NexaWeld & Flux LLP
Welding Relationships

Mild Steel Electrode

NEXA-6013

For All Position General Fabrication

Classification:
AWS: AWS A/5.1 E-6013
IS: IS 814: ER 4211X

Applications of the Product

- Suitable for the general fabrication
- For structural steels
- For ship building
- For storage tanks
- For truck bodies
- For pipes and more...

Characteristics of the Product

- Medium coated rutile type electrode
- Smooth and stable arc
- Easy slag removal
- Radiography quality weld
- For all position welding
- Low spatter
- Fine rippled bead

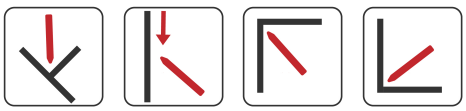
Chemical Composition of Weld

Element	C	Mn	Si	S	P	Ni	Cr	Mo	V
Typical Values (%)	<0.2	<1.2	<1	N.S.	N.S.	<0.3	<0.2	<0.3	<0.08

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	CVN Impact (0 C)
Typical Values	>430	>330	>22	>47

Welding Positions



Welding Currents - AC (50 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	3.15 x 450 mm	4.0 x 350 mm	4.0 x 450 mm
Current	60-85	90-120	90-120	140-180	140-180

5.0 x 450 mm
180-220

Packaging

Supplied in 2.5 Kgs x 8 pkts = 20Kgs

Conditions (Pre-Drying)

100°C for min. 30mins

NexaWeld & Flux LLP
Welding Relationships

Mild Steel Electrode

NEXA 6013+

For All Position General Fabrication

Classification:
AWS: AWS A/5.1 E-6013
IS: IS 814: ER 4211X

Applications of the Product

- Suitable for the general fabrication
- For structural steels
- For ship building
- For storage tanks
- For truck bodies
- For pipes and more...

Characteristics of the Product

- Medium coated rutile type electrode
- Smooth and stable arc
- Easy slag removal
- Radiography quality weld
- For all position welding
- Low spatter
- Fine rippled bead

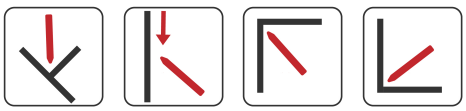
Chemical Composition of Weld

Element	C	Mn	Si	S	P	Ni	Cr	Mo	V
Typical Values (%)	<0.1	<0.6	<0.4	<0.03	<0.03	<0.3	<0.2	<0.3	<0.08

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	CVN Impact (0 C)
Typical Values	>430	>330	>22	>47

Welding Positions



Welding Currents - AC (50 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	3.15 x 450 mm	4.0 x 350 mm	4.0 x 450 mm
Current	60-85	90-120	90-120	140-180	140-180

5.0 x 450 mm
180-220

Packaging
Supplied in 2.5 Kgs x 8 pkts = 20Kgs

Conditions (Pre-Drying)
100°C for min. 30mins

NexaWeld & Flux LLP
Welding Relationships

MILD STEEL GENERAL PURPOSE (MSGP)

NEXA XL

For Radiographic Quality Weld

Classification:
AWS: AWS A/SFA 5.1 E6013
IS: IS 814: ER 4112X

Applications of the Product

- Storage tanks, Pipes
- Construction equipment
- Machine frames
- Welding steel grade IS 2062, 226

Characteristics of the Product

- Medium coated rutile type electrode
- Radiographic weld deposit
- Great for mild steel fabrication work
- Operates at low OCV
- All position welding

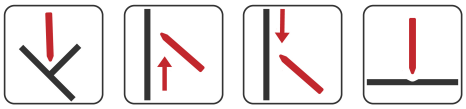
Chemical Composition of Weld

Element	C	Mn	Si	S	P
Typical Values (%)	<0.12	0.25-0.55	0.12-0.35	<0.03	<0.03

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	CVN Impact (J) (0°C)
Typical Values	>430	>330	>22	>50

Welding Positions



Welding Currents - AC (50 OCV min.)/ DCEN

Size	2.5 x 350 mm	3.15 x 350 mm	3.15 x 450 mm	4.0 x 350 mm	4.0 x 450 mm
Current	60-85	90-120	90-120	140-180	140-180

5.0 x 450 mm
180-220

Packaging

Available in 8 packets of 2.5kgs each

Conditions (Pre-Drying)

100°C for min. 30mins

NexaWeld & Flux LLP
Welding Relationships

MILD STEEL GENERAL PURPOSE (MSGP)

NEXA 6013S

For Radiographic Quality Weld

Classification:
AWS: AWS A/SFA 5.1 E6013
IS: IS 814: ER 4211X

Applications of the Product

- Storage tanks, Pipes
- Construction equipment
- Machine frames
- Welding steel grade IS 2062, 226

Characteristics of the Product

- Medium coated rutile type electrode
- Radiographic weld deposit
- Great for mild steel fabrication work
- Operates at low OCV
- All position welding

