PRODUCT PROFILE

NexaWeld®

LOW HEAT SERIES

WELDING ELECTRODES

Contents

NEXA-100

AN ALL POSITION ELECTRODE FOR HIGH PRODUCTIVITY WELDING OF MILD STEEL.

ALLOY BASE : Fe , Mn , Si

SPECIAL FEATURES

- All position, electrode for welding of low carbon steels.
- Smooth weld bead of X-ray quality.
- Minimum distortion.

RECOMMENDATIONS

A unique all positional welding alloy for low carbon steels. Very well suitable for thin guage sheets, plates where warpage, distortion and stresses are to kept minimum.

APPLICATIONS

Storage tanks, wagon & carriages, containers, sheet metal like containers, fabrication of structures steels.

PROCEDURES

Clean the joint area thoroughly. Use recommended current, with reverse polarity on DC power source for deep penetration. Use down hand stringer bead technique. Hold short to medium arc slight weaving.

TECHNICAL DATA

Tensile Strength	:	40-50 kgf / mm2
Elongation	:	17 – 25 %

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.50	4.00
CURRENT (Amps)	50-90	90-140	120-170

NEXA-660

ELECTRODE FOR MEDIUM-TENSILE DUCTILE STEEL WELDS

ALLOY BASE : C, Mn, Si

SPECIAL FEATURES

- Crack free deposits with higher strength.
- Ideal for contaminated surfaces
- Highly ductile
- It gives radiographic weld bead.
- Excellent impact resistance.

RECOMMENDATIONS

Low alloy sheets, low carbon steels, medium carbon steels, problem steels having sulphur contents, high tensile steel. Very much useful where toughness and weld reliability are important.

APPLICATIONS

Flanges, sulphur and phosphorous steel, heavy equipment maintenance, automobile chassis, tanks, pressure vessels.

PROCEDURES

Clean the area to be welded. Use short arc, on DC power source with reverse polarity. It is recommended to dry the electrode at 300^{0}C for one hour before use.

TECHNICAL DATA

Tensile Strength	:	55-55 kgf / mm2
Elongation	:	26 – 30 %

CURRENT RANGE : DC (+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	90-140	140-180	180-250

NEXA-110

A CONTACT ELECTRODE FOR SPEEDY ALL – POSITION WELDING OF MILD STEEL.

ALLOY BASE : Fe , Mn , Si

SPECIAL FEATURES

- All position, contact type welding electrode
- Very low distortion and warpage
- Welding bead is of x-ray quality.
- Outstanding welds deposit appearance

RECOMMENDATIONS

A versatile all positional welding alloy for low carbon steels. Highly recommended for welding of thin gauged sheets.

APPLICATIONS

Tanks thin gauge sheets containers, sugar mill roll journals, pipelines, machine guards furniture. Air conditioning units.

PROCEDURES

Clean the joint area thoroughly. Use recommended current, with reverse polarity on DC power source for deep penetration. Use down hand stringer bead technique. Hold short to medium arc slight weaving.

TECHNICAL DATA

Tensile Strength	:	40-50 kgf / mm2
Elongation	:	20 – 30 %

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-90	90-140	120-170

NEXA-670

FULLY AUSTENTIC HEAT RESISTANT ALLOY ELECTRODE

ALLOY BASE : Fe , Cr, Ni,

SPECIAL FEATURES

- A unique all positional austenitic stainless steel welding alloy for AISI 309 & 310 stainless steel.
- Ideal for high oxidation resistance maintain high strength at temperatures up to 1200°C.
- Suitable for stainless steel of unknown analysis.

APPLICATIONS

Suitable for welding of steel with high carbon content often used in the building field . furnace lining , furnace parts , burners heat treatment pots and baskets.

PROCEDURES

Clean weld area of oil , grease or any dirt carefully. If jigs are not available for clamping the work must to tack welded. Weld a number of light beads maintaining short arc. To avoid over heating intermittent welding may be used. Frequently clean the slage between passes.

TECHNICAL DATA

Tensile Strength	:	55-65 kgf / mm2
Elongation	:	30-35%

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-75	80-110	120-140

NEXA-106

ELECTRODE FOR HIGH STRENGTH AND EXTREME CRACK RESISTANCE

ALLOY BASE : Fe , Cr, Ni, Mn.

SPECIAL FEATURES

- Controlled grain structure for high strength and for ductility.
- Controlled ferrite-austenite duplex structure.
- Low amperage, extremely low spatter, easy strike and re- strike.
- Weld bead is smooth, tough with superior crack resistance.
- Optimum resistance to friction, heat, corrosion impact.

RECOMMENDATIONS

A versatile electrode for welding most type of steels. Very high tensile strength and highly suitable for the welding of dissimilar and unknown steels. It is suitable for combination of similar and dissimilar steel and joining steels of different thicknesses.

APPLICATIONS

Tools dies, pinions, springs, shafts, machinable build up and overlays, automobile application including gear box main shaft, counter shaft and key ways. Joining of wear plates, buckets, many more application in sugar industries.

PROCEDURES

Clean the joint area thoroughly and prepare joint edges. Preheat high alloy and high carbon steel to about 200-250^{0}C followed by slow cooling after welding. Use short arc with stringer bead technique.

TECHNICAL DATA

Tensile Strength	:	85 kgf / mm2
Elongation	:	22 – 24 %

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-75	70-110	110-140

NEXA-680

AUSTENITIC-FERRITE ELECTRODE WITH EXCELLENT DUCTILITY AND HIGH TENSILE STRENGTH.

