

AarTMya
ELECTRODES

CATALOGUE

An ISO 9001:2008 Company

Aarya Electrodes Pvt. Ltd. is an ISO 9001:2008 certified company offers a wide range of welding electrodes for different types of welding.

Aarya Electrodes is promoted by "ROSE CARPET GROUP" which was established in 1975 and pioneers in carpet manufacturing, exports and real estate business at Agra, UP.

OUR MERIT

Team work based on implementation of progressive research & development and supported by a strong techno commercial team of professionals having experience for a period of two to three decades in the respective field.

OUR STRENGTH

Wide range of product, combine with experience in the local market.

SERVICE

We believe that the length of our service is the proof of the positive effect on our client.

Aarya Electrodes plant equipped with advance machineries and modern quality control is situated in industrial hub and "TAJ" city Agra (UP) which is well connected with the rest of India.

Aarya Electrodes have a wide range of MMAW products for various type of welding:

- Mild Steel Electordes
- Low Alloy Electordes
- Low Hydrogen Electrodes
- Stainless Steel & Special Electrodes
- Hardfacing Electrodes
- Maintenance Electrodes
- Cast Iron Electrode
- Cutting & Gouging Electrodes

Here we want to express our heartfelt gratitude to our clients for the trust they have been placing in us.



ELECTRODES FOR MILD STEEL

		Typical Weld Metal Chemistry	Typical Mechanical Properties	Description / Application	WELDING PARAMETERS (AC/DC±) Size(mm) Amp
AARYA 13	AWS:6013	C : 0.057	UTS(MPa) : 400	Aarya – 13 is a general purpose all position rutile type electrodes suitable for welding of mild steel operates on both AC/DC(±). Ideally suited for general fabrication, storage tanks, steel furniture, construction equipment etc.	2.50 X 350 70-90
	IS : ER 4211	Mn : 0.45	YS(MPa) : 510		3.15X350/450 100-130
		Si : 0.25	ELONGATION : 26%		4.00X450 140-180
		S : 0.016	IMPACT AT 0°C : 56 J		5.00X450 190-220
		P : 0.019			
AARYA 13 S	AWS:6013	C : 0.055	UTS(MPa) : 410	Aarya -13 S is a medium coated general purpose all positioning electrodes.The electrode is characterized by stable and smooth arc, low spatter having good deslagging. Welds are radiographic quality. Ideally suited for welding of all types mild steel.	2.50 X 350 70-100
	IS : ER 4222x	Mn : 0.48	YS(MPa) : 520		3.15X350/450 100-140
		Si : 0.28	ELONGATION : 25%		4.00X450 130-190
		S : 0.015	IMPACT AT 0°C : 58 J		5.00X450 180-220
		P : 0.018			
AARYA 13 SS	AWS:6013	C : 0.057	UTS(MPa) : 430	Aarya -13 SS is a heavy coated rutile type electrodes with low spatter, stable arc having sound and radiographic quality weld metal. Suitable for pressure vassals, rail coaches, heavy earthmoving equipments, boiler parts, ship building etc.	2.50 X 350 60-100
	IS : ER 4222x	Mn : 0.45	YS(MPa) : 525		3.15X450 110-140
		Si : 0.25	ELONGATION : 24%		4.00X450 140-200
		S : 0.016	IMPACT AT 0°C : 62 J		5.00X450 190-230
		P : 0.019			

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ELECTRODES FOR MEDIUM AND HIGH TENSILE

