IS 1786 IS 13620

A product of Belgium Technology

TEMPCORE®

RASHMI CORROSHIELD

EPOXY COATED TMT BARS

ABOUT US

RASHMI Group is one of Eastern India's leading Integrated Steel Manufacturers with a vision to build a Nation with a Bright Future. Our Plant is located in one of the most important railway hubs at Kharagpur, West Bengal, in the South Eastern Railway section. We are an integral part of RASHMI GROUP which has already proved its leadership in STEEL, CEMENT, DUCTILE IRON PIPE, BULK MATERIAL and HANDLING SYSTEM. RASHMI GROUP is awarded 'Ultra Mega Project' status by the Government of West Bengal. We are the first companies to get the Environmental and Pollution clearance in West Bengal. The company has excellent logistic support with its Captive Railway Siding at BARBIL and KHARAGPUR with three tracks within the plant premise.

RASHMI METALIKS LIMITED is the Flagship Company of the group incorporated in 2004 in West Bengal. It is one of the leading PIG IRON manufacturing companies with a capacity of 0.92 MTPA.
SINTER Plant has been operating since 2007 with a capacity of 1.90 MTPA. BILLET and SMS plant was started in 2009 with a capacity of 2.503 MTPA. The Sponge Iron and Pellet plant has a capacity of 4.871 MTPA and 11.20 MTPA. The WHRB Captive Power Plant and CFBC Captive Power Plant have capacities of 386 MW and 137 MW. Rolling mill started in 2010 has a capacity of 1.453 MTPA.

PRODUCTS

IRON ORE

COAL PRODUCTION

SPONGE IRON PRODUCTION

PELLET PLANT

BILLET/ BLOOM PRODUCTION

BLAST FURNACE OPERATION

SINTER PLANT

CAPTIVE POWER PLANT

COAL WASHERY

RAILWAY SIDING

DI PIPE

WIRE ROD

NAIL & BINDING WIRE

TMT BARS & CRS BARS

EPOXY COATED TMT BARS

PIG IRON

OXYGEN PLANT

FERRO ALLOYS

COKE OVEN

CEMENT PLANT

RASHMI CORROSHIELD CHEMICAL PROPERTIES

PROPERTIES	Fe-500D		Fe-550D	
	IS 1786:2008 (Max %)	RASHMI TMT (Max %)	IS 1786:2008 (Max %)	RASHMI TMT (Max %)
Carbon %	0.25	0.22	0.25	0.22
Sulphur %	0.04	0.04	0.04	0.04
Phosphorous %	0.04	0.04	0.04	0.04
Sulphur%+Phosphorous%	0.075	0.075	0.075	0.075

RASHMI CORROSHIELD MECHANICAL PROPERTIES

PROPERTIES	Fe-500D		Fe-550D	
	IS 1786:2008 (Min %)	RASHMI TMT (Min %)	IS 1786:2008 (Min %)	RASHMI TMT (Min %)
Yield Strength (N/mm2)	500	530	550	580
Tensile Strength (N/mm2)	565	630	600	680
% Elongation	16	20	14.5	19
TS/YS Ratio (N/mm2)	≥1.10	1.15	≥1.08	1.15

BIS SPECIFICATION Vs RASHMI CORROSHIELD TMT BARS

Parameter	BIS 3620:1993	RASHMI EPOXY COATED BARS
Bare Bars Properties	As per IS 1786:2008	Conforming to IS 1786:2008
Coating Thickness	100 to 300 Microns	175 to 300 Microns
Coating Holiday	6 Holidays / m (max)	5 Holidays / m (max)
Coating Flexibility	120 Degree Bend using 10D	120 Degree Bend using 8D & 10D Complying with BIS Specifications

ABOUT EPOXY COATED TMT BAR

RASHMI CORROSHIELD Epoxy coated TMT bar, one of the best TMT bars in India, are a highly corrosion resistant variant of steel bars which are protected by Fusion Bonded Epoxy (FBE) coating. Fusion Bonded Epoxy coating commonly referred to as FBE coating and is widely used to protect concrete TMT bars, steel pipes, piping connections etc., used in construction. FBE coatings are in the form of dry powder at normal atmospheric temperature. The powder is applied electrostatically to the surface of cleaned hot steel bars and cured to form a protective film after undergoing various chemical processes. The epoxy coated bars last longer due to the protective film and thereby contribute to the quality of construction.