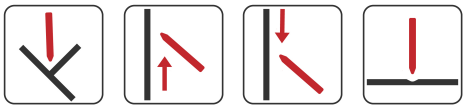
Chemical Composition of Weld

Element	C	Mn	Si	S	P
Typical Values (%)	<0.1	<0.6	<0.3	<0.03	<0.03

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	CVN Impact (J) (0°C)
Typical Values	>430	>330	>22	>50

Welding Positions



Welding Currents - AC (50 OCV min.)/ DCEN

Size	2.5 x 350 mm	3.15 x 350 mm	3.15 x 450 mm	4.0 x 350 mm	4.0 x 450 mm
Current	60-85	90-120	90-120	140-180	140-180

5.0 x 450 mm
180-220

Packaging
Available in 8 packets of 2.5kgs each

Conditions (Pre-Drying)
100°C for min. 30mins

NexaWeld & Flux LLP
Welding Relationships

MILD STEEL GENERAL PURPOSE (MSGP)

NEXA 6013SS

Heavy Coated Mild Steel Electrode

Classification:
AWS: AWS A/SFA 5.1 E6013
IS: IS 814: ERR 4222X

Applications of the Product

- for wagon building
- Suitable for thin sheets
- Locomotive fabrication
- Auto Components & Steel furniture

Characteristics of the Product

- Heavy rutile type coating
- All position welding capability
- Superior welding characteristics
- Radiographic weld quality

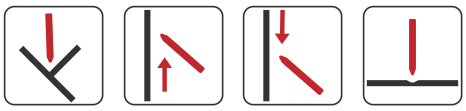
Chemical Composition of Weld

Element	C	Mn	Si
Typical Values (%)	0.1	0.6	0.5

Mechanical Properties of Weld

Property	UTS (MPa)	YS at 0.2% off., MPa	El%	CVN Impact ay 0°C
Typical Values	>430	>330	>22	>50

Welding Positions



Welding Currents - AC (50 OCV min.)/ DCEN

Size	2.5 x 350 mm	3.15 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	90-120	140-180	180-220

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5kgs each

Conditions (Pre-Drying)

100°C for min. 30mins

NexaWeld & Flux LLP
Welding Relationships

MILD STEEL GENERAL PURPOSE (MSGP)

NEXA 7024

For Mild and Medium Tensile Steel

Classification:
AWS: AWS A/SFA 5.1 E7024

Applications of the Product

- Heavy steel structures, Storage tanks
- Pipelines, Bridges
- Pressure vessels, Ships
- Joining ASTM SA 283 Gr.A/B/C/D,SA 414/414M Gr.C/D/E steels

Characteristics of the Product

- Iron powder type
- Radiographic quality weld
- Outstanding deposition rates

Chemical Composition of Weld

Element	C	Mn	Si	S	P
Typical Values (%)	<0.15	<1.25	<0.90	<0.035	<0.035

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	EL%	CVN Impact at 0°C
Typical Values	>490	>400	>20	50-100

Welding Positions

Welding Currents - AC (70 OCV)/DCEN

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 450 mm	5.0 x 450 mm
Current	80-120	150-170	200-240	250-290

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

100°C for min. 30mins

NexaWeld & Flux LLP
Welding Relationships

C-Mn STEEL (Special Purpose)

NEXA GT

For Welding Galvanizing Bath & Kettle

Classification:
AWS: GALVANIZED

Applications of the Product

- Welding and repairing of hot dip galvanizing baths
- Filling holes, building up worn out parts not subjected to excessive wear
- Windows, door frames, thin walled tanks and vessels etc.

Characteristics of the Product

- Deposit pure iron with low impurities
- Resistant to corrosion by molten Zinc
- Low Silicon content
- Easy slag removal

Chemical Composition of Weld

Element	C	Mn	Si	S	P
Typical Values (%)	<0.05	<0.25	<0.05	<0.035	<0.035

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	EL%	CVN Impact
Typical Values	>415	>330	>22	66 J

Welding Positions

Welding Currents

Size	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	100-130	150-180	190-220

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

150°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

STAINLESS STEEL (Austenitic Manganese Steel)

NEXA 307-16

Stainless Steel Electrode with Magnese

Classification:
AWS: AWS A/SFA 5.4 E307-16

Applications of the Product

- Welding of 14% Mn steel, steel armour, hardenable steel
- Joining of wear plates to each other and to their supports
- Extensively used in steelmaking public works, mining carrying and dredging.
- Welding of difficult to weld steel
- Joining of stainless steels to carbon steels
- Building up of rails and buttering layers before hardfacing on 14%Mn steel or on steels of unknown composition or on carbon steels

Characteristics of the Product

- 307 is a lime-titania stainless steel electrode
- The deposited metal has excellent crack resistibility
- Often used as a buffer layer in hardfacing applications
- Easy arc striking-Restriking during welding
- Deposited metal of 19%- 9%Ni-4%Mn stainless steel with the perfect structure of austenite
- Easy work hardening characteristic
- Excellent slag detachability

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni
Typical Values (%)	0.04-0.14	3.3-4.75	<1	18-21.5	9-10.7

Mechanical Properties of Weld

Property	UTS (MPa)	El%	Initial Hardness (BHN)	Work Hardens (BHN)
Typical Values	>590	>30%	200-250	500-550

Welding Positions

Welding Currents - AC (70 OCV) /DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm	5.0 x 450 mm
Current	60-80	80-120	110-160	150-200

Packaging

Standard carton packing of 10 kg box containing 5 vacuum packed cartons of 2 kg each.