ALLOY BASE : Fe , Cr, Ni, Mn.

SPECIAL FEATURES

- Controlled grain structure for high strength and for ductility.
- Controlled ferrite-austenite duplex structure.
- Low amperage, extremely low spatter, easy strike and re- strike.
- Weld bead is smooth, tough with superior crack resistance.
- Optimum resistance to friction, heat, corrosion impact.

RECOMMENDATIONS

Weld deposit gives superior crack resistant, suitable for all types of steels including austenitic Mn steel and die steels. Optimum resistance to heat, impact and corrosion etc.

APPLICATIONS

For joining dissimilar steels of unknown composition, and welding of springs steel etc. For depositing cushioning layer on difficult to weld steel before depositing final surfacing layer.

PROCEDURES

Clean the joint area thoroughly. Use DCRP (DC+) on DC power source. Stringer bead technique should be preferably used with a short arc. Prepare X, V or U groove on thick-walled work piece with an angle of 60-80^{0}C. preheat high carbon containing steel to approx. 250^{0}C. while weaving restrict upto 2-3 times electrode diameter.

TECHNICAL DATA

Tensile Strength	:	80-85 kgf / mm2
Elongation	:	22 – 24 %

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-75	80-110	120-140

NEXA-1106

AUSTENO -FERRITIC STAINLESS STEEL ELECTRODE FOR HIGH STRENGTH AND CRACK- RESISTANT WELDS.

ALLOY BASE : Fe, Cr, Ni.

SPECIAL FEATURES

- Gives Austeno- ferritic crack resistance weld.
- Deal for welding unidentified steels.
- Gives smooth weld, with uniform ripples, with no slag interference.
- Deposit extremely tough.

APPLICATIONS

Most suitable for joining armour steel, Aust. Manganese steel, cast steel, forged steel and stainless steel to carbon steel of unknown composition.
Surface of grooved rolls and the repair of droped forge dies.
As a cushioning layer before hard facing.

TECHNICAL DATA

UTS	:	70-77 kgf/mm2
Elongation(L=4d)	:	30-32%
Hardness of pure weld metal	:	180-220 Brinell.

CURRENT RANGE : DC (+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	80-130	110-140	150-155

NEXA-390

SUPERIOR WELDING ALLOY FOR HIGH RESISTANCE TO HEAT AND CORROSION

ALLOY BASE : Cr, Ni, Fe

SPECIAL FEATURES

An extra low carbon, all position electrodes. Gives stable arc, low spatter, smooth weld profile, easily removable slag. The weld deposit is of radiographic quality and withstand temp. upto 1200 ^{0}C.

RECOMMENDATIONS

Ideal for welding of AISI 309, stainless steel of unknown composition and stainless steel to mild steel. Designed for application requiring a high degree of oxidation resistance and high strength.

APPLICATIONS

Suitable for welding of AISI 309, stainless steel of unknown composition and stainless steel to mild steel etc.

PROCEDURES

Clean weld area of any surface contamination and stringer beads, intermittent welding may be used to avoid heat buildup. Preheat is not necessary.

TECHNICAL DATA

Tensile Strength	:	65-75 kgf / mm2
Elongation	:	25 – 30 %

CURRENT RANGE : DC (+)

SIZE mm	2.15	3.15	4.00
CURRENT (Amps)	50-75	60-110	90-130

NEXA-360

AUSTENITIC ACID-RESISTANT ELECTRODE.

ALLOY BASE : Fe , Cr, Ni, Mn.

SPECIAL FEATURES

- Resists pitting due to acids and highly concentrated chemicals.
- Requires low amperage, so as to avoid warpage.
- Deposition is rapid and smooth.
- Suitable for highly restrained joints.
- Moly bearing SS welding alloy.
- Suitable for AISI 316, 316L , and 318 stainless steels.
- Minimised carbide precipitation.

RECOMMENDATIONS

Recommended for AISI 316, 316L, 317 and 318 type stainless steels for higher resistance to corrosion, heat resistance up to 300^{0}C. Resistance to impact, corrosion, heat and scaling is excellent. Protective overlay on steel for medium hardness and high corrosion resistance.

APPLICATIONS

Steam turbine blades, mixers chemicals pumps plating tank, hot forging dies, paper industries . Digesters and other fertilizers plant application

PROCEDURES

Clean weld area . use clamps or holding devices to avoid the distortion. Track weld at short gaps and use short arc. Use skip technique. Avoid use of weaving and chip out slag between passes.

TECHNICAL DATA

Tensile Strength	:	55-65 kgf / mm2
Elongation	:	30 – 40 %

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-75	80-110	120-140

NEXA-BL

AUSTENITIC STAINLESS STEEL ELECTRODE.

ALLOY BASE : Fe , Cr, Ni.

SPECIAL FEATURES

- Easy Arc striking.
- Radiographic quality welds metal.
- Extra low carbon content.
- Suitable to resist heat corrosion and carbon precipitation.
- All positional.
- Exceptional weldability.
- Superior colour match.

RECOMMENDATIONS

Recommended for AISI 301,302,304,304L,308L type stainless steel. Suitable for welding parts used in severe corrosive condition. Welding at low amperage especially recommended for joining extra low carbon grades to minimize carbide precipitations and avoids strongly intergranular corrosion. Superior resistance to impact, heat and scaling.

