MEGA™

WELDING ELECTRODES

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STAINLESS STEEL ELECTRODES

MEGA - SS 308

CLASSIFICATION
AWS : E 308-16, IS : E19.9 R26

DESCRIPTION AND APPLICATIONS

A rutile type stainless steel electrode suitable for welding of AISI 304, 308 grade stainless steels, The weld metal is highly resistant to corrosion, scaling and temperature upto 800°C. Operates equally well on AC and DC (+) in all conventional positions. Suitable for welding of AISI 301, 302, 304 and 308 grades, Chemical plants and Surfacing of 18/8 and Clad steels

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	Cr	Ni	Mo	Cu	P	S
0.08 max	0.5-2.5	0.9 max	18-21	9-11	0.75 max	0.75 max	0.04 max	0.03 max

TYPICAL MECHANICAL PROPERTIES

UTS mpa	Elongation (%)	CVN Impact at 27°C Joule
550-640	35-45	70 min

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	PIECES / CARTON
2.50 X 350	60-80	2 Kg
3.15 X 350	80-110	2 Kg
4.00 X 350	110-140	2 Kg
5.00 X 350	150-180	2 Kg

EACH BOX CONTAINS 5 CARTONS

MEGA - SS 309

CLASSIFICATION
AWS : E 309-16, IS:E23, 12R 26

DESCRIPTION AND APPLICATIONS

A rutile type stainless steel electrode suitable for welding of AISI 309 grade in cast or wrought form. The weld-metal has excellent resistance to corrosion and temperatures upto 1100°C. Operates equally well on AC and DC (+) in all conventional positions. Suitable for welding of AISI 309 type, Straight chrome steels, Stainless steel and Clad steels.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	Cr	Ni	Mo	Cu	P	S
0.10 max	0.5-2.5	0.9 max	22-25	12-14	0.75 max	0.75 max	0.04 max	0.03 max

TYPICAL MECHANICAL PROPERTIES

UTS mpa	Elongation (%)	CVN Impact at 27°C Joule
550-640	30-40	70 min

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	60-80	2 Kg
3.15 X 350	80-110	2 Kg
4.00 X 350	110-140	2 Kg
5.00 X 450	150-180	2 Kg

EACH BOX CONTAINS 5 CARTONS

MEGA - SS 316

CLASSIFICATION
AWS : E 316 16, IS:E19,12.2 R26

DESCRIPTION AND APPLICATIONS

A rutile type stainless steel electrode designed for welding of AISI 316 grade stainless steels. The weld metal has high resistance to corrosion, pitting and scaling temperatures upto 865°C. Suitable for joining and surfacing of AISI 316, 317 grade, Clad steels of similar composition and highly suitable for Chemical, Textile, Paint and Dye industries.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	Cr	Ni	Mo	Cu	P	S
0.08 max	0.5-2.5	0.90 max	17-20	11-14	2-3	0.75 max	0.04 max	0.03 max

TYPICAL MECHANICAL PROPERTIES

UTS mpa	Elongation (%)	CVN Impact at 27°C Joule
520-600	30-40	70 min

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	60-80	2 Kg
3.15 X 350	80-110	2 Kg
4.00 X 350	110-140	2 Kg
5.00 X 350	150-180	2 Kg

EACH BOX CONTAINS 5 CARTONS

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HARD FACING ELECTRODES

MEGA - 250 HARD

CLASSIFICATION
(Hard Alloy 250)

DESCRIPTION AND APPLICATIONS

A rutile type electrode manufactured for hard surfacing of carbon steels, low alloy steels etc. Very stable arc, easily removable slag and smooth weld bead makes the electrode acceptable in an welding shop. Suitable for welding of Rolling stock tyres, Crank shafts, Gear key-ways, Pulleys, rails Cog wheels, Wheel rim and Sugarcane rollers.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	Cr
0.25 max	0.50 1.0	0.6 max	0.5- 1.0

TYPICAL MECHANICAL PROPERTIES

HARDNESS : 200 - 300 BHN (On Two layer Deposit)

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	70-100	2.5 Kg
3.15 X 350	90-120	2.5 Kg
3.15 X 450	90-120	2.5 Kg
4.00 X 450	140-170	2.5 Kg
5.00 X 450	180-220	2.5 Kg

EACH BOX CONTAINS 8 CARTONS

MEGA - 350 HARD

CLASSIFICATION
(Hard Alloy 350)

DESCRIPTION AND APPLICATIONS

A rutile type electrode developed for hard surfacing of steels subjected to wear due to impact and abrasion. Very stable arc and smooth transfer of alloying elements to weld deposit ensures completely crack free and sound weld metal. Suitable for welding for Shovels, Conveyor parts, Forging dies, Brake shoes, Sprockets, Gears and Punching dies.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	Cr
0.2- 0.4	0.4- 0.8	0.6 max	2- 3

TYPICAL MECHANICAL PROPERTIES

HARDNESS : 330 - 400 BHN (On Three Layer Deposit)