Conditions (Pre-Drying)

250-300°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

Stainless Steel Electrode

NEXA 308 - 16

Austenitic Steel Electrode

Classification:
AWS: AWS A/5.4 E - 308 - 16

Applications of the Product

- Welding Cr-Ni steels represented by AISI 301, 302, 304, 308
- Fabrication of boilers, reactors and turbines
- Suitable for material no. 1.4300,1.4301, 1.4310, 1.4312, 1.4550,1.4001, 1.4016, 1.4057
- Build up application on SS surfaces of centrifugal pump impellers and shafts valve faces, seats etc.
- SS piping in refineries, oil & gas industries, chemical plants

Characteristics of the Product

- Rutile type coating
- Smooth and Stable Arc
- 19/9 type austenitic SS weld
- Radiographic weld quality
- Excellent cracking, corrosion and scaling resistance
- Minimal Spatter
- Excellent welder appeal

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni
Typical Values (%)	0.08 max	0.5-2.5	1.0 max	18-21	9-11

Mechanical Properties of Weld

Property	UTS (MPa)	El%
Typical Values	>550	>30

Welding Positions

Welding Currents - AC (70 OCV)/DCEP

Size	2.50mm x 350mm	3.15mm x 350mm	4.00mm x 350mm
Current	50-70	70-100	110-140

Packaging

10 KG Carton, 5 Vacuum Packed Packets of 2KGs Each

Conditions (Pre-Drying)

250-300°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

Stainless Steel Electrode

NEXA 308L - 16

Austenitic Steel Electrode

Classification:
AWS: AWS A/SFA 5.4 E308L - 16

Applications of the Product

- Welding Cr-Ni steels represented by\r\nAISI 301, 302, 304, 308
- Fabrication of boilers, reactors and\r\nturbines
- Suitable for material no. 1.4300,\r\n1.4301, 1.4310, 1.4312, 1.4550,\r\n1.4001, 1.4016, 1.4057
- Build up application on SS surfaces of\r\ncentrifugal pump impellers and shafts valve\r\nfaces, seats etc.
- SS piping in refineries, oil & gas industries,\r\nchemical plants

Characteristics of the Product

- Rutile type coating
- Smooth and Stable Arc
- 19/9 type austenitic SS\r\nweld
- Radiographic weld quality
- Excellent cracking, corrosion and scaling resistance
- Minimal Spatter
- Excellent welder appeal

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni
Typical Values (%)	0.04 max	0.2-2.5	1.0 max	18-21	9-11

Mechanical Properties of Weld

Property	UTS (MPa)	El%
Typical Values	>520	>30

Welding Positions

Welding Currents - AC (50 OCV)/DCEP

Size	2.50mm x 350mm	3.15mm x 350mm	4.00mm x 350mm
Current	50-70	70-100	110-140

Packaging

10 KG Carton, 5 Packets of 2KGs Each

Conditions (Pre-Drying)

250-300°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

Stainless Steel Electrode

NEXA 309 - 16

Dissimilar Steel Welding

Classification:
AWS: AWS A/SFA 5.4 E309 -16

Applications of the Product

- Dissimilar joints between stainless steels and low alloy or carbon steels
- For buffer layer on low alloy and carbon steels
- Welding of AISI 309 type steels
- Joining corrosion resistant clad steels

Characteristics of the Product

- Rutile type medium coating
- Low dilution on mild and low alloy steels due to higher alloy content
- Exhibit excellent corrosion and oxidation resistance upto 1100°C
- Highest resistance to cracking
- 23/12 type deposit
- Radiographic quality welds

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni
Typical Values (%)	0.15 max	0.5-2.5	1.0 max	22-25	12-14

Mechanical Properties of Weld

Property	UTS (MPa)	El%
Typical Values	>550	>30

Welding Positions

Welding Currents - AC (70 OCV) /DCEP

Size	2.50mm x 350mm	3.15mm x 350mm	4.00mm x 350mm
Current	50-70	70-100	110-140

Packaging

10 KG Carton, 5 Vacuum Packed Packets of 2KGs Each

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

Stainless Steel Electrode

NEXA 309L - 16

Dissimilar Steel Welding

Classification:
AWS: AWS A/SFA 5.4 E309L -16

Applications of the Product

- Dissimilar joints between stainless\r\nsteels and low alloy or carbon steels
- For buffer layer on low alloy and carbon steels
- Welding of AISI 309 type steels
- Joining corrosion resistant clad steels