		Typical Weld Metal Chemistry	Typical Mechanical Properties	Description / Application	WELDING PARAMETERS(DC+) Size(mm)	Amp
AARYA 18	AWS:7018	C : 0.075	UTS(MPa) : 445	Aarya - 18 basic coated hydrogen controlled type high yield electrodes.The deposition efficiency exceeds 115%.	2.50 X 350	70-100
	IS : EB 5426 H3JX	Mn : 1.05	YS(MPa) : 560		3.15X450	110-150
		Si : 0.45	ELONGATION : 27%	Weld deposit is tough and ductile having radiographic quality weld metal. Typical application include heavy earth moving structure, Boiler welding, bridges, thermal power station, pressure vessels etc.	4.00X450	140-190
		S : 0.016	IMPACT AT 30°C : 50 J		5.00X450	200-250
		P : 0.021				
AARYA 16	AWS:7016	C : 0.072	UTS(MPa) : 440	Aarya - 16 is a heavy coated iron powder type hydrogen controlled electrodes.The deposited metal in highly resistance to cracking.	2.50 X 350	70-100
	IS : EB 5424H2JX	Mn : 1.10	YS(MPa) : 555		3.15X450	110-150
		Si : 0.40	ELONGATION : 28%	Typical application include high tensile steel, railway wagons and coaches, atomic reactor, bridges, highly restrained joint etc.	4.00X450	140-190
		S : 0.018	IMPACT AT 30°C : 56 J		5.00X450	200-250
		P : 0.022				
AARYA 16 CS	AWS:7016	C : 0.085	UTS(MPa) : 450	Aarya - 16 CS is a heavy coated iron powder type hydrogen controlled electrodes. The deposited metal in highly resistance to cracking.	2.50 X 350	70-100
	IS : EB 5424H2JX	Mn : 1.25	YS(MPa) : 560		3.15X450	110-150
		Si : 0.50	ELONGATION : 27%	Typical application include high tensile steel, railway wagons and coaches, atomic reactor, bridges, highly restrained joint etc.	4.00X450	140-190
		S : 0.018	IMPACT AT 30°C : 54 J		5.00X450	200-250
		P : 0.022				
AARYA 18 Spl	AWS:7018-1	C : 0.055	UTS(MPa) : 460	Aarya – 18 Spl is a specially designed for very high quality welding having unmatched in welding performance and properties. Weld metal produced radiographic quality. Suited for welding of heavy and rigid structure, penstock, pump and compressor, pressure vessels etc.	2.50 X 350	80-100
	IS : EB 5426H3JX	Mn : 1.30	YS(MPa) : 580		3.15X450	110-145
		Si : 0.35	ELONGATION : 25%		4.00X450	150-180
		S : 0.016	IMPACT AT 45°C : 52 J		5.00X450	190-230
		P : 0.019				



ELECTRODES FOR HARDFACING

	Typical Weld Metal Chemistry	Typical Mechanical Properties	Description / Application	WELDING PARAMETERS (DC+ or AC)	
				Size mm	Amp
AARYA 250 HF	C : 0.22	Hardness : 200 – 250 BHN	Aarya – 250 is a medium coated rutile type hardfacing electrode operating on AC/DC(-) depositing an air hardening weldmetal which has high degree of toughness and excellent resistance to rolling sliding friction and heavy impact load. The weld deposit is machinable.	3.15X350/450	110-145
	Mn : 0.45			4.00X450	150-180
	Si : 0.37			5.00X450	190-230
	Cr : 1.90				
AARYA 350 HF	C : 0.18	Hardness : 350 – 450 BHN	Aarya – 350 A medium - heavy coated, rutile type electrode depositing weld metal having hardness with range of 350 – 450 BHN. The electrode is easy to operate displaying pleasing welding characteristics. The weld deposit is machinable.	3.15X350/450	110-145
	Mn : 0.55			4.00X450	150-180
	Si : 0.40			5.00X450	190-230
	Cr : 2.50				
AARYA 550 HF	C : 0.2.0	Hardness : 500 – 550 BHN	Aarya -550 HF is a basic coated AC-DC type electrodes specially designed for hardfacing applications. Weld metal gives appx. 500-550 BHN hardness. The welds are non-machinable and air hardening type Carbon Chromium alloy which has excellent resistance to severe abrasion. Typical application welding of crusher jaws,xcavater teeth ,scraprer blades etc.	3.15X350 /450	110-145
	Mn : 1.30			4.00X450	150-180
	Si : 0.90			5.00X450	190-230
	Cr : 3.50				
AARYA Mn	C : 0.75	Hardness As welded : 200 – 250 BHN	Aarya – Mn is a basic coated, hard facing electrode specially design for welding of austenitic manganese steel weld metal containing 14% Mn. The weld metal gives work - hardens under impact in service and produced excellent resistance to wear by abrasion and impact.	3.15X350/450	110-145
	Mn : 14.0			Work Hardening : 500 – 550 BHN	4.00X450
	Si : 0.65				5.00X450

