



WELDING THE WAY FORWARD

**WHERE EVERY
WELD BUILDS A
BETTER TOMORROW**

www.specialwires.in



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The background of the page is a composite image. The left side features a light blue background with several white gear outlines of different sizes. The right side is a dark, high-contrast photograph of a welding process, showing bright orange sparks and molten metal. A large white gear outline is also visible in the center-right area, partially overlapping the welding image.

COMPANY INTRODUCTION

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SPECIAL WIDGES 
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debangki mudi agm.bach (d) shila.c.
Unit 1 No. 201, 5th Street, Sector 1, 8000 Industrial Estate,
North Point, Antabara, Chennai - 605 006.
GSTIN : 33AABC0214P123

ABOUT OUR COMPANY

Established in 1983, Special Wire Products Pvt Ltd is a renowned manufacturer of

- Welding electrodes & MIG wires
- Mild steel wire and carbon steel wires
- Cold forged parts and components
- Seat springs

We operate from a spacious 25,000 sq. ft. shop floor, equipped with cutting-edge machines from Taiwan, Japan, and India. This enables us to maintain exceptional quality and efficiency.

Our highly skilled workforce has been perfecting their craft for over three decades. With an annual production capacity of 7200 tons, we deliver high-quality products consistently



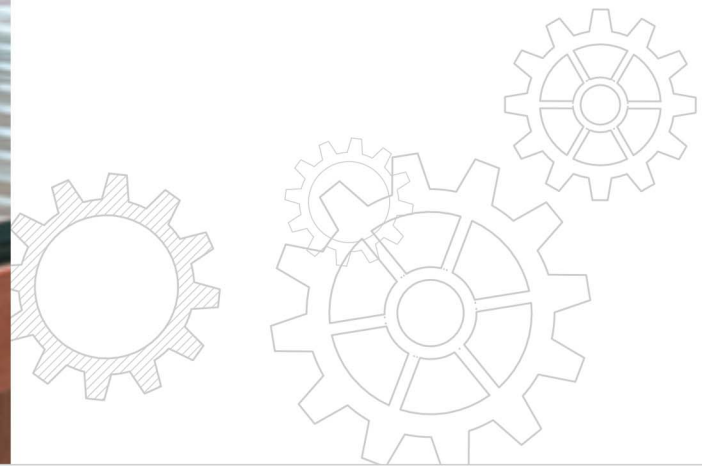


PL.Rajendran

Managing Director

Under the visionary leadership of PL. Rajendran, our company has experienced significant growth and transformation. As Managing Director, he has been instrumental in leveraging technology to enhance our business infrastructure and drive Innovation.