Characteristics of the Product

- Rutile type medium coating
- Low dilution on mild and\r\nlow alloy steels due to\r\nhigher alloy content
- Exhibit excellent corrosion\r\nand oxidation resistance\r\nupto 1100°C
- Highest resistance to\r\ncracking
- 23/12 type\r\ndeposit
- Radiographic quality welds

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni
Typical Values (%)	0.04 max	0.5-2.5	1.0 max	22-25	12-14

Mechanical Properties of Weld

Property	UTS (MPa)	El%
Typical Values	>550	>30

Welding Positions

Welding Currents - AC (70 OCV) /DCEP

Size	2.50mm x 350mm	3.15mm x 350mm	4.00mm x 350mm
Current	50-70	70-100	110-140

Packaging

10 KG Carton, 5 Packets of 2KGs Each

Conditions (Pre-Drying)

250 - 300 °C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

Stainless Steel Electrode

NEXA - 310 - 16

Electrode for Heat Resisting Weld Deposit

Classification:
AWS: AWS A/SFA 5.4 E310-16

Applications of the Product

- Joining difficult to weld steels such as armor plates and ferritic stainless steels as well as dissimilar steels
- Welding of AISI 310 and similar steel
- Suitable for materials 1.4710, 1.4713, 1.4745,1.4762, 1.4823, 1.4832, 1.4837, 1.4840, 1.4841, 1.4845, 1.4846, 1.4848, 1.4849
- Furnace parts, Annealing boxes, Carburizing pots, Gas turbine combustion chamber parts, hydrogenation and polymerization plant
- Cladding side of stainless steels and dissimilar steels

Characteristics of the Product

- Rutile coated electrode
- Excellent resistance to cracking and fissuring
- Excellent arc stability
- Easy slag removal
- 25/20 type SS deposit
- Provides excellent stability and oxidation resistance upto 1150°C
- Low spatter loss
- Radiographic quality weld deposit

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni
Typical Values (%)	0.08-0.20	1.0-2.5	0.75 max	25-28	20-22.5

Mechanical Properties of Weld

Property	UTS (MPa)	EL%
Typical Values	>550	>30

Welding Positions

Welding Currents - AC (70 OCV)/DCEP

Size	2.50mm x 350mm	3.15mm x 350mm	4.00mm x 350mm
Current	50-70	70-100	110-140

Packaging

10 KG Carton, 5 Vacuum Packed Packets of 2KGs Each

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

Stainless Steel Electrode

NEXA - 316 - 16

Austenitic Steel Electrode

Classification:
AWS: AWS A/SFA 5.4 E316 -16

Applications of the Product

- Welding Mo bearing austenitic alloys represented by AISI 316, 317 types
- Cladding stainless steels
- Welding of equipments in Chemical, Paper and pulp, Paint and dye industries
- Suitable for material no. 1.4401 & similar grades

Characteristics of the Product

- Rutile type coating
- High resistance against intergranular corrosion
- Offers improved corrosion and pitting resistance in marine and industrial environment
- Weld deposit with 19/12/Mo
- High welder appeal
- Radiographic quality weld

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni	Mo
Typical Values (%)	0.08 max	0.5-2.5	1.0 max	17-20	11-14	2-3

Mechanical Properties of Weld

Property	UTS (MPa)	El%
Typical Values	>520	>30

Welding Positions

Welding Currents - AC (70 OCV) /DCEP

Size	2.50mm x 350mm	3.15mm x 350mm	4.00mm x 350mm
Current	50-70	70-100	110-140

Packaging

10 KG Carton, 5 Vacuum Packed Packets of 2KGs Each

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

Stainless Steel Electrode

NEXA - 316L - 16

Austenitic Steel Electrode

Classification:
AWS: AWS A/SFA 5.4 E316L -16

Applications of the Product

- Welding Mo bearing austenitic alloys\r\nrepresented by AISI 316, 317 types
- Cladding stainless steels
- Welding of equipments in Chemical, Paper\r\nand pulp, Paint and dye industries
- Suitable for material no. 1.4401 &\r\nsimilar grades

Characteristics of the Product

- Rutile type coating
- High resistance against\r\nintergranular corrosion
- Offers improved corrosion and\r\npitting resistance in marine and\r\nindustrial environment
- Weld deposit with 19/12/Mo
- High welder appeal
- Radiographic quality weld

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni	Mo
Typical Values (%)	0.04 max	0.5-2.5	1.0 max	17-20	11-14	2-3

Mechanical Properties of Weld

Property	UTS (MPa)	El%
Typical Values	>490	>30

Welding Positions

Welding Currents - AC (70 OCV) /DCEP

Size	2.50mm x 350mm	3.15mm x 350mm	4.00mm x 350mm
Current	50-70	70-100	110-140

Packaging

10 KG Carton, 5 Packets of 2KGs Each

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

STAINLESS STEEL (Austenitic Steel)