Manufacturing Process

- Surface Preparation
- Pre-Heating
- Epoxy Powder Application
- Curing and Cooling

COMPARISION BETWEEN NORMAL REBARS Vs FBE (EPOXY) BARS

STANDARD TESTING	UNCOATED REBARS	FUSION BONDED EPOXY COATED REBARS
Bureau of Indian Standards	IS 1786 : 2008	IS 13620 : 1993
Rusting & Corrosion	Yes	No
Bond with Concrete	Excellent	Excellent forever
Flexibility	Excellent	Excellent forever
Coating Thickness	NA	Excellent
Continuity of Coating	NA	Excellent
Salt Spray	After 45 days material found rusted and reduce thickness	100% Rust Free and same thickness found after 45 days of process
Resistance to Alkaline environment	Safe for some time	Very safe for long time
Resistance to Acidic environment	Safe for some time	Very safe for long time

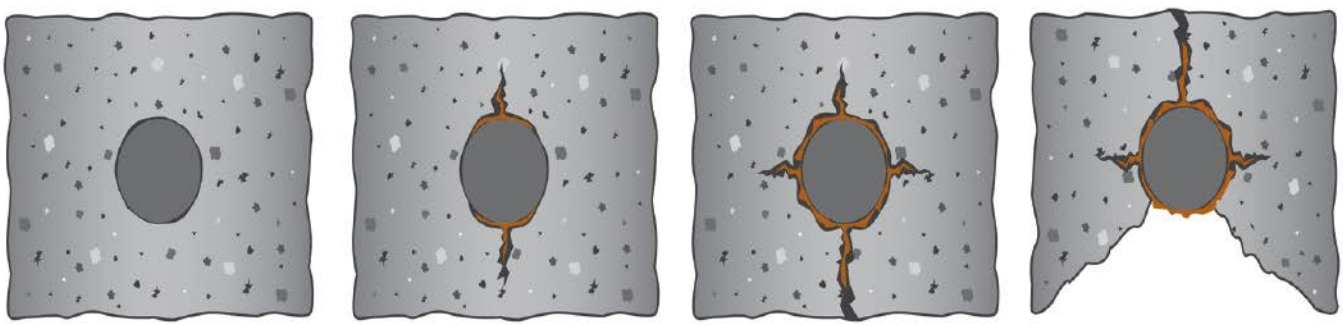
FEATURES OF RASHMI CORROSHIELD TMT BARS

Epoxy Coating Technology is more than 45 years of tried and tested technology. Fusion Bonded Epoxy is basically 100% solid ground fused powder particles, which when heated, melt to form a continues adherent film. It involves coating of Epoxy and bonding over reinforcement Bars.

- ❖ Excellent CORROSION Protection
- ❖ Excellent BONDING with with Concrete
- ❖ High STRENGTH and DUCTILITY due to fine grain multiphase composite structure
- ❖ Excellent BENDABILITY due to micron level coating
- ❖ EARTHQUAKE RESISTANT qualities due to high capacity of absorbing energy
- ❖ Extend the LONGEVITY of structures in harsh corrosive environments

BENEFITS OF RASHMI CORROSHIELD TMT BARS

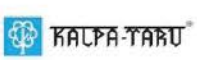
- ❖ Economical
- ❖ Maintenance Free
- ❖ Long Lasting
- ❖ Cost-effective Life Cycle
- ❖ Superior Quality
- ❖ Excellent Bonding with Concrete
- ❖ Environment-friendly



BEFORE CORROSION | BUILD-UP OF CORROSION PRODUCTS | FURTHER CORROSION SURFACE CRACKS, STAINS | EVENTUAL SPALLING CORRODED BAR EXPOSED

The corrosion cycle of steel begins with the rust expanding on the surface of the bar and causing cracks near the steel/concrete interface. With the passage of time, the corrosion products build up and cause more extensive cracking until the concrete breaks away from the bar, eventually causing spalling.

ESTEEMED CLIENTELE



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