ELECTRODES FOR STAINLESS STEEL

	Typical Weld Metal Chemistry	Typical Mechanical Properties	Description / Application	WELDING PARAMETERS (DC+ or AC)	
				Size(mm)	Amp
AARYA 308L	AWS:E 308L-16 C : 0.021 Mn : 1.52 Si : 0.33 Cr : 19.20 Ni : 9.45 S : 0.013	UTS(MPa) : 523 ELONGATION : 35%	Aarya – 308L is a semi-basic type AC/DC electrode yielding an extra low carbon 18Cr-10 Ni weld metal. Welds are radiographic quality having excellent corrosion resistance to various metal compositions. Ideally suited for welding of AISI 304L,308L and their equivalent for overlays and surfacing.	2.50 X 350	60-90
				3.15X350	80-120
				4.00X350	110-150
				5.00X350	150-200
AARYA 309L	AWS:E 309L-16 C : 0.025 Mn : 1.40 Si : 0.41 Cr : 23.70 Ni : 12.72 S : 0.017	UTS(MPa) : 585 ELONGATION : 38%	Aarya – 309L is a 24Cr% - 12Ni% DC(+)/AC type stainless steel electrodes for welding of dissimilar material. It has high resistance to oxidation upto 11000C. Ideally suited for welding stainless steels, wrought and cast iron materials of similar composition, welding of stainless steel to carbon steel for buffer layers.	2.50 X 350	60-90
				3.15X350	80-120
				4.00X350	110-150
				5.00X350	150-200
AARYA 316L	AWS:E 316L-16 C : 0.055 Mn : 1.30 Si : 0.35 Cr : 18.80 Ni : 12.60 Mo : 2.40 S : 0.016	UTS(MPa) : 575 ELONGATION : 39%	Aarya – 316L is a rutile coated stainless steel electrode depositing an 18% Cr-11% Ni-2.30% Mo stainless steel weld metal. The weld metal has excellent resistance to intergranular corrosion event at elevated temperature, the weld metal being particularly immune to sensitization. These electrodes ideally suited for welding of similar composition.	2.50 X 350	60-90
				3.15X350	80-120
				4.00X350	110-150
				5.00X350	150-200



	Typical Weld Metal Chemistry	Typical Mechanical Properties	Description / Application	WELDING PARAMETERS (DC+ or AC)				
				Size(mm)	Amp			
AARYA 310	AWS:E 310-16	C : 0.084 Mn : 1.76 Si : 0.45 Cr : 26.50 Ni : 21.50 S : 0.014	UTS(MPa) : 605 ELONGATION : 34%	Aarya – 310 is a rutile based special purpose 25% Cr – 20% Ni type stainless steel electrode. The weld metal has resistance to corrosion. Oxidation resistance is satisfactory upto 12000C. This electrode ideally suited for welding of AISI 310 and similar composition of metal.	2.50 X 350 3.15X350 4.00X350 5.00X350	60-90 80-120 110-150 150-200		
	AARYA 312	AWS:E 312-16	C : 0.090 Mn : 1.76 Si : 0.45 Cr : 30.40 Ni : 9.70 S : 0.015	UTS(MPa) : 710 ELONGATION : 38%	Aarya – 312 is a rutile based semi-basic type 30% Cr – 10% Ni type stainless steel electrode. Electrodes Produced versatile high strength with crack - free joint in carbon steel, low alloy steel including difficult to weld steels. Ideally suited for similar composition base metal.	2.50 X 350 3.15X350 4.00X350 5.00X350	60-90 80-120 110-150 150-200	
		AARYA 307	AWS:E 307-16	C : 0.076 Mn : 5.70 Si : 0.62 Cr : 19.50 Ni : 9.30 S : 0.018	UTS(MPa) : 680 ELONGATION : 36%	Aarya – 307 is specially designed for welding of austenitic steels and austenitic manganese steels. It is a 18% Cr – 9% Ni & 6% Mn type welding electrode ideally suited for welding of heat resistance steel, dissimilar materials, for buffer layer etc.	2.50 X 350 3.15X350 4.00X350 5.00X350	80-100 110-145 150-180 190-230

ELECTRODES FOR CREEP RESISTING STEEL

	Typical Weld Metal Chemistry	Typical Mechanical Properties		Description / Application	WELDING PARAMETERS (DC +)	
		UTS (MPa)	ELONGATION		Size(mm)	Amp
AARYA 18 A1	AWS:E 7018-A1	C : 0.065	UTS : 570 (MPa)	Aarya-18A1 is basic coated, low hydrogen, iron powder type electrode producing a weld metal which contains 0.50% Mo. The weld metal displays good creep strength at elevated temperatures upto 475°C. The electrode operates in all conventional positions depositing welds of radiographic quality.	2.50 X 350	70-100
	Mn : 0.75	ELONGATION : 26%	3.15X350		100-140	
	P : 0.48		4.00X450		140-180	
	Si : 0.51		5.00X450		180-220	
	Mo : 0.013					
	S					
AARYA 8018B2	AWS:E 8018 B2	C : 0.066	UTS : 605 (MPa)	Aarya-8018B2 is a basic coated, low hydrogen electrode producing weld metal containing 1.25% Cr and 0.50% Mo. The weld metal shows good elevated temperature strength upto 525° C. The electrode is easy to operate in all positions and produces X-ray quality welds.	2.50 X 350	70-100
	Mn : 0.76	ELONGATION : 22%	3.15X350/450		100-140	
	P : 0.44		4.00X450		140-180	
	Si : 1.25		5.00X450		190-240	
	Cr : 0.50					
	Mo : 0.015					
S						
AARYA 9018B3	AWS:E 9018 B3	C : 0.066	UTS : 625 (MPa)	Aarya-9018B3 is a basic, low hydrogen type electrode operating in all positions. The electrode produces weld metal containing 2.25% Cr and 1% Mo and is suitable for welding creep – resisting steels of even composition for service at elevated temperatures as upto 575° C. Welds are of radiographic quality.	2.50 X 350	70-100
	Mn : 0.76	ELONGATION : 19%	3.15X450		100-140	
	P : 0.44		4.00X450		140-180	
	Si : 2.25		5.00X450		190-240	
	Cr : 1.02					
	Mo : 0.016					
S						