Nexa 347-16

Rutile Type Stainless Steel Electrode

Classification:
AWS: AWS A/SFA 5.4 E347-16

Applications of the Product

- Fabrication of equipments in refineries, power plants, centrifugal pump impellers and shafts, valve faces, seats
- Fabrication of boiler and gas turbine paper and pulp, paint and dye industries
- Welding stabilized Cr-Ni steels such as AISI 321, 321H, 347, 347H
- Suitable for material no. 1.4300, 1.4301, 1.4306, 1.4308, 1.4310, 1.4541, 1.4543, 1.4550, 1.4552, 1.4878, 1.6905
- Welding of stainless steel tanks, valves, pipes in food, chemical and petrochemical industries

Characteristics of the Product

- Rutile based coating
- Resistance to intergranular corrosion and scaling upto 850°C
- Smooth operating characteristics
- Radiographic quality weld
- Resistance to cracking and embrittlement
- 19/10/Nb stabilized weld deposit
- All position capability

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni	Nb
Typical Values (%)	<0.08	0.5-2.5	<1	18-21	9-11	<1

Mechanical Properties of Weld

Property	UTS (MPa)	EL%
Typical Values	>520	>30%

Welding Positions

Welding Currents - AC (70 OCV) /DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm	5.0 x 350 mm
Current	60-80	80-100	110-140	150-180

Packaging

Standard carton packing of 10 kg box containing 5 vacuum packed cartons of 2 kg each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

STAINLESS STEEL (Plain Chrome Series)

NEXA 410-15

For Corrosion and Heat Resistance

Classification:
AWS: AWS A/SFA 5.4 E410-15

Applications of the Product

- For welding ferritic martensitic chrome steels and steel castings
- Cladding of exhaust valvesmufflers, manifolds, manifold elbows
- Suitable for 1.4000, 1.4002, 1.4006, 1.4021, 1.4024 and AISI 410/420 steel
- For general corrosion and heat resisting applications
- For cutlery, pump parts, castings, oil refinery equipments

Characteristics of the Product

- Basic coated electrode
- Proper preheating and stress relieving required to avoid hardening
- Stable arc and low spatter loss
- Radiographic quality weld
- Typical 13Cr martensitic alloy
- Air hardenable weld deposit
- All position capability

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni
Typical Values (%)	<0.12	<1.0	<0.9	11.0-13.5	<0.7

Mechanical Properties of Weld

Property	PWHT	UTS (MPa)	El%
Typical Values	740°C for 1hr	>520	>20%

Welding Positions

Welding Currents - DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm
Current	50-70	70-110	130-160

Packaging

Standard carton packing of 10 kg box containing 5 vacuum packed cartons of 2 kg each.

Conditions (Pre-Drying)

250-300°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

Stainless Steel Electrode

NEXA - 410NiMo

Special Purpose Electrode (12Cr - 4.6Ni - 0.5Mo)

Classification:
AWS: AWS: SFA 5.4 E410NiMo-16

Applications of the Product

- Surfacing of high pressure valves, turbine blades, surfacing of high pressure valves, turbine blades
- Surface welding for valve seats, repairs of runners, pulp and paper plant equipment, etc.

Characteristics of the Product

- Deposits 12Cr - 4.6Ni - 0.5Mo weld metal
- Excellent resistance to erosion and corrosion
- Suited for groove welding and surfacing applications
- Excellent resistance to pitting and impact
- Suited for joining of similar composition materials

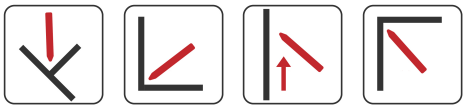
Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni	Mo
Typical Values (%)	<0.06	<1.0	<0.9	11-12.5	4.0-5.0	0.4-0.7

Mechanical Properties of Weld

Property	PWHT	UTS (MPa)	El%	Hardness (VPN)
Typical Values	600°C for 1hr	>760	>15	325-360

Welding Positions



Welding Currents

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm	
Current	60-80	80-100	110-150	150-190

Packaging

10 KGs Carton, 5 Packets of 2KGs Each (Available in Vacuum Pack Too)

Conditions (Pre-Drying)

250-300°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

STAINLESS STEEL (Plain Chrome Series)

Nexa 430-15

For Joining and Surfacing Application

Classification:
AWS: AWS A/SFA 5.4 E430-15

Applications of the Product

- For welding ferritic martensitic chrome steels and steel castings of similar composition
- Cladding of exhaust valves
- For cladding where temperature and corrosion resistance is necessary
- Suitable for material 1.4057, 1.4740, 1.4742, 1.4059 and AISI 430 steel
- For general corrosion and heat resisting applications
- Joining and cladding of 17Cr alloy
- For cutlery, pump parts, castings, oil refinery equipments

Characteristics of the Product

- Basic coated electrode
- Proper preheating and PWHT will achieve desired properties
- Excellent arc stability and low spatter
- Typical 17Cr ferritic alloy
- Air hardenable weld deposit
- Radiographic quality weld

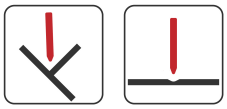
Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni
Typical Values (%)	<0.1	<1.0	<0.9	15-18	<0.6