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	70-100	2.5 Kg
3.15 X 350	100-130	2.5 Kg
3.15 X 450	100-130	2.5 Kg
4.00 X 450	140-180	2.5 Kg
5.00 X 450	190-230	2.5 Kg

EACH BOX CONTAINS 8 CARTONS

MEGA - 550 HARD

CLASSIFICATION
(Hard Alloy 550)

DESCRIPTION AND APPLICATIONS

A special electrode with basic type of coating designed for surfacing of parts subjected to heavy abrasion. Arc is very stable and smooth which ensures proper alloy transfer to weld deposit. Suitable for welding of Excavator teeth, Plough shears, Oil expeller worms, Crushing hammers, Crane wheels, Muller tyres, Cams and Cement die rings.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	Cr
2.0- 3.0	0.8- 1.25	2.0- 3.5	3.5- 5.5

TYPICAL MECHANICAL PROPERTIES

HARDNESS : 525 - 600 BHN (On Three Layer Deposit)

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
3.15 X 350	100-130	2.5 Kg
3.15 X 450	100-130	2.5 Kg
4.00 X 450	140-180	2.5 Kg
5.00 X 450	190-230	2.5 Kg

EACH BOX CONTAINS 8 CARTONS

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WELDING ELECTRODES

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CAST IRON ELECTRODES

MEGA - CAST NM

CLASSIFICATION
(Non Machinable Electrode)

DESCRIPTION AND APPLICATIONS

A unique electrode with mild steel core wire which deposits grey cast iron. Suitable for welding of grey cast irons. Parent metal and weld metal matches absolutely. Hence there are no differential stresses and thus no cracking after cooling. Pre heat is must and varies from 450°C to 750°C depending upon the size of the job and machinability desired.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	S	P
2.0-3.0	0.60 max	5-6	0.3 max	0.2 max

TYPICAL MECHANICAL PROPERTIES

HARDNESS : 250 BHN max

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	90-120	1 Kg
3.15 X 350	120-140	1 Kg
4.00 X 350	150-180	1 Kg
5.00 X 350	190-230	1 Kg

EACH BOX CONTAINS 10 CARTONS

MEGA - MONEL

CLASSIFICATION
AWS : E Ni Cu B

DESCRIPTION AND APPLICATIONS

A electrode with Nickel-Copper alloy wire specially designed for welding of cast iron parts. In view of the balanced flux formula this electrode is more suitable for oil impregnated cast-iron jobs. Multipass welding can be done. Suitable for welding of Machine bases, Engine blocks pumps and Transmission hoses, Repairing of gears.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	Ni	Cu
0.35-0.55	2.3 max	0.75 0.30	60-70	25-35

TYPICAL MECHANICAL PROPERTIES

HARDNESS : 200 BHN max

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	40-70	1 Kg
3.15 X 350	70-100	1 Kg
4.00 X 350	100-130	1 Kg
5.00 X 350	130-170	1 Kg

EACH BOX CONTAINS 10 CARTONS

MEGA - FeNi

CLASSIFICATION
AWS : E NI Fe CI

DESCRIPTION AND APPLICATIONS

A Nickel - Iron alloy core wire electrode specially designed for producing high strength joints in malleable cast irons and in nodular cast irons. The weld metal has good ductility and machinability. Slag is very thin and runs to the sides of weld bead. Suitable for welding of all types of Cast irons, Cast iron to steel joining, and on High Sulphur / Phosphorus castings.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Si	Ni	Fe
0.08-1.50	0.90 max	55-60	40-45

TYPICAL MECHANICAL PROPERTIES

HARDNESS : 220 BHN max

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	40-70	1 Kg
3.15 X 350	70-100	1 Kg
4.00 X 350	100-130	1 Kg
5.00 X 350	130-170	1 Kg

EACH BOX CONTAINS 10 CARTONS

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WELDING ELECTRODES

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MILD STEEL GENERAL PURPOSE ELECTRODES

ECONOMY

CLASSIFICATION
AWS : E-6013, IS : ER4211

DESCRIPTION AND APPLICATIONS

A general purpose, medium coated, all position, rutile type electrode suitable for general fabrication, structural and maintenance work in mild steel. The electrode is characterised by stable and smooth arc, low spatter, good deslagging and finely rippled weld bead. Weld deposit possesses good mechanical properties.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	S	P
0.10 max	0.60 max	0.30 max	0.03 max	0.03 max

TYPICAL MECHANICAL PROPERTIES

UTS mpa	YS mpa	Elongation (%)	CVN Impact at 0°C Joule
478.5	434.0	28.0	63.0

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	PIECES / CARTON
2.50 X 350	60-90	135
3.15 X 350	100-140	90
3.15 X 450	100-140	90
4.00 X 450	140-180	60
5.00 X 450	180-220	45

APPROVALS :
BHEL (Trichy)