APPLICATIONS

Kitchen equipments, milk dairy equipment, mixer refineries, brewery, chemical industries, containers, mixer & nuclear plants.

PROCEDURES

Clean weld area. Use jigs/back up plates for clamping or tack at short gaps to decrease distortion. Use short arc, stringer beads and number of light bead. Avoid weaving and chip out slag between passes.

TECHNICAL DATA

Tensile Strength	:	53-65 kgf / mm2
Elongation	:	35 – 40 %

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-75	80-110	120-140

NEXA-1124

AUSTENITIC STAINLESS STEEL ELECTRODE.

ALLOY BASE : Fe, Cr, Ni,

SPECIAL FEATURES

- Easy Arc striking.
- Radiographic quality welds metal.
- Extra low carbon content.
- Suitable to resist heat corrosion and carbon precipitation.
- All positional.
- Exceptional weld ability

RECOMMENDATIONS

Recommended for AISI 301,302,304,304L,308L type stainless steel. Suitable for welding parts used in severe corrosive condition. Welding at low amperage especially recommended for joining extra low carbon grades to minimize carbide precipitations and avoids strongly intergranular corrosion. Superior resistance to impact, heat and scaling.

APPLICATIONS

Kitchen equipment's, milk dairy equipment, mixer refineries, brewery, chemical industries, containers, mixer & nuclear plants.

PROCEDURES

Clean weld area. Use jigs/back up plates for clamping or tack at short gaps to decrease distortion. Use short arc, stringer beads and number of light bead. Avoid weaving and chip out slag between passes.

TECHNICAL DATA

Tensile Strength	:	24-28 kgf / mm2
Elongation	:	35-40 BHN

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-75	80-110	120-140

NEXA-22RJ

FOR WELDING SUGAR MILL ROLLERS JOURNALS, MACHINERY COMPONENTS AND BEARING AREAS.

ALLOY BASE : Fe, Cr, Ni, Mo

SPECIAL FEATURES

All position electrode giving Cr/Ni/Mo weld deposit providing high strength, excellent resistance to chemical corrosion and heat.

APPLICATIONS

Specially developed electrode for multi pass crack free buildup of sugar mill roller journals, machinery components and bearing areas. Smooth and steady deposition at lower currents. For cladding carbon steels to improve their wear and corrosion resistance due to sugar cane juice, water and other contaminants.

PROCEDURES

Clean weld area; remove all fatigued and cracked metal. For heavy thickness bevel 90°C groove. Stringer bead technique with shortest possible arc length is recommended. Use DC+ for good ripple and finish.

TECHNICAL DATA

Tensile Strength	:	55-66 kgf / mm2
Elongation	:	30-45%

CURRENT RANGE (AC/DC+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	60-100	85-120	120-150

NEXA-1080

HIGH RESISTANCE TO IMPACT AND DEFORMATION SUPERIOR CUSHIONING WELDING ALLOY

ALLOY BASE : Fe, Cr, Ni, Mn

SPECIAL FEATURES

- High work hardening in service.
- Highly crack resistance.
- Excellent all position welding.
- Superior resistance to impact deformation, heat and mild corrosion.

RECOMMENDATIONS

A versatile welding alloy for austenitic manganese steel and joining of mild steel and difficult steel. Very well suitable for cushioning layer under hard facing deposits. The weld metal gives good hardness in as deposited and work hardened under repeated and pounding load in service. Easy slag detachability.

APPLICATIONS

Sprockets, track pads, excavators, shovel and dragline buckets and other earth moving equipment, crusher roller , buildup of hammer, mantles, Dozer blades.

PROCEDURES

Clean weld area, fatigued material should be remove by chamfering. No preheating is required for manganese steel. Always use skip or staggered welding. Maintain a short to medium arc.

TECHNICAL DATA

Tensile Strength	:	55-65 kgf / mm2
Elongation	:	30-40 %

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-80	80-100	110-150

NEXA-670H

ELECTRODE FOR HK 30, HK 40 AND SIMILAR HEAT-RESISTANT ALLOYS

ALLOY BASE : Fe , Cr, Ni, Mo, C.

SPECIAL FEATURES

- Easy arc striking.
- Easy slag removal.
- Evenly rippled shining bead.
- The weld deposit can withstand temperatures up to 1150^{0}C in continuous service.
- Use low current and short arc.

APPLICATIONS

For welding reformer tubes (also called furnace tubes) made of HK 30 and HK 40 alloys used in fertilizer industries, oil refineries, petrochemical plants, etc.

PROCEDURES

Before welding, dry the electrode at 250-300^{0}c for 2 hours. It is advantageous to use a stringer bead with short arc.

TECHNICAL DATA

Tensile Strength	:	62 kgf / mm2

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-75	80-110	120-140

NEXA-008

AUSTENITIC STAINLESS STEEL ELECTRODE.

ALLOY BASE : Fe, Cr, Ni,

SPECIAL FEATURES

- Self-releasing slag with little or no need for weld dressing or fettling negligible spatter.
- High quality weld deposit with defect free radiographic performance in multi pass welds.
- Extra low carbon content.
- Suitable to resist heat corrosion and carbon precipitation.
- All positional.
- Exceptional weld ability

RECOMMENDATIONS

Recommended for AISI ,302,304,304L,308L type stainless steel. Suitable for welding parts used in severe corrosive condition. Welding at low amperage especially recommended for joining extra low carbon grades to minimize carbide precipitations and avoids strongly intergranular corrosion. Superior resistance to impact, heat and scaling.