Mechanical Properties of Weld

Property	PWHT	UTS (MPa)	EL%
Typical Values	770°C for 2 hrs	>450	>20%

Welding Positions



Welding Currents - DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm
Current	60-90	70-110	130-160

Packaging

Standard carton packing of 10 kg box containing 5 cartons of 2 kg each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

C-Mn STEEL (Low Hydrogen)

NEXA 7016

For Buffer Layer and Unknown Steels

Classification:
AWS: AWS A/SFA 5.1 E7016
IS: IS 814: EB 5426H3X

Applications of the Product

- Buffer layer before hard facing
- Repair of cast iron
- Fixing of rails to mild steel girders
- Joining cast iron to mild steel
- Butt welding of rail ends

Characteristics of the Product

- Basic coated low hydrogen electrode
- All position capability
- Radiographic weld deposit
- Ductile weld metal provide superior crack resistance
- Excellent impact properties down to -30°C

Chemical Composition of Weld

Element	C	Mn	Si
Typical Values (%)	0.1	1.3	0.6

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	EL%	CVN Impact (J) (-30°C)
Typical Values	>490	>400	>22	>50

Welding Positions

Welding Currents - DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	90-120	140-180	180-220

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250-300°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

Low Hydrogen Electrode

NEXA-7018

For Pressure Vessels and Bridges

Classification:
AWS: AWS A/SFA 5.1 E-7018
IS: IS EB 5426H3JX

Applications of the Product

- For heavy structure subject to dynamic loading
- For high restrained joints
- For earth moving machinery and equipment
- For heavy structure subject to impact
- Boilers and Pressure Vessels

Characteristics of the Product

- Low hydrogen iron powder type electrode
- Weld deposit is tough, ductile and of radiographic quality
- Designed to weld heavy restrained joints subject to dynamic loading
- The deposition efficiency approx 115%

Chemical Composition of Weld

Element	C	Mn	Si	S	P	Ni	Cr	Mo	V
Typical Values (%)	<0.15	<1.6	<0.75	<0.035	<0.035	<0.3	<0.2	<0.3	<0.08

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	CVN Imp (-30°C), J
Typical Values	>490	>400	22	>27

Welding Positions

Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	3.15 x 450 mm	4.0 x 350 mm	4.0 x 450 mm
Current	60-100	90-120	90-120	140-180	140-180

5.0 x 450 mm
180-220

Packaging

Supplied in 5 Kgs x 4 pkts = 20Kgs

Conditions (Pre-Drying)

250-300°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

C-Mn STEEL (Low Hydrogen)

NEXA 7018-1

With Superior Low Temp. Impact Properties

Classification:
AWS: AWS A/SFA 5.1 E7018-1
IS: IS EB 5629H3JX

Applications of the Product

- Storage tanks, pipes, boilers
- Joining ASTM SA 414/414M Gr.C/D, SA 516/516M Gr.55/60, IS 2002, IS 2062 steels
- Bridges & heavy structures subject to dynamic loading

Characteristics of the Product

- Basic coated iron powder type
- Excellent toughness down to -50°C
- All position capability
- Suitable for pipe welding in 5G, 6G & 6GR positions
- Radiographic weld deposit

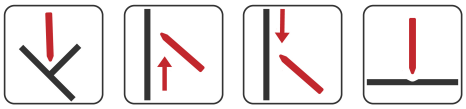
Chemical Composition of Weld

Element	C	Mn	Si
Typical Values (%)	0.1	1.3	0.5

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	EL%	CVN Impact (J) (-46°C)
Typical Values	>490	>400	>22%	>45

Welding Positions



Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	90-120	140-180	180-240

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250-300°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

C-Mn STEEL (Low Hydrogen)

NEXA 7018-1 H4R

For Heavy Welding with Low Hydrogen Content

Classification:
AWS: AWS A/SFA 5.1 E7018-1 H4R
IS: IS 814: EB5629H3JX

Applications of the Product

- Storage tanks, pipes, boilers
- 414/414M Gr.C/D,SA 516/516M Gr.55/60/65/70, IS 2002, IS 2062 steelsJoining ASTM SA
- Bridges & heavy structures subject to dynamic loading

Characteristics of the Product

- Basic coated iron powder type
- Radiographic weld deposit
- Excellent toughness down to -60°C
- Suitable for pipe welding in 5G and 6G positions

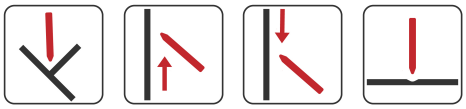
Chemical Composition of Weld

Element	C	Mn	Si
Typical Values (%)	0.1	1.3	0.5

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	EL%	CVN Impact (J) (-46°C)	Diffusible H2
Typical Values	>490	>400	>22%	80 J	<5 ml/100 gm

Welding Positions



Welding Currents - AC (70 OCV)/ DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	90-120	140-180	180-240

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

C-Mn STEEL (Low Hydrogen)

