

# STRUCTURAL STEEL

## Permanent Brand Welding



"Permanent" Welding Electrodes are used for the welding of Steel Sheets, Vehicles, Vessels, Bridges, Buildings and also welding within general construction work.

- MT - 06: Cellulose Electrode for Welding Pipelines of Carbon Steel
- MT - 12: Electrode for Welding Mild Steel & Low Carbon Steel
- MT - 48: Low Hydrogen Electrode for Welding High Tensile Steel
- MT - 50: Electrode for Welding Mild Steel
- MT - 52: Electrode for Welding with High Efficiency
- MT - B52: Electrode for Welding 50kg/mm<sup>2</sup> Class High Tensile Steel



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Permanent Brand Welding Electrodes have received the following approvals:



ABS: American Bureau of Shipping



BV: Bureau Veritas



GL: Germanischer Lloyd



LR: Lloyds Register of Shipping



CCS: China Classification Society



DNV: Det Norske Veritas



NK: Nippon Kaiji Kyokai

GRADE PRODUCT	BUREAU						
	ABS	BV	CCS	DNV	GL	LR	NK
MT - 12	2	2	2	2	2	2	KMW2
MT- 45	3YH10	-	-	-	-	-	-
MT- 48	3YH10	3YHH	3YH10	3YH10	3YH10	3YH15	KMW53H10
MT- 50	3	3	3	3	3	3	KMW3
MT- 52	2Y	2Y	2Y	2YH10	2Y	2Y	KMW52
MT6013	2	2	2	2	2	2	2



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## Welding Electrodes



PRODUCT TYPE	CORRESPONDING TO	SIZE (mm)	PACKING	DESCRIPTION	APPLICATION	TYPICAL MECHANICAL PROPERTIES OF WELDED METAL
<b>MT 12 Electrode for Welding Mild Steel</b>	AWS E6013	2.50 x 300	8 boxes of 2.5kg/box	MT12 is a low carbon steel style electrode with titania coating. It gives the user excellent welding performance with a stable arc and negligible spatter loss. The Slag is fluid and upon hardening is compact & easy to remove. Suitable for all position welding.	Where the user is welding structures of Steel Sheets, Vehicles, Buildings, Vessels, Machinery Manufacture and various structures of low carbon steel	Yield strength 39kg / mm <sup>2</sup> , 400N / mm <sup>2</sup>  Tensile Strength: 48kg / mm <sup>2</sup> 490N / mm <sup>2</sup>  Elongation 29%
		3.2 x 350	4 boxes of 5kg/box			
	JIS D4313	4.0 x 400				
	GB E4313	5.0 x 400				
<b>MT 06 Cellulose Electrode for Welding Pipeline</b>	AWS E6011	2.5 x 300	8 boxes of 2.5kg/box	MT06 is a cellulose type electrode for welding low carbon steel. It is versatile in all welding positions and develops a low volume of slag that can be easily removed.	For high quality welds, such as carbon steel pipelines, ships, bridges and buildings	Yield strength 41kg / mm <sup>2</sup> , 410N / mm <sup>2</sup>  Tensile Strength: 57kg / mm <sup>2</sup> 570N / mm <sup>2</sup>  Elongation 24%
		3.2 x 350	4 boxes of 5kg/box			
		4.0 x 400				
	GB E4311	5.0 x 400				
<b>MT 48 Low Hydrogen Electrode for Welding High Tensile Steel</b>	AWS E7018	2.5 x 300	8 boxes of 2.5kg/box	MT48 is an iron powder low hydrogen electrode for welding low alloy, high tensile steel. Operates in all positions on DC and AC (AC open circuit voltage > 70V).	For the welding of key structures and 50kg/mm <sup>2</sup> class high tensile steel for ships & bridges	Yield strength 47kg / mm <sup>2</sup> , 480N / mm <sup>2</sup>  Tensile Strength: 56kg / mm <sup>2</sup> 570N / mm <sup>2</sup>  Elongation 30%
		3.2 x 350	4 boxes of 5kg/box			
	JIS D5016	4.0 x 400				
	GB E5018	5.0 x 400				

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PRODUCT TYPE	CORRESPONDING TO	SIZE (mm)	PACKING	DESCRIPTION	APPLICATION	TYPICAL MECHANICAL PROPERTIES OF WELDED METAL
<b>MT 50 Electrode for Welding Mild Steel</b>	JIS D4303	2.50 x 300	8 boxes of 2.5kg/box	MT50 is a titania calcium coated type electrode and offers the user excellent welding performance. The arc is stable, concentrated and is easy to restrike. It welds in all positions and the slag is easy to remove with the bead surface appearing neat and clean. The <b>MT50 has won the approval of the shipbuilding industry.</b>	For structural welding of ships, boilers, vehicles, high pressure containers and heavy machinery.	Yield strength 37kg / mm <sup>2</sup> , 370N / mm <sup>2</sup>  Tensile Strength: 48kg / mm <sup>2</sup> 490N / mm <sup>2</sup>  Elongation 29%
		3.2 x 350	4 boxes of 5kg/box			
		4.0 x 400				
	GB E4303	5.0 x 400				
<b>MT 52 Electrode for Welding with High Efficiency</b>	AWS E7024	2.5 x 300	8 boxes of 2.5kg/box	MT 52 is a titanium iron powder coated electrode. The Iron powder content in the flux coating gives a high efficiency to the electrode and the MT 52 is suitable for flat or horizontal position welding.	For welding the structures of vehicles, boilers ships and where welding in a flat or horizontal position.	Yield strength 42kg / mm <sup>2</sup> , 480N / mm <sup>2</sup>  Tensile Strength: 50kg / mm <sup>2</sup> 490N / mm <sup>2</sup>  Elongation 27%
	JIS D4304	3.2 x 350	4 boxes of 5kg/box			
		4.0 x 400				
	GB E5024	5.0 x 400				

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PRODUCT TYPE	CORRESPONDING TO	SIZE (mm)	PACKING	DESCRIPTION	APPLICATION	TYPICAL MECHANICAL PROPERTIES OF WELDED METAL
<b>MT B52 Electrode for Welding 50kg/mm<sup>2</sup> Class with High Tensile Steel</b>	AWS A5.1 E7016	2.5 x 300	8 boxes of 2.5kg/box	MT B52 is a low hydrogen potassium type electrode. It provides excellent plasticity, impact toughness and crack resistance. It is our most popular electrode for 50kg/mm <sup>2</sup> class high tensile steel.	Suitable for the welding of 50kg/mm <sup>2</sup> class high tensile steel in ship structures, vehicles, buildings and bridges.	Yield strength 520 MPA  Tensile Strength: 580 MPA  Elongation 28%
	BS EN:499 E42 3B	3.2 x 350	4 boxes of 5kg/box			
	JIS: Z2312 D5016	4.0 x 400				
	GB E5016	5.0 x 400				
We can also offer Stainless Steel Welding Electrodes and Wire, Cast Iron Welding Electrodes and Submerged-Arc Welding wires, Brazing and soldering consumables, Welding Flux (i.e MTF101 & MTF301) and Copper Alloy welding Consumables. All Welding Electrodes are supplied in 20kg cartons						
<b>MT- C56 C02 Gas-shielded welding wire</b>	AWS ER 70S-6		20kg / ctn	MTC-56 is a copper coated low alloy steel wire, suitable for the welding of mild and medium strength steel.	For the Welding of mild Steel and 500 MPA grade high strength steel structures.	Yield strength >420 MPA  Tensile Strength: > 500 MPA  Elongation 22%

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