APPLICATIONS

Kitchen equipment's, milk dairy equipment, mixer refineries, brewery, chemical industries, containers, mixer & nuclear plants.

PROCEDURES

Clean weld area. Use jigs/back up plates for clamping or tack at short gaps to decrease distortion. Use short arc, stringer beads and number of light bead. Avoid weaving and chip out slag between passes.

TECHNICAL DATA

Tensile Strength	:	53-65 kgf / mm2
Elongation	:	35-40 %

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-75	80-110	120-140

NEXA-009

SUPERIOR WELDING ALLOY FOR HIGH RESISTANCE TO HEAT AND CORROSION

ALLOY BASE : Cr, Ni, Fe

SPECIAL FEATURES

An extra low carbon, all position electrodes. Gives stable arc, low spatter, smooth weld profile, easily removable slag. The weld deposit is of radiographic quality and withstand temp. upto 1200°C.

RECOMMENDATIONS

Ideal for welding of AISI 309, stainless steel of unknown composition and stainless steel to mild steel. Designed for application requiring a high degree of oxidation resistance and high strength.

APPLICATIONS

Suitable for welding of AISI 309, stainless steel of unknown composition and stainless steel to mild steel etc.

PROCEDURES

Clean weld area of any surface contamination and stringer beads, intermittent welding may be used to avoid heat buildup. Preheat is not necessary.

TECHNICAL DATA

Tensile Strength	:	65-75 kgf / mm2
Elongation	:	25-30 %

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	50-75	60-110	90-130

NEXA-224

ELECTRODE FOR COLD WELDING OF CAST IRON.

ALLOY BASE : Ni.

SPECIAL FEATURES

- Exceptional weldability.
- High nickel content.
- Weld deposits exhibit high strength and machinability.
- All positional welding alloys.
- It is a unique product for heavy section, structure and casting of big machineries of cast iron.

RECOMMENDATIONS

Recommended for joining and build – up of malleable iron and grey cast iron without preheat. It is used for heavy sections dissimilar thickness circumferential pipe joints can be welded effectively.

APPLICATIONS

A unique electrode for cold welding of cast iron without preheats and joining cast iron parts subjects to erosion, corrosion and high temperatures. Best suited for repairing intricate cast iron part, waters pump housing, electric motor bodies and covers, machine frames, cylinder blocks, gears. Also ideal for salvaging foundry casting, gear box and differential housing, lathe beads, sugar mill rollers, glass moulds and cast iron dies.

PROCEDURES

Clean the welding zone and check the surface for cracks and defects. Use a short arc with low current to deposit a string bead not exceeding 50 mm. Peen the deposits to reduce residual stresses.

TECHNICAL DATA

Tensile Strength	:	30-34 kgf / mm2
Hardness		100 – 130 BHN

CURRENT RANGE : DC (-)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	40-70	60-110	100-120

NEXA-116

ALLOY BASE : Ni, Cu.

SPECIAL FEATURES

- Excellent machinability and ductility.
- Best colour machining
- No pre-heating required.
- Nickel and copper alloy for good strength.

RECOMMENDATIONS

Easily machinable nickel copper alloy electrode for welding most of cast irons giving a high strength and sound joints.

APPLICATIONS

Broken cast iron parts, repairing defects in cast iron foundry, gear teeth, pump impellers etc.

PROCEDURES

Sufficient amount of the casting skin should be removed. Depending on the job thickness a U weld or a double U weld should be made. Use shortest possible arc length.
The pass width should not be more than twice the diameter of the core wire. Deslag every weld bead and peen the weld metal carefully. Restrike the arc on the weld metal and never on the parent metal.

TECHNICAL DATA

Tensile Strength	:	30-34 kgf / mm2
Hardness		100 – 130 BHN

CURRENT RANGE : DC (-)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	40-70	60-110	100-120

NEXA-27

ECONOMIC NON-MACHINABLE FERROUS ELECTRODE FOR WELDING CAST IRON.

ALLOY BASE : Ni.

SPECIAL FEATURES

- Recommended for contaminated surface in old, dirty oily, greasy cast irons.
- Close colour match for cast iron.
- Economical cast iron electrode.
- Crack resistant and high tensile strength.
- Nickel free deposits
- Quick freezing.

RECOMMENDATIONS

For all cast iron applications where machining is not required. Can be used for joining of cast iron to steel, where contaminated surface is found to be conditioned.

APPLICATIONS

Foundry defects, sealing oil soaked cast iron. Corroded or oxidized cast iron furnace equipment, motor and generator housing. Guards on machine tools and foundry casting etc.

PROCEDURES

Remove fatigued metal by gouging or grinding. Sue short, and skip welding sequence.Keep medium arc length and 20 mm to 60 mm long beads. Chip out the slag.

TECHNICAL DATA

Tensile Strength : up to 60 kgf / mm2(approx.)

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	40-70	60-110	100-150

NEXA-119

EXTREMELY CRACK RESISTANT NICKEL IRON ALLOY ELECTRODE FOR WELDING CAST IRON.

ALLOY BASE : Ni, Fe.

SPECIAL FEATURES

- Less base metal dilution reduced impurities impregnation.
- Very suitable for cladding.
- Excellent weld ability and high strength on most cast iron.
- Ideal for parts subjected to elevated temperature and corrosion.