AARYA 7013 A1	Typical Weld Metal Chemistry	Typical Mechanical Properties	Description / Application	WELDING PARAMETERS (DC +)	
				Size(mm)	Amp
AWS:E 7013 A1	C : 0.065	UTS : 517 (MPa)	A medium coated, all position, rutile type electrode depositing weld metal which contains 0.50% Mo. The electrode displays all the pleasing welding characteristics of a rutile type, medium coated electrode. Suitable for welding of tubes and pipes in oil refinery and thermal projects where high temperature strength is necessary. Welds are of radiographic quality.	2.50 X 350	70-100
	Mn : 0.75	ELONGATION : 27%		3.15X350/450	100-140
	Si : 0.48			4.00X450	140-180
	Mo : 0.51			5.00X450	190-240
	S : 0.013				

ELECTRODES FOR CAST IRON

AARYA – N1C1	Typical Weld Metal Chemistry	Typical Mechanical Properties	Description / Application	WELDING PARAMETERS (DC+ or AC)	
				Size(mm)	Amp
AWS:E NiFeCl	C : 1.50	Hardness : 190 VPN	Aarya – N1C1 AC/DC (+) graphite coated all positioning electrodes electrode depositing weld metal which contains nickel and iron. Ideally suited for cast iron to steel welding and repair of varieties of cast irons. The weld deposit has superior bond strength and shows greater tolerance to impurities in the cast irons. Welds are easily machinable.	2.50 X 350	70-90
	Mn : 1.30			3.15X350	100-130
	Si : 0.35			4.00X350	140-180
	Ni : 52.0			5.00X350	190-220
	Fe : Balance				
AARYA – C1	C : 1.50	Hardness : 170 VPN	Aarya – C1 an AC/DC (+) type electrode produced a soft and stable arc with low currents. The electrode deposits a soft, crack – free and sound weld on grey cast iron. Welds can be machined easily.	2.50 X 350	70-90
	Mn : 1.30			3.15X350	100-130
	Si : 0.35			4.00X350	140-180
	Ni : Balance			5.00X350	190-220
	Fe : 4.50			Surfacing of the above materials, cast machinery parts engine blocks, bearing blocks, frames, foundry castings, etc.	

ELECTRODES FOR GALVANISING

	Typical Weld Metal Chemistry	Typical Mechanical Properties	Description / Application	WELDING PARAMETERS(DC-)	
				Size(mm)	Amp
AARYA 45	C : 0.048	UTS(MPa) : 400 ELONGATION : 28%	Aarya-45 is a very special type electrodes depositing iron weldmetal which is suitable for hot-dip galvanizing baths. Low silicon weld metal is highly resistance to molten Zinc corrosion. Ideally suited for welding of galvanizing bath tanks & related parts etc.	3.15X450	110-145
	Mn : 0.22			4.00X450	150-180
	Si : 0.05			5.00X450	190-230

ELECTRODES FOR CUTTING AND GOUGING

	Description / Application	WELDING PARAMETERS(AC or DC-)	
		Size(mm)	Amp
AARYA CUT	Aarya – CUT an very special red iron oxide based electrode designed for smooth cutting of metal in all positions. The special coating withstands at high currents without overheating. A arc force renders it possible to cut all metals. When using the electrode hold it at an angle of 45° to the weld job. Closer the arc, the faster and cleaner the cut. Keep the electrode continuously in motion holding it firmly against the surface of the metal.	3.15X350	150-180
		4.00X450	190-240
		5.00X450	250-300
AARYA GOJ	Aarya – GOJ is a heavy coated electrode specially designed to produce smooth and clean grooves in all positions on weld job. The special exothermic coating stable the force of the arc right at the point of application producing a highly efficient metal weld pool. The force of the arc remove the undesired metal from its path leaving a clean groove for subsequent operations such as welding surfacing etc. The electrode withstands high currents without getting overheated.	3.15X350	200-250
		4.00X450	250-300
		5.00X450	300-350



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