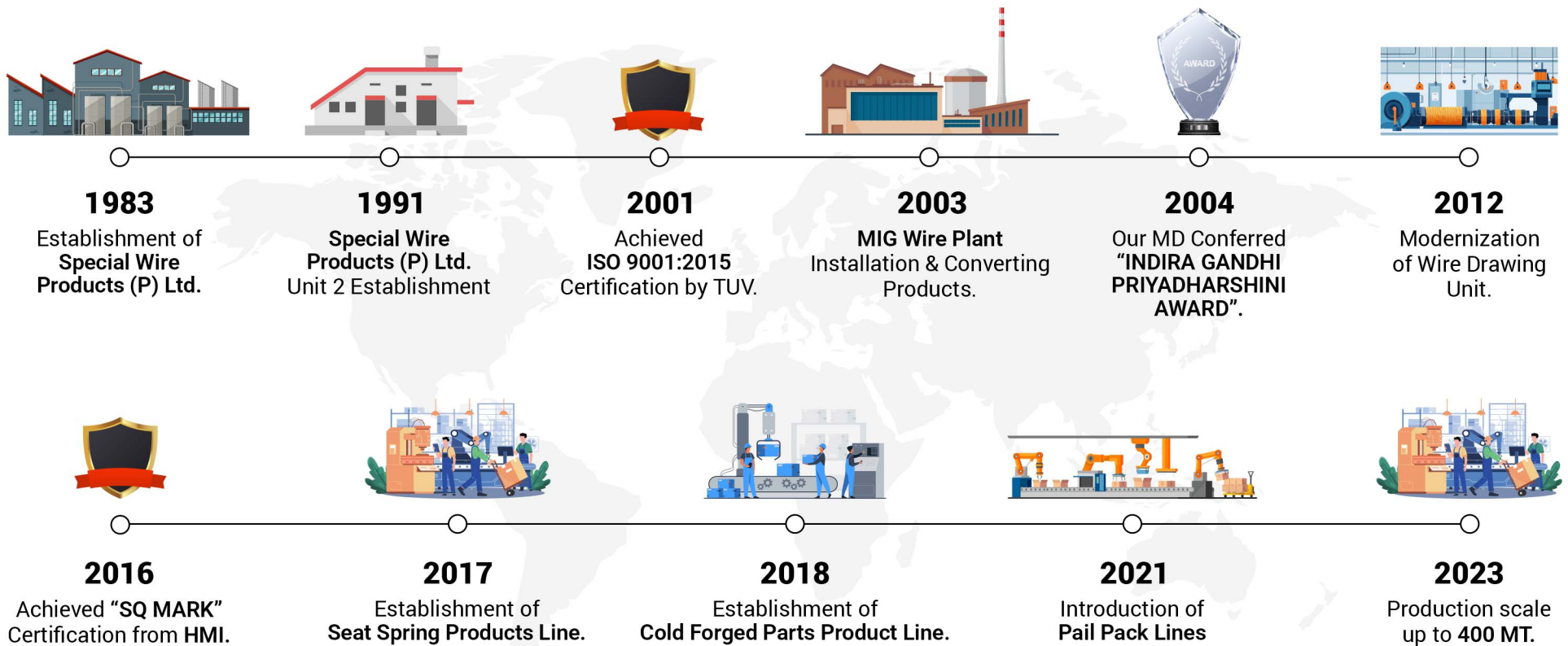
Through his strategic direction and efficient resource management, we have successfully expanded into high-growth business areas, establishing a strong presence in niche and specialized segments. His leadership has been pivotal in shaping our company's growth trajectory and positioning us for continued success.



ESTABLISHMENT & DEVELOPMENT JOURNEY



Over 42 years of establishment and development, Star electrodes & wires has always persistently pursued the path of sustain able development, aiming to balance the interests of stakeholders. At the same time, we uphold "our promise, our commitment " by providing the highest quality products and services.





MISSION

At Special Wire Products Pvt Ltd, our mission is to deliver high-quality MIG welding wires & electrodes, and mild steel wires ,cold forged parts that exceed our customers' expectations. We strive to build long-term relationships with our clients, suppliers, and partners through our commitment to innovation, reliability, and exceptional customer service.



VISION

Our vision is to be the leading manufacturer of MIG welding wires & electrodes and mild steel wires ,cold forged parts in India & global, recognized for our excellence in quality, technology, and sustainability. We aim to expand our global footprint, foster a culture of innovation and continuous improvement, and contribute to the growth and development of our community

CORE VALUES



QUALITY

We are committed to delivering high-quality products that meet international standards.



INNOVATION

We encourage innovation, creativity, and continuous improvement in all aspects of our business.



CUSTOMER FOCUS

We prioritize our customers' needs, providing exceptional service and support.



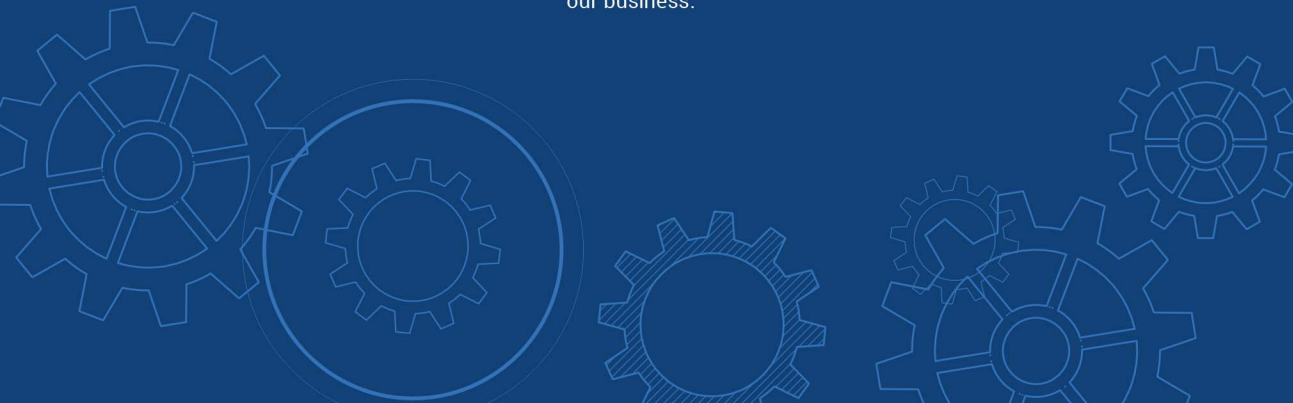
SUSTAINABILITY

We strive to minimize our environmental footprint and promote sustainable practices.