NEXA 7018-G

Excellent Sub Zero Temp. Properties

Classification:
AWS: AWS A/SFA 5.1 E7018-G

Applications of the Product

- Ammonia storage tanks
- Si-Mn steels
- For mild steel and heavy joints at subzero temperatures
- Horton spheres, Pressure vessels
- Steels containing Ni upto 1%
- Joining ASTM SA 515/515M Gr.60/65, SA 516/516M Gr.60/65 steels

Characteristics of the Product

- Basic type iron powder electrode
- Exhibit excellent impact at subzero temperatures
- Deposition efficiency approx 110%
- All position capability

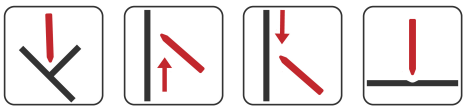
Chemical Composition of Weld

Element	C	Mn	Si
Typical Values (%)	0.1	1.3	0.5

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	EL%	CVN Impact (J) (-50°C)
Typical Values	>490	>390	>22%	>47

Welding Positions



Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	140-180	180-240

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

LOW ALLOY STEEL (High Temperature)

NEXA 8018-B2

For Heat and Creep Resisting Steel

Classification:
AWS: AWS A/SFA 5.5 E8018-B2

Applications of the Product

- Welding of 1.25Cr-0.5Mo, 1Cr-0.5Mo steels in refineries, power plants, chemical plants
- Cr and Cr-Mo bearing steels at elevated temperature service e.g. steam production plants, steam pipes
- Suitable for 13CrMo44, 15CrMo5, 15Cr3, 16MnCr5, 20MnCr5
- Pressure vessels and Boilers
- Joining P4 materials e.g. ASTM SA 182/182M Gr.F2/F11/F12, SA 213/213M Gr.T11/T12, SA 335/335M Gr.P11/P12, SA 387/387M Gr.2/11/12

Characteristics of the Product

- 1.25Cr-0.5Mo type weld deposit E 55B-B2
- Preheat and interpass temperature of 150-200°C followed by PWHT
- Positional welding capability
- Resistant to creep and heat upto 550°C
- Radiographic quality weld deposit

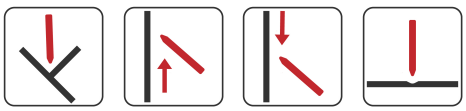
Chemical Composition of Weld

Element	C	Mn	Si	Cr	Mo
Typical Values (%)	0.05-0.12	<0.9	<0.8	1.0-1.5	0.40-0.65

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	CVN Impact (J) (-30°C)	Condition
Typical Values	>550	>460	19	100	PWHT: 690°C for 1hr

Welding Positions



Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	140-180	180-240

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

LOW ALLOY WEATHERING STEEL ELECTRODE

NEXA 8018-W2

For Welding of Withering Steel

Classification:
AWS: AWS A/SFA 5.5 E8018-W2

Applications of the Product

- Welding of weathering steels e.g. CORTEN-A and CORTEN-B and their equivalents
- Suitable for ASTM A36, A 283, Gr.B/c
- Bridges, Architectural structures, Exhaust gas flues, Chimneys

Characteristics of the Product

- Basic type iron powder electrode
- High crack resistance under restraint
- Exhibits excellent atmospheric corrosion resistance compared to normal steels
- Cr-Ni-Cu type low alloy steel welds
- Radiographic quality weld deposit
- All position capability

Chemical Composition of Weld

Element	C	Mn	Si	Ni	Cr	Cu
Typical Values (%)	<0.12	0.5-1.3	0.35-0.8	0.4-0.8	0.45-0.7	0.3-0.75

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	EL%	CVN Impact (J) (-20°C)	Diffusible H2
Typical Values	>550	>460	>19%	>27	<5 ml/100 gm

Welding Positions

Welding Currents - AC (70 OCV) / DCEP

Size	2.5 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	140-180	190-250

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

LOW ALLOY STEEL (High Temperature)

NEXA 9018-B3

For Heat and Creep Resisting Steel

Classification:
AWS: AWS A/SFA 5.5 E9018-B3

Applications of the Product

- Welding of 2.25Cr-0.5Mo and 2.25Cr- 1Mo type creep resistant steels
- Main steam pipes of boilers in electric power plant, Boiler super heaters
- Suitable for 12CrMo9-10, 10CrSiMoV7 German steels
- Application in refineries, power plants, pressure vessels, boilers
- Cr-Mo and Cr-Mo-V bearing steels for high temperature applications
- Joining of P5A materials
- Joining ASTM A 335 Gr.P22, A 387 Gr.22 materials

Characteristics of the Product

- Basic coated iron powder electrode
- Resistant to creep and heat upto 600°C
- Radiography quality weld metal
- Low alloy steel Cr-Mo deposit
- Ductile and crack resistant and heat treatable weld

Chemical Composition of Weld

Element	C	Mn	Si	Cr	Mo
Typical Values (%)	0.05-0.12	0.9	0.8	2.0-2.5	0.9-1.2

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	CVN Impact (J) (0°C)	Condition	Diffusible H2 Content
Typical Values	>620	>530	>17	>40	PWHT: 690°C for 1hr	<5ml/100gm