EACH BOX CONTAINS 8 CARTONS

MEDIUM

CLASSIFICATION
AWS : E-6013, IS : ER4221X

DESCRIPTION AND APPLICATIONS

A medium coated rutile type, all position electrode which can be described as TOUCH electrode since it can be operated without maintaining an arc gap. Suitable for all types of Mild steel structures, Tanks and Vessels, Pipe lines, Railway wagons, Bridges, Ship hull, Boilers etc., The weld metal is sound, ductile and is of RADIOGRAPHIC quality.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	S	P
0.10 max	0.60 max	0.20 0.30 max	0.03 max	0.03 max

TYPICAL MECHANICAL PROPERTIES

UTS mpa	YS mpa	Elongation (%)	CVN Impact at 0°C Joule
480.5	435.5	28.0	65.0

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	60-90	5 Kg
3.15 X 350	100-140	5 Kg
3.15 X 450	100-140	5 Kg
4.00 X 450	140-190	5 Kg
5.00 X 450	180-220	5 Kg

EACH BOX CONTAINS 8 CARTONS

HEAVY

CLASSIFICATION
AWS : E-6013, IS : ERR4221X

DESCRIPTION AND APPLICATIONS

A heavy coated rutile type electrode developed for TOUCH type welding. Arc is very stable. Slag removes by itself leaving almost flat and rippleless weld bead. Striking & restriking is excellent. Weld metal is of radiographic quality. Suitable for welding of Boilers, Pipe lines, Bridges, Storage tanks, Fire boxes and Steel furniture.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	S	P
0.10 max	0.60 max	0.30 max	0.03 max	0.03 max

TYPICAL MECHANICAL PROPERTIES

UTS mpa	YS mpa	Elongation (%)	CVN Impact at 0°C Joule
490	445.5	22-28	50-80

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	60-100	5 Kg
3.15 X 350	100-140	5 Kg
4.00 X 450	140-200	5 Kg
5.00 X 450	190-230	5 Kg

EACH BOX CONTAINS 8 CARTONS

MEGA™

WELDING ELECTRODES

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MILD STEEL LOW HYDROGEN ELECTRODES

MEGA - 7016

CLASSIFICATION
AWS : E-7016, IS : EB 5424 H_3X

DESCRIPTION AND APPLICATIONS

A basic coated low hydrogen electrode specially designed for welding of medium and high tensile ship steels of grade A,D &E. Radiographic quality welds, excellent ductility. Suitable for welding of HT52W and High tensile grade steels, Cast steels, Used as buffer layer before hard surfacing and joining of M.S. with C.I.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	S	P
0.10 max	0.9-1.3	0.60 max	0.03 max	0.03 max

TYPICAL MECHANICAL PROPERTIES

UTS mpa	YS mpa	Elongation (%)	CVN Impact at 27°C/-30°C Joule
600	480	26 min	90 / 30

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	70-100	5 Kg
3.15 X 450	100-140	5 Kg
4.00 X 450	140-180	5 Kg
5.00 X 450	180-240	5 Kg

EACH BOX CONTAINS 4 CARTONS

MEGA - 7018 LH

CLASSIFICATION
AWS : E-7018, IS : EB 5426 H_3JX

DESCRIPTION AND APPLICATIONS

A low hydrogen iron powder electrode, suitable for welding of medium tensile strength steels. Weld metal is of radiographic quality. Metal recovery is minimum 110%. Suitable for Welding storage tanks, Pressure vessels, Boilers, Pipe lines, Blast furnace shells, Railway wagons and Dynamic loaded structures.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	S	P
0.10 max	1.0-1.4	0.6 max	0.03 max	0.03 max

TYPICAL MECHANICAL PROPERTIES

UTS mpa	YS mpa	Elongation (%)	CVN Impact at 27°C/-30°C Joule
580	460	26 min	90 / 30

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	Kg / CARTON
2.50 X 350	70-100	5 Kg
3.15 X 450	100-140	5 Kg
4.00 X 450	140-180	5 Kg
5.00 X 450	180-240	5 Kg

EACH BOX CONTAINS 4 CARTONS

MEGA - 7108 LH SPL

CLASSIFICATION
AWS : E-7018-1, IS : EB 5626 H_3JX

DESCRIPTION AND APPLICATIONS

A low-hydrogen iron powder electrode, producing exceptionally tough and ductile welds. Weld metal is of radiographic quality. Suitable for Welding hardenable low alloy steels, Pressure vessels, Heavy & rigid structures, Equipments requiring heavy impact at minus 46°C and thick plates of carbon steels.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL (%)

C	Mn	Si	S	P
0.10 max	1.3-1.6	0.6 max	0.03 max	0.03 max

TYPICAL MECHANICAL PROPERTIES

UTS mpa	YS mpa	Elongation (%)	CVN Impact at 46°C Joule
575	475	26 min	30

ELECTRODE SIZE AND WELDING CURRENT : AC / DC (-)

SIZE DxL(MM)	CURRENT Amps.	kg / CARTON
2.50 X 350	70-100	5 Kg
3.15 X 450	100-140	5 Kg
4.00 X 450	140-180	5 Kg
5.00 X 450	180-220	5 Kg

EACH BOX CONTAINS 4 CARTONS