TEAMWORK

We foster a culture of collaboration, respect, and open communication among our employees, partners, and stakeholders.



QUALITY POLICY

At Special Wire Products, our Quality Policy is to design, manufacture, and supply high-quality MIG welding wires, electrodes, steel wire products, and ground bars that meet the stringent requirements of the Automotive and General Engineering Industries

Our purpose is to satisfy our customers with superior quality Welding products at affordable prices. We measure our success not just by growth and profit, but by the loyalty and satisfaction of our customers. Spreading happiness through our products is our ultimate goal.

Palaniyappan.Ra
Director





MIG / MAG WELDING WIRES



AWS Specification	TS (N/mm ²)	YS (N/mm ²)	EL(%)	C	Mn	Si	P	S	Cr	Ni	Mo	Details
A5.18 ER70S-G	544	478	25	0.09	1.23	0.52	0.017	0.012	-	-	-	Welding of mild steel & 490N/mm ² grade steel such as ship building, steel structure & machinery. Stable arc at high current due to additional special alloy content.
A5.18/ ER70S-G	555	431	29	0.08	1.13	0.6	0.01	0.011	-	-	-	Welding 490N/mm ² grade steel in butt & fillet welding. Wide operation range, stable arc, low spatters.
A5.18 ER70S-G	585	485	24	0.08	1.45	0.89	0.005	0.003	0.03	-	0.01	Non copper coated MIG welding wire for automated & Robotic welding. Welding of 490N/mm ² .
A5.28 ER80S-G	650	560	26	0.05	1.44	0.61	0.028	0.017	-	-	-	For 590N/mm ² grade steel Wide operation range, stable arc and good weld ability. Ideal for welding in bridges, constructions and pressure vessels.
A5.18 ER70S-2	593	470	30	0.04	1.21	0.46	0.01	0.008	0.06 (Al)	0.06 (Ti)	0.04 (Zr)	Welding mild steel and 490N/mm ² grade steel. Specially designed for GTAW with Ar in root pass of pipe welding, Also used for butt or fillet welding of high pressure items in ships, petro - chemistry industries and nuclear power plants.

STAR MILD STEEL & LOW ALLOY FLUX CORED WIRES



GRADE	TS (N/mm ²)	YS (N/mm ²)	EL(%)	C	Mn	Si	P	S	Cr	Ni	Mo	Application
STAR E71T1-C	578	472	28	0.035	1.29	0.34	0.007	0.01	0.015	0.012	0.011	Welding 490N/mm ² grade steel, good mechanical properties, deep penetration, excellent weldability, less fume, stable arc, easy slag removal and excellent X-ray quality welds . (104J at -20°C). Most widely used for welding some key structures like ship building, mechanical manufacture, pressure vessels, boilers, petroleum machinery, chemical machinery, hoisting machinery, etc
STAR E71T-5C	570	454	23	0.044	1.28	0.34	0.011	0.009	0.013	0.024	0.015	Welding 490N/mm ² grade steel, Capable of producing low diffusible hydrogen levels. (152J at -30°C) excellent low temperature toughness and good crack-resistance. Used for welding some key structures like ship building, vehicles, mechanical manufacture, pressure vessels, petrochemical machinery, hoisting machinery, etc