RECOMMENDATIONS

For building up missing section in all positions. Suitable for thin walled grey cast iron. Excellent for cladding repairing crack and joining of CI to other metal, good for vertical and over heat welding

APPLICATIONS

Hot and cold welding of cast iron parts, of grey cast iron , nodular graphite iron , malleable iron subject to heavy wear. Joining of cast materials with steel. The electrode is most suitable for the surfacing of the above materials. Casting machinery parts, bearing blocks, frames, foundry casting etc.

PROCEDURES

Sufficient amount of the casting skin should be removed. Use shortest possible arc length.The pass width should not be more than twice the diameter of the core wire. Deslag every weld bead and peen the weld metal carefully. Restrike the arc on the weld metal and never on the parent metal.

TECHNICAL DATA

Tensile Strength	:	35-45 kgf / mm2(approx.)
Hardness	:	150-190 BHN

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	40-70	60-110	90-120

NEXA-226

EXTREMELY CRACK RESISTANT NICKEL IRON ALLOY ELECTRODE FOR WELDING CAST IRON.

ALLOY BASE : Ni, Fe.

SPECIAL FEATURES

- Less base metal dilution reduced impurities impregnation.
- Very suitable for cladding.
- Excellent weld ability and high strength on most cast iron.
- Ideal for parts subjected to elevated temperature and corrosion.

RECOMMENDATIONS

For building up missing section in all positions. Suitable for thin walled grey cast iron. Excellent for cladding repairing crack and joining of CI to other metal, good for vertical and over heat welding

APPLICATIONS

Hot and cold welding of cast iron parts, of grey cast iron , nodular graphite iron , malleable iron subject to heavy wear. Joining of cast materials with steel. The electrode is most suitable for the surfacing of the above materials. Casting machinery parts, bearing blocks, frames, foundry casting etc.

PROCEDURES

Use shortest possible arc length. The pass width should not be more than twice the diameter of the core wire. Deslag every weld bead and peen the weld metal carefully. Restrike the arc on the weld metal and never on the parent metal.

CURRENT RANGE : DC (+)

SIZE mm	2.50	3.15	4.00
CURRENT (Amps)	40-70	60-110	90-120

NEXA-242

ELECTRODE FOR COLD WELDING OF ALL GRADES OF CAST IRON.

ALLOY BASE : Ni

SPECIAL FEATURES

- Electrode with stable and soft arc, regular flow which can be used for multi position welding.
- Heat affected zone is easily machinable.
- Minimum penetration and hence very less dilution.
- No undercuts.
- Very fine and even weld ripples.

APPLICATIONS

A versatile, nickel- based electrode for cold welding of all grades of cast iron without preheats. It is recommended for joining carbon steel to all grades of cast iron. Welds withstand server erosion and corrosion encountered in service. Best suited for repair- welding of intricate parts of cast iron, water pump housing, frame parts, cylinder block, gears, etc.

PROCEDURES

Gouge out cracks with Nexa- 900. Grind to get even surface on groove faces. Adopt stringer bead and skip welding technique. Hot peen the deposit. Chip slag between passes. Fill craters. Allow the job to cool slowly to room temperature.

TECHNICAL DATA

Tensile Strength : 32-38 kgf / mm2

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00
CURRENT (Amps)	80-100	100-130

NEXA-214

SPECIAL ELECTRODE FOR NON- FERROUS

ALLOY BASE : Cu, Sn, P.

SPECIAL FEATURES

- The weld metal is free from porosity and cracks.
- The bead is smooth and uniform.
- Excellent colour match on broze.

RECOMMENDATIONS

An electrode with exceptional weldability for joining and overlaying of steels & cast irons. Preheat thick sections up to 300^{0}c. suitable for AC power source.

APPLICATIONS

Welding and surfacing of copper, brass and bronze. Joining copper and bronze to cast iron overlays and steel. Filling cavities in copper alloy casting. Overlays on pumps, shafts and bearing surfaces. Building up missing section.

PROCEDURES

Prepare a large V approx. 80-90^{0}C. for work piece above 8 mm thick preheat upto 300^{0}C. bronze casting should be cooled slowly.

TECHNICAL DATA

Tensile Strength	:	24-28 kgf / mm2
Hardness	:	70-85 BHN

CURRENT RANGE : DC (+)

SIZE mm	3.15	4.00
CURRENT (Amps)	80-110	110-140

NEXA-2800

SPECIAL ELECTRODE FOR NON-FERROUS

ALLOY BASE : Cu, Sn, P

SPECIAL FEATURES

- A thin coated electrode intended for welding of copper and copper tin-alloys.
- Best suited for joining copper or bronze to steels.
- Can also use for welding of cast irons without preheat if machinability is not required.
- Suited for cladding also.

RECOMMENDATIONS

While welding copper or bronze work piece should be preheated to approx.300°C. But in no case the working temperature should reach 400°c or above as this will result in hot shortness. When welding large jobs maintain the interposes temperature of 300°c.

APPLICATIONS

Brushes valve seat ship propellers, malleable iron, Brass parts, bearing, and impellers blades galvanized iron.

PROCEDURES

Clean and grind the weld surface, for heavy section preheats is needed upto 250°C. Use short arc at low current with deposit stringer beads.

