAGES



**SAVE TIME**

- A prefabricated solution that reduces slab to slab casting time
- Ready-to-use materials delivered at site
- Valuable labour hours saved



**OPTIMIZES DESIGN**

- Use any dia from 2-12mm unlike rebars
- Optimized designs for reinforcement requirements
- Reduce overall steel requirement



**REDUCES COST**

- Eliminate labor costs on cutting, binding and placing rebars
- Save cost of binding wire
- Reduce inventory costs and working capital



**HELPS WORKS SMARTER**

- Easy tracking to minimize pilferage
- Easy inspection for structural consultants
- Perfect spacing through mechanized process



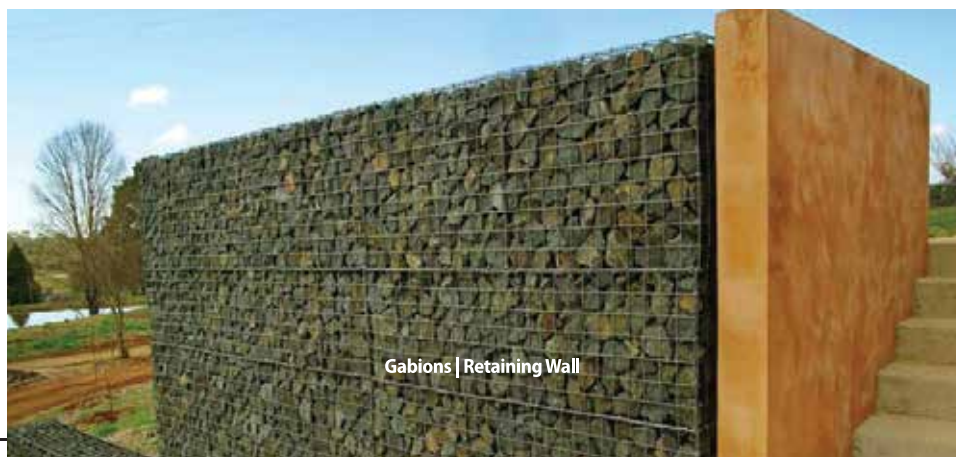
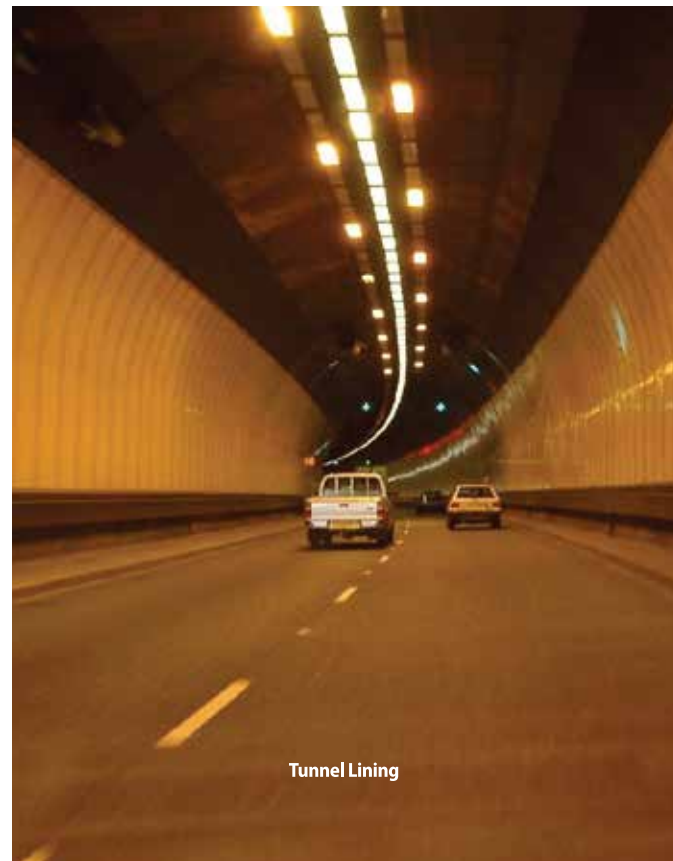
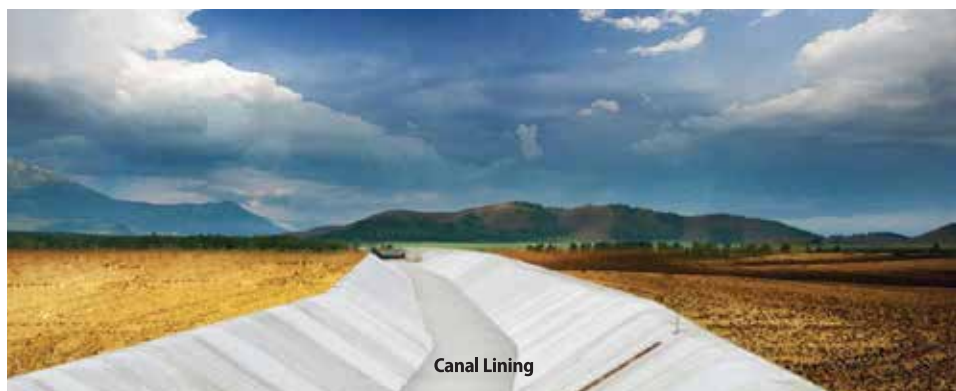
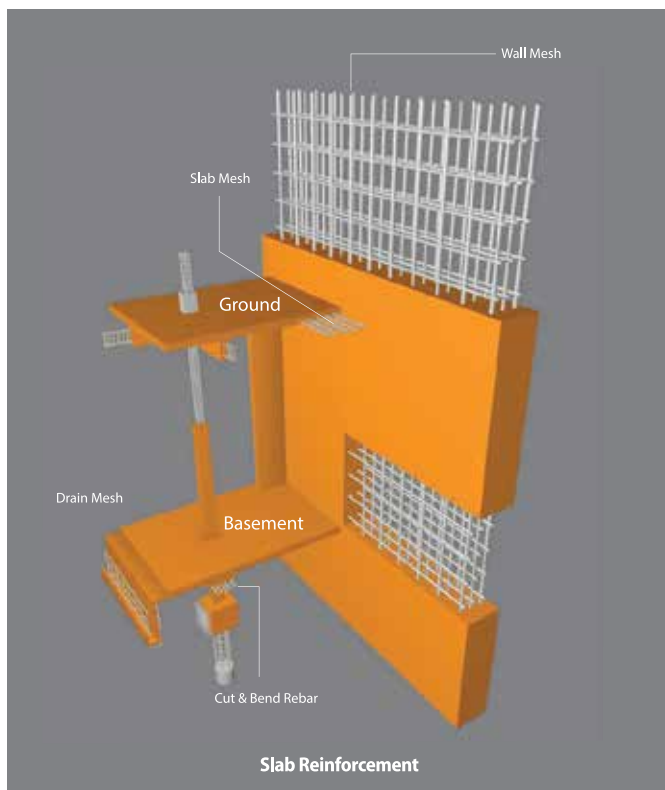
**PROVIDES QUALITY ASSURANCE**

- All materials with Test Certificates
- Tata Steel assurance of good quality
- Manufactured with only Tata Steel wire rods





# APPLICATIONS





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