STAR MILD STEEL AND STAINLESS STEEL METAL CORED WELDING WIRES



GRADE	TS (N/mm ²)	YS (N/mm ²)	EL(%)	C	Mn	Si	P	S	Cr	Ni	Mo	Application
STAR 409 Ti	489	410	15	0.03	0.3	0.59	0.012	0.01	0.015	0.012	0.011	Weld metal is 12%Cr-Ti. Designed for joining components of automotive exhaust systems. Such as catalytic converters (for ferritic stainless steel such as AISI/SUS 409)
STAR 436	487	395	23	0.022	0.41	0.04	0.009	0.012	17.1	0.71	1.09	Metal cored wire for horizontal, fillet and flat position welding of 409, 430 and 436 type stainless steels as found in ferrite stainless steels automotive mufflers
STAR 439	510	480	22	0.034	0.46	0.32	0.012	0.008	17.5	0.30		metal cored wire designed for flat and horizontal fillet welding of AISI 439 Ferrite stainless steels. High tensile strength at the high temperature atmosphere

STAR HARD FACING FLUX CORED WIRE

GRADE	Hardness of weld metal	C	Si	Mn	P	S	Cr	Mo	W	B	Application
STAR 600 H	605	0.35	2.8	0.5	0.013	0.008	6.5	0.51			It is highly recommendable to use on wear plate and weld metals hardness should be over Hv 600
STAR 700 H	710	0.4	3.2	0.6	0.012	0.01	7		0.80		It is highly recommendable to use on wear plate and weld metals hardness should be over Hv 700
STAR 800 H	804	0.43	3.4	0.550	0.013	0.011	7.50		1		It is highly recommendable to use on wear plate and weld metals hardness should be over Hv 800
STAR 900 B	895	1.63	0.44	0.640	0.011	0.018	10.50	0.050	1	6.3	It is highly recommendable to use on wear plate and weld metals hardness should be over Hv 900



SUBMERGED ARC WELDING WIRE

GRADE	YS (Mpa)	TS(Mpa)	EL(%)	C	Mn	Si	P	S	Cu	Impact value @-40°C	Application
STAR EM12K	485	570	31	0.09	1.05	0.215	0.017	0.011	0.005	102.2	Star EM12K is for welding 450Mpa-500Mpa tensile strength structures such as boiler, ships, bridges, pressure vessels as well as LPG cylinders before welding. The base metal must clear away impurities and the flux must be baked in a temperature of 300 to 350 C for 1-2 hrs



STAINLESS STEEL WELDING WIRES & TIG WELDING RODS



GRADE	TS (N/mm ²)	YS (N/mm ²)	EL(%)	C%	Mn%	Si%	P%	S%	Cr%	Ni%	Mo%	Application
ER 307	650 N/mm ²	465 N/mm ²	40%	0.08	4.5	0.43	0.012	0.011	20.02	9.52	0.97	Star ER307 welding wire is a versatile, austenitic stainless steel wire used for joining and surfacing applications involving work-hardened steels, heat-resistant steels, and dissimilar steels. Applications:- Joining Dissimilar Steels: ER307 wire is effective for welding different types of metals, especially when joining mild steel to stainless steel or austenitic stainless steel to carbon steels. Hard facing Applications: Ideal for depositing buffer layers on crack-sensitive base metals, providing a robust foundation for subsequent hard facing layers. High-Temperature and Corrosive Environments: Suitable for components exposed to high
ER 308	550-690	345-483	30-40%	0.04	1.80	0.31	0.013	0.008	20.15	9.53	0.43	Star ER308 is a popular welding wire used for joining austenitic stainless steels. applications:- Joining Austenitic Stainless Steels: ER308 wire is ideal for welding 304, 304L & other austenitic stainless steel grades. • Food Processing Equipment: Suitable for fabricating and repairing equipment that requires corrosion resistance and hygiene. • Chemical Processing: Used in applications where resistance to corrosive substances is essential. • Architectural Features: Ideal for welding decorative stainless steel components. • Piping and Tubing: Suitable for joining stainless steel pipes and tubes in various industries. Star ER308 welding wire offers excellent corrosion resistance, ductility, and weldability, making it a popular choice for various stainless steel applications.
ER 308L	483-621 N/mm ²	345-448 N/mm ²	30-40%	0.023	1.63	0.4	0.013	0.009	20.12	10.35	0.37	Star ER308L is a low-carbon version of ER308 welding wire, offering improved corrosion resistance and reduced carbide precipitation. Applications - Joining Austenitic Stainless Steels: ER308L wire is ideal for welding 304L, 304, and other low-carbon austenitic stainless steel grades. Corrosion-Resistant Applications: Suitable for applications where resistance to corrosive substances is essential, such as in chemical processing, food processing & pharmaceutical industries. Low-Temperature Applications: ER308L wire is suitable for use in low-temperature environments due to its low carbon content and resistance to sensitization. Piping and Tubing: Ideal for joining stainless steel pipes and tubes in various industries, including oil and gas, chemical processing, and power generation. ER308L welding wire offers excellent corrosion resistance, ductility & weld ability, making it a popular choice for various stainless steel applications where low carbon content is beneficial.