TECHNICAL DATA

Tensile Strength	:	24-28 kgf / mm2
Hardness	:	70-85 BHN

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00
CURRENT (Amps)	80-110	110-140

NEXA-900

ELECTRODE FOR GROVVING WITHOUT OXYGEN

SPECIAL FEATURES

- Special electrode with high blowing effect and producing hot exothermic penetrating arc.
- The molten metal is blown away quickly and provides good visibility.
- The cut is smooth and molten and blown away material can be removed easily.
- Does not damage the metal structure.

RECOMMENDATIONS

Where chamfering grooving is necessary without supplementary gases and extensive equipment's.

APPLICATIONS

For chamfering, gouging and making grooves in all industrial metals. For removing defective welds and rivets without using oxyacetylene and compressed air: removing flashers and risers in foundry casting. For beveling cracks in machine frames without dismantling. A prerequisite for welding. Cutting of metal parts on building sites.

PROCEDURES

The electrode is inclined to the surface at a 35° angle. The arc is pushed deeper and forward to drive the molten and slag onwards. For deeper groove, repeat procedure in stages until the required depth is reached.

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	200-250	250-300	300-350

NEXA-901

ELECTRODE FOR CUTTING WITHOUT OXYGEN

SPECIAL FEATURES

- Special electrode with a coating which gives a stable arc during the cutting or piercing process.
- The kerfs are clean and narrow.
- Suitable for all position.
- Produces negligible stag.

RECOMMENDATIONS

For high speed cutting, piercing hole of all metals using standard electric arc equipment. Ideal for cutting mild steels, carbon steels, cast iron nickel alloys and bronze etc. dose not over heat.

APPLICATIONS

Cutting and piercing of steel, cast iron copper materials, aluminum. Excellent for burning rivets, dismantling work at site and for cutting out unwanted metal in foundry casting. Oxy-acetylene or compressed air need not be used.

PROCEDURES

After striking the arc, swing the arc back and forth as in sawing maintain the motion and at the metal. For piercing holes, push the arc in and out until the metal is pieced. Use DC with electrode negative for best results.

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	150-250	200-300	250-400

NEXA-7072

ELECTRODE FOR TOUGH AND WEAR- RESISTANT SURFACING ALLOY DEPOSIT

ALLOY BASE : Fe, Cr, Mn, C

SPECIAL FEATURES

- Basic all position electrode.
- The deposit is particularly resistant to impact.
- Thick surfacing without intermediate layers possible

RECOMMENDATIONS

For overlaying parts subject to friction and impact. Can be used for multipass buildup in all position. Best suited for reclamation of steel rollers in rolling mills.

APPLICATIONS

Surfacing of parts subject to wear or impact, rims, carbon-alloyed rails dies, striking tools, rolling surfaces, sliding surfaces subject to heavy wear, matrixes, stampers, etc.

PROCEDURES

Clean the surface thoroughly. Remove all cracked and spelled metal. Use short arc and lay stringer bead. Weld 2-3 layers. Finish welds metal by machining.

TECHNICAL DATA

Hardness : 29-35 HRc

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	80-110	110-160	140-180

NEXA-7073

HIGHLY WEAR RESISTANT, TOUGH SURFACING ELECTRODE

ALLOY BASE : Fe, Cr, Mo, C

SPECIAL FEATURES

- Superior dense and spatter free deposit.
- Resist high abrasion and moderate impact.
- Operative in all position
- Low heat

RECOMMENDATIONS

For reclamation and protective coating on parts subjected to severe abrasion and moderate impact. Unique electrode for multiples builds up in all positions.

APPLICATIONS

To surface parts subject to heavy abrasive wear and mild impact: digger teeth, drills, conveyor screws, cutting and forming tools, hot work dies and crusher hammers etc.

PROCEDURES

Clean the surface thoroughly. Remove cracked and spelled metal. It can be used for single and multi-pass hard-facing. Weld 3 layer if possible to attain recommended hardness. Slow cooling after welding is recommended using an oven or asbestos.

TECHNICAL DATA

Hardness : 56-58 HRC

CURRENT RANGE : DC (+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	90-110	120-150	150-190

NEXA-7074

SPECIAL AUSTENITIC MANGANESE STEEL ELECTRODE

ALLOY BASE : Fe, Mn, Ni, Cr, C

SPECIAL FEATURES

- The deposit is work- hardening type and highly resistant to cracking and deformation during working.
- Excellent abrasion resistance in the work- hardened condition.
- Prolonged working life even when subjected simultaneously to impact and abrasion.

RECOMMENDATIONS

Clean weld area. Maintain short arc length. Maintain interpass temperature below 150°c by skip welding. Hot peening is advisable to relieve stresses.

APPLICATIONS

For joining manganese steel parts, hard facing of parts subject to heavy impact and stress. For use on big crushing equipment for rocks, jaws, cones, gyratory crushing and manganese rails etc.

PROCEDURES

Ensure proper cleaning of area to be welded. Removes the fatigued area by gouging. Do not preheat manganese steel. Interpass temperature should be kept below 150°c using staggered. Hot peening helps reducing stresses. Cool slowly. For small components, immerse in water.

TECHNICAL DATA

Hardness : 40-45 HRc

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	70-120	130-190	170-250

NEXA-7000

SURFACING ELECTRODE WITH CHROMIMUM CARBIDE

ALLOY BASE : Ni, Cr, C, Mn

SPECIAL FEATURES

- Chromium carbide deposit retains cutting edge.
- Excellent resistance to abrasion.
- Smooth bead appearance.
- Easy application
- Low co-efficient of friction.