Welding Positions

Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	140-180	180-220

Packaging

Standard carton packing of 20 kg box containing 4 cartons each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

LOW ALLOY STEEL (High Temperature)

NEXA 9018-G

For Welding High Tensile Structural Steel

Classification:
AWS: AWS A/SFA 5.5 E9018-G

Applications of the Product

- Welding of High tensile steels
- Joining ASTM SA 662/662M Gr.A/B/C
- Pressure vessels, Boilers and heavy structures

Characteristics of the Product

- Basic coated electrode
- Optimum combination of strength and impact toughness
- Suitable for welding medium high tensile structural steels, heavy sections
- Ni-Mn type low alloy steel weld
- Radiographic weld deposit

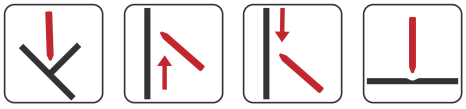
Chemical Composition of Weld

Element	C	Mn	Si	Ni	Mo
Typical Values (%)	~0.06	~1.7	~0.3	~1.5	~0.4

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	EL%	CVN Impact (J) (-50°C)	Diffusible H2
Typical Values	>620	>530	>17%	>35	<5 ml/100 gm

Welding Positions



Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	140-180	180-240

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

LOW ALLOY STEEL (High Temperature)

NEXA 11018-M

For High Strength Welding with Subzero Temperatures

Classification:
AWS: AWS A/SFA 5.5 E11018-M

Applications of the Product

- Welding of high tensile steels like USS T-1, Fine grained steels like HY 80, HY 90, HY 100, NAXTRA 70
- Heavy structures under restraint
- Penstocks, Earthmoving equipments
- Suitable for ASTM SA 225/225M Gr.C/ D, SA 533/533M Gr.B/C/D, SA 543/ 543M Gr.B/ SA 517 Gr.F

Characteristics of the Product

- Basic type coating
- Excellent crack resistant
- Radiographic quality weld metal
- Ni-Mn-Mo-Cr-V type electrode
- Excellent toughness at subzero temperature

Chemical Composition of Weld

Element	C	Mn	Si	Ni	Cr	Mo
Typical Values (%)	<0.1	1.3-1.8	<0.6	1.25-2.25	<0.4	0.25-0.5

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	EL%	CVN Impact (J) (-50°C)	Diffusible H2
Typical Values	>760	680-760	>20%	>27	<5 ml/100 gm

Welding Positions

Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	140-180	190-250

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

Low Hydrogen Electrode

NEXA - 12018M

LOW ALLOY STEEL (High Temperature)

Classification:
AWS: AWS A/SFA 5.5 E12018-M

Applications of the Product

- Welding of high tensile steels and fine grained steels like HY 80, HY 90, HY100
- Joining high strength, low alloy or microalloyed steels to themselves or to lower strength steels, including carbon steels

Characteristics of the Product

- Basic type coating
- Excellent crack resistance
- Radiographic quality weld metal
- Ni-Mn-Mo-Cr alloyed electrode
- Excellent toughness at subzero temperature

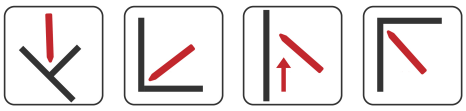
Chemical Composition of Weld

Element	C	Mn	Si	Cr	Ni	Mo
Typical Values (%)	0.1	1.3-2.25	0.6	0.3-1.5	1.75-2.5	0.30-0.55

Mechanical Properties of Weld

Property	UTS (MPa)	YS (0.2% Off.)	El%	CVN Imp (-50 C)
Typical Values	>830	745-830	>18	>47

Welding Positions



Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	60-100	90-120	140-180	180-240

Packaging

Available in Standard carton packing of 20 kg box containing 4 cartons of 5 kg each. Also available in vacuum packing

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

HARD FACING (Moderate - Abrasion Impact)

NEXA HARD-1

For Moderate Abrasion - Impact Condition

Classification:
AWS: Proprietary

Applications of the Product

- Gears, Pinion teeth
- Sugarcane crushers
- Wobblers, Chassis
- Pulleys, Shafts
- Excavators, Axles
- Track links, Tram tyres
- Gear wheels, Hammers
- Rollers, Sprockets
- Couplings, Spindles
- Rail points and crossings

Characteristics of the Product

- Rutile coated electrode C, Mn, Si, Cr
- Air hardenable machinable deposit
- Recommended buffer layer of NEXA 7016 on hard base materials
- Weld deposit resistant to moderate and impact
- Good resistance against rolling and sliding friction

Mechanical Properties of Weld

Property	Hardness (BHN)	Layers
Typical Values	210-280	Two Layers

Welding Currents - AC (80 OCV)/DCEN

Size	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	100-140	150-190	200-240

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

100°C for min. 30mins

NexaWeld & Flux LLP
Welding