GRADE	TS (N/mm ²)	YS (N/mm ²)	EL(%)	C%	Mn%	Si%	P%	S%	Cr%	Ni%	Mo%	Application
ER 309	621	414	35	0.081	1.61	0.4	0.012	0.013	23.85	13.05	0.23	<p>Star ER309 is a welding wire used for joining dissimilar metals and for welding 309 stainless steel. Applications - Joining dissimilar metals (stainless steel to carbon steel or low-alloy steel)- Welding 309 stainless steel - Buffer layer for hard facing applications - Industries: petrochemical, power generation, chemical processing, and oil and gas.</p> <p>Star ER309 wire offers good corrosion resistance, high-temperature resistance, and weldability, making it suitable for various applications involving dissimilar metals and high-temperature environments.</p>
ER 309L	625	420	33	0.021	1.95	0.34	0.012	0.008	23.9	12.92	0.39	<p>Star ER309L is a low-carbon version of ER309 welding wire, offering improved corrosion resistance and reduced carbide precipitation. Applications Joining dissimilar metals (stainless steel to carbon steel or low-alloy steel) Welding 309L stainless steel Buffer layer for hard facing applications Industries: petrochemical, power generation, chemical processing, oil and gas and food processing. Star ER309L wire offers excellent corrosion resistance, high-temperature resistance and weld ability, making it suitable for applications requiring low carbon content and resistance to sensitization.</p>
ER 310	634	434	30	0.087	2.00	0.38	0.011	0.009	27.42	21.82	0.35	<p>Star ER310 is a welding wire used for joining high-temperature and corrosion-resistant stainless steels. Applications High-temperature applications (furnace parts, heat exchangers) Corrosion-resistant applications (chemical processing, petrochemical) Joining 310 stainless steel and other high-temperature alloys Industries: petrochemical, power generation, chemical processing, and oil and gas.</p> <p>Star ER310 wire offers excellent high-temperature resistance, corrosion resistance, and weld ability, making it suitable for demanding applications</p>
ER 316 L	551	379	35	0.048	1.75	0.45	0.011	0.01	19.63	12.52	2.5	<p>Star ER316L is a low-carbon version of ER316 welding wire, offering excellent corrosion resistance and reduced carbide precipitation. Applications - Joining 316L stainless steel and other low-carbon austenitic stainless steel grades - Corrosion-resistant applications (chemical processing, marine, food processing) - High-temperature applications (heat exchangers, furnace parts) - Industries: chemical processing, pharmaceuticals, food processing, marine & power generation.</p> <p>Star ER316L wire offers excellent corrosion resistance, high-temperature resistance and weldability, making it suitable for applications requiring resistance to pitting and crevice corrosion.</p>

STAR STICK ELECTRODES



GRADE	TS (N/mm ²)	YS (N/mm ²)	EL(%)	C%	Mn%	Si%	P%	S%	Cr%	Ni%	Mo%	Impact value	Application
E6013	480	407	23.2	0.075	0.482	0.25	0.019	0.021				(68J at 0°C)	STAR E6013 used for welding of pressure pipe lines which cannot be welded from inside, storage tanks, automobile bodies, lpg cylinders, ship building, presssure vessels, railway coach panels, sheet metal work, bridges & construction equipment manufacturing, it gives stable arc, easy arc re-start, good slag removal & bead appearance.
E7018	563	482	24.5	0.072	1.03	0.454	0.016	0.081				(93J at -30°C)	Star E7018 used for weld the high pressure pipe line, tanks and vessels, earth moving equipment, cranes, griders and rail coaches, heavy welded fabrications as replacement for castings, bridges, pressure vessels, root runs in heavy and re strained joints and also used for welding in sub zero temp down to minus 330 degree centigrade, it gives high deposition rate, good mechanical properties of weld metal, crack resistance and x ray quality welds in both AC and DC
E6011	430	330	22	0.08	0.45	0.2	0.02	0.02				(20J at -20°C)	STAR E6011 Used for welding pipe lines, pressure vessels, tanks, structurals, field work where good penetration is necessary in all positions, it gives a flat bead with high melting rate, the weld metal is highly ductile and of radiographic quality. suitable for all position work
E7016	490	400	22	0.15	1.6	0.75	0.035	0.035				(20J at -30°C)	STAR E7016 Used for welding of railway class ii steel for depositing buffer layer before hard facing, For over head cranes, but welding of rail ends, Repair in cast iron, Joining mild steel to cast iron, Its gives radiographic quality welds, deposition efficiency is approximately -110%
E6010	430	330	22	0.09	0.05	0.24	0.026	0.028				(20J at -20°C)	STAR E6010 Used for welding pipe lines, pressure vessels, tanks, structurals, field work where good penetration is necessary in all positions, Good fit up joints necessary, Specially suited for pressure pipelines which cannot be welded from inside it gives a flat bead with high melting rate, the weld metal is highly ductile and of radiographic quality. suitable for all position work