RECOMMENDATIONS

For steel parts, Mn steel parts requiring severe abrasive wear. Easy to handle. Extensively recommended in mining, cement, earthmoving machinery, paper cutting knife industries.

APPLICATIONS

Wear resistant surfacing of mild and low steel. Building machines, digger teeth, bucket edges, conveyor screws, mixing wings and muller tyres etc.

TECHNICAL DATA

Hardness : 58-62 HRc

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	90-110	110-140	140-180

NEXA-7050

ELECTRODE FOR ABRASIVE AND CORROSIVE CONDITIONS EVEN AT ELEVATED TEMPERATURE

ALLOY BASE : C, Mn, Ni, Mo.

SPECIAL FEATURES

- Quick and stable arc.
- Special alloys make the weld resistant to impact, while retaining hardness at relative elevated temperature due to secondary hardening.
- Crack- free, heavy build-up possible.

APPLICATIONS

For surfacing of blast furnace bells and hopper, tong pins, hot shears, etc. to resist severe abrasion specially at elevated temperature.

PROCEDURES

Preheat the workplace to 250-300°c. Use a medium/ long arc. Cool the job slowly with the help of asbestos or lime. Machining is possible only with tungsten carbide tools.

TECHNICAL DATA

Hardness : 48-50 HRc

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	90-110	110-180	160-220

NEXA-7430

HARD SURFACING ELECTRODE WITH VERY HIGH METAL RECOVERY.

ALLOY BASE : C, Cr, Cb.

SPECIAL FEATURES

- Hard surfacing electrode with very high metal recovery exceptional abrasion resistance at room temperature.
- Easy arc control in horizontal.
- No slag interference.

RECOMMENDATIONS

It is used for over laying for plane carbon steel, manganese steel and gray cast iron casting. Alloy steels, stainless steels where hardness and toughness is desired.

APPLICATIONS

For hard facing of parts subject to heavy abrasion and metal to metal wear with moderate impact up to 510°C. Suitable for, refractory press screws brick press screws, cement press screws, plam nut press screws, parts of crushers for friable materials, conveyor screws, blast furnace bells and hoppers.

PROCEDURES

Use a medium /long arc. To prevents excessive dilution with parent metal use low amperage. The recommended hardness is obtained only in the second or third layers.

TECHNICAL DATA

Hardness : 57-61 HRc

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	120-150	140-200	160-210

NEXA-6006

SURFACING ELECTRODE WITH EXCEPTIONAL HARDNESS AND ABRASION RESISTANCE.

ALLOY BASE : Fe, Cr, Cb, V, Mo, W, C

SPECIAL FEATURES

- Hard surfacing electrode with excellent abrasion resistance at high temperature and exceptional metal recovery.

RECOMMENDATIONS

Most suitable for hard facing on sugar machinery parts, mining industry, cement industry and the parts exposed to very high abrasion with mild impact.

APPLICATIONS

For surfacing of hopper and protection plates in quarries, ore crushing rolls, gyratory crushers, ore breaker teeth, scraping beaks, sinter plant disintegrators, blast furnace bell and hoppers.

PROCEDURES

Use a medium /long arc. To prevent excessive dilution with parent metal use low amperage. The recommended hardness is obtained only in the second or third layers.

TECHNICAL DATA

Hardness : 57-60 HRc

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	80-120	100-150	140-200

NEXA-7078

ELECTRODE FOR AUSTENITIC MANGANESE STEELS.

ALLOY BASE : Fe, Cr, Ni, Mn

SPECIAL FEATURES

- Specially formulated low heat input austenitic. Stainless- steel electrode.
- Has excellent heat resistance up to 900°C and is resistant to corrosion by atmosphere, sea water, weak acid etc.

RECOMMENDATIONS

Use dry electrodes at the lowest possible current. While reconditioning of the worn out parts, the hardened layer should be ground out. Peening is a must. Total weld deposit should be less than 25 mm thick.

APPLICATIONS

For joining austenitic manganese steels. Ideal for joining austenitic manganese steels to mild steels, difficult steel, high alloy steels etc. Surfacing manganese steel rails. Repairing crack in austenitic manganese steel casting.

PROCEDURES

Use short arc and adjust low amperage, especially for high manganese steel. Peen and deslag each pass.

TECHNICAL DATA

Tensile Strength	:	59-64 kgf / mm2
Elongation	:	30-40%

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00
CURRENT (Amps)	80-110	110-140

NEXA-7079

HIGH DEPOSITION MANGANESE STEEL ELECTRODE.

ALLOY BASE : Fe, Mn, Cr, C

SPECIAL FEATURES

- Work hardening type electrode with very high deposition rate.
- Extremely ductile and hence ideal for intricate and hardened manganese steel parts.
- Have very fast work hardening tendency, high abrasion resistance and resistance to deformation and cracking.

RECOMMENDATIONS

Re -dry the electrodes at 200°C for one hour. Use low current and short arc. Avoide preheat/ overheat in case of manganese steels.

APPLICATIONS

For all position welding of 14% Mn steels, armour steels, carbon steels. Also for surfacing of such steels. Ideal as under layers before surfacing on 14% Mn steels. Very thick build-up possible without cracking.

PROCEDURES

Ensure proper cleaning of the area to be welded .do not preheat manganese steel. interpass temperature should be kept below 150°C using staggered or skip welding. Hot peening helps reducing stresses. Cool slowly. For small components, immerse in water.