GRADE	TS (N/mm ²)	YS (N/mm ²)	EL(%)	C%	Mn%	Si%	P%	S%	Cr%	Ni%	Mo%	Impact value	Application
E308L	520		35	0.08	0.2	0.01	0.02	0.023	19	10	FERRITE 5%		Star E 308L Used for welding of all Cr-Ni steels with low or medium carbon content as well as Ti & Cb stabilised Cr-Ni steels of 18/8 type represented by AISI types 302,304,304L,321 & 347 welding of house hold articles, hospital equipment ,chemical plants, milk and soap industries, valve faces and seats, its gives easy striking and restriking with fine rippled beads and has excellent creep strength and the weld metal is radiographic quality
E309 L	520		30	0.04	1.18	1.0	0.03	0.028	23	24			Star E309 L - Heavy coated rutile type all position austenitic ferrite content of approx 15%, Excellent oxidation and corrosion resistance in continuous service up to 1000 degree centigrade. Gives little spatter. easy detachable slag with fine ripple beads of radiographic quality. its used for joining high alloy and unalloyed steels, Also suitable for buffer layer on 18/8 Cr-Ni steels, suitable for heat resistant steels type AISI 309
E 316 L	520		30	0.07	2.2	1	0.03	0.02	18	12	2.5		Star E316 L - A low carbon 18/13/Mo stainless steel type electrode for welding of stabilised and non stabilised and non stabilised
STAR CAST IRON WELDING ELECTRODES													Point up with the electrode, Grind to chisel, drill out any cracks which may end in the workpiece to prevent further cracking, Remove any casting scale present, Pre-heat hollow bodies or stress -prone and complicated work piece to 200 to 250 degree centigrade, with pure nickel or nickel-copper consumable materials, weld absolutely not more than 10 times the electrode diameter after each other (30 to 50 mm).Hammer out the welding beads immediately to relieve welding stresses, If possible, Keep the work piece only warm enough to touch and weld at different places. Weld double -U seams on both sides, If the work piece is not divided by the crack, the welding is begun on the edge and welded in the back-step process against the inside of the workpiece, Never follow a reverse order. With nickel-iron consumables follow strictly the same work sequence, but do not hammered out. When welding multiple layers, ignite the arc on the already welded additive material and overlay successively wider beads, However, not wider than a about 3 x electrode core - wire diameter.

GRADE	TS (N/mm ²)	YS (N/mm ²)	EL(%)	C%	Mn%	Si%	P%	S%	Cr%	Ni%	Mo%	Impact value	Application
STAR FERRO - NICKEL					2.0 Max	1				45 to 60	Fe balance		Star ferro - nickel electrode specially designed for welding cast iron the cold way. The nickel-iron weld deposit does not pick up carbon from the base metal and hence remains ductile ,soft and easily machinable at the same time retaining adequate strength. used for repairing cast iron pads, broken castings, building up of worn surface or correcting machining errors on castings and joining cast iron to steel, welding on nodular graphite iron, malleable iron subject to heavy wear.
STAR 250				0.16 Max	0.15 to 0.40%	0.5 max	0.003 max	0.003 max	0.40 to 0.75				Star medium heavy coated rutile type electrode deposits air hardening type weld metal of approx 250 brinell hardness. The weld metal is machinable. used for welding of gears ,tram tyres, shafts, sugarcane crushers, gear wheels, hammers, pinion teeth, pulleys, couplings, spindles and axles.
STAR 650 LH				0.3 to 0.6	0.6 to 1.0	0.7	0.03	0.03	5 to 9	0.5% V	0.5		Star 650 LH is a medium heavy coated low hydrogen air hardening type electrode for hard facing applications. Produces extremely hard, sound & non machinable welds, Due to the low hydrogen coating the electrodes can be used on high sulphur steel without inducing under bead cracking or porosity. The deposits can be finished by grinding only. Application-welding of oil expeller worms, pan mixture blades, stone crushers jaws, muller tyres, screw conveyors, cement die rings, hot and cold punching dies, crane wheels, caterpillar treads, mine rails, shear blades, bamboo chipper knives, croppers etc
Star - manganese				1.0	12- 16	0.8	0.03	0.03					A medium heavy coated low hydrogen work hardening type electrode for hard facing applications on austenitic Mn steel parts like stone crusher jaws, dredger bucket teeth etc, Where resistance to impact is necessary. The weld deposit consists of 12% Mn steel which has 200 brinell hardness which increase to over 500 brinell under severe impact in service. Application-welding of rock crushing jaws, manganese steel rails, dredger bucket depth, cement grinding rings, mining, various parts of earth moving equipments ,muller tyres, hammers etc
Star non machinable				1.0	12- 16	0.8	0.03	0.03					Star non machinable is a medium heavy coated ,low hydrogen type electrode for non machinable welds on cast iron. Preferred When a strong and rigid joints are obtained between two cast iron parts, Preheating is recommended for heavy and complicated sections, The electrodes should always be kept dry. Applications - welding of cast iron parts and for all types of general reclamation or repair work where machinability is not a primary consideration. It is also useful in joining of cast iron to mild steel.

STEEL WIRE

We offer coils and cut length of alloy carbon, mild steel, who application can be from automobiles to general engineering products line can be from fasteners to automotive components. We offer customs packing of our product as per the specification provided by our clients.



SEAT SPRINGS

Springs used in Automotive seats
manufactured in auto line with an
inbuilt tempering furnace & can be supplied
with PE coating or rubber coating

Application used widely in all Automotive Seats.



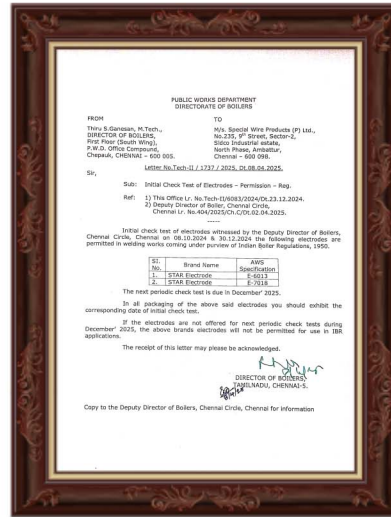
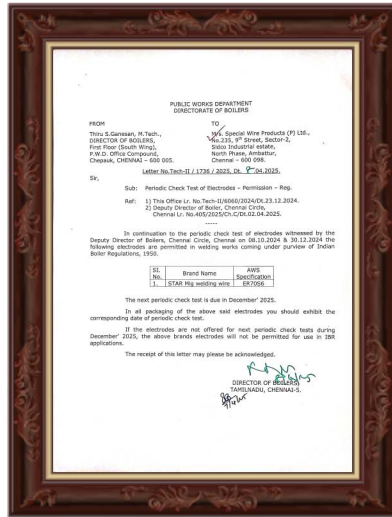
COLD FORGED PARTS

Product: Our range of products are produced with head formers, Multi station machines are produced with capability of threading & turning in secondary operations. Our product ranges can be bolts with extrusions. Single head washer assembly, pointing pins & knurling.

Product Applications: Our products are widely used in fastening applications & clamping application in automotive industry, hardware implements, appliances industry.



CERTIFICATES & APPROVALS



TESTING FACILITY

- Our lab is equipped to test & meet the quality requirements of our clients.
- Our lab is equipped to sort Raw Materials & batch it to meet various applications of our clients.
- Our chemist is a field exposure of 10+ years on welding applications, Cold Forged application failure analysis, which stands as a core strength of our laboratory.





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