TECHNICAL DATA

Tensile Strength	:	80-85 kgf / mm2
Elongation	:	30-33%
Hardness	:	42-50 HRc

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	100-140	150-190	180-220

NEXA-DIETUF 100

SPECIAL FEATURES

NEXA- DIETUF 100 is a newly developed electrode with Cr-Ni-Mo specially for forging die – repairs in forging industry. The special alloy addition makes the weld deposit suitable for using were higher level of strength, toughness and ductility is required. Weld deposit have good high temperature resistance which is very helpful in increasing the die life. The deposited weld metal is highly resistant to cracking even with higher impact load and temperature. It is used for welding high-strength tempered low-alloy steels as well as process welding on steels castings, cast steels of corresponding strength.

APPLICATIONS

NEXA –DIETUF 100 is an all position electrode with high strength for repair of large forging dies, hot working tools, hammer bases, and sow blocks anvil, and insert dies, and rolls of cold rolling mill. Any surface requires impact and friction resistance.

TECHNICAL DATA

Tensile Strength	:	115 kgf/mm2 (Min.)
Hardness	:	37-42 HRC

CURRENT RANGE : DC (+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	80-120	120-150	150-190

NEXA-222

NI-CR-FE BASIC COATED STICK ELECTRODE FOR HEAT RESISTANCE

ALLOY BASE : Ni, Cr, Mn, Fe Nb

SPECIAL FEATURES

- The electrode gives soft stable arc on low currents.
- Deposits are smooth, tough and has excellent resistance to scaling, corrosion resistance at normal as well as elevated temperature.
- Also possesses good thermal cycles and shock resistance.

APPLICATIONS

This is a versatile electrode for welding of nickel, Inconel, monel, nickel-chromium-iron alloys. Weld deposits are similar to E Ni Cr Fe-3. Stainless steel and heat resisting steels. Also for welding dissimilar metals such as carbon steels, stainless steels, nickel alloys to each other. For use on equipment and components made of pure nickel, for fabrication of corrosion resistance tanks and containers, heat exchangers, furnace components and boilers etc.

PROCEDURES

Clean the workpiece thoroughly for a crack and porosity free deposit. Adopt short arc and ensure minimum heat input using lowest possible amperage. Adopt stringer bead technique. Dry electrode for 1 hour at 300°C.

TECHNICAL DATA

Tensile Strength	:	55-68 kgf / mm2
Elongation	:	30-40%

CURRENT RANGE : DC(+)

SIZE mm	2.50	3.15	4.00	4.00
CURRENT (Amps)	60-80	90-110	110-140	140-160

NEXA-2222

BASIC COATED NICKEL BASES ELECTRODE FOR INCONEL ALLOY WELDING.

ALLOY BASE : Ni, Cr, Fe

SPECIAL FEATURES

- Basic type coating
- Ni, Cr-Fe deposit.
- Outstanding strength and resistance to corrosion from normal to high temperatures.
- Positional welding capability.
- For overlay application minimum three layers must be deposited.

APPLICATIONS

- Welding of wrought and cast form of Ni-Cr-Fe alloys to themselves and to carbon steels.
- Joining carbon, SS or low alloy steel or combinations of any of them.
- Joining Ni based alloys to steel.
- Application in temperature critical conditions such as furnace equipment and pipe work.

TECHNICAL DATA

UTS	:	60 kgf / mm2
Elongation (L=4d)	:	34%

CURRENT RANGE : DC(+)

SIZE mm	2.50	3.15	4.00	5.00
CURRENT (Amps)	70-100	90-130	140-170	160-200

NEXA-800

ARCING ELECTRODE FOR SUGAR MILLS.

SPECIAL FEATURES

For surfacing roughening of sugar rolls increase surface areas of the rollers and therefore crushing efficiency, reduces POL % from bagasse, improve roller life etc.

APPLICATIONS

Use of NEXA-800 increases the crushing efficiency, the life of the rollers, reduces POL% and moisture from bagasse. Eliminates the need for chevron grooves. Increase productivity by at least 20%.

TECHNICAL DATA

Hardness : 58 - 62 HRc

CURRENT RANGE (AC/DC+)

SIZE mm	3.15	4.00	5.00
CURRENT (Amps)	100-140	130-180	180-220

NEXA-7080

HOT WORK TOOL STEEL ELECTRODE

ALLOY BASE : Fe, W, Cr, C

PROPERTIES

The deposit is a high quality hot work steel, tough, wear resistant free from crack and porosities. The weld beads are smooth and uniform.

APPLICATIONS

Repair of tools of similar materials or fabrication of hot work tools of carbon steels or low alloy steel. Dies, stampers for non-ferrous metals, saddle tracks, forging hammers, distributor pins, slides, hot shear blades, trimming dies, etc.

PROCEDURES

Preheat bigger jobs to 400-550°C and maintain temperature during welding. Maximum build up permissible is 5 mm. slow cool the job in an oven or under asbestos after weld. The weld deposit can be machined only by grinding. If any other cutting operation is to be performed the deposit need to be annealed.

TECHNICAL DATA

Hardness	as Welded	:	41-46 HRc
	(After Hardening)	:	49-51 HRc
	(After Annealing)	:	21-24 HRc

CURRENT RANGE : DC (+)

SIZE mm	3.15	4.00
CURRENT (Amps)	90-110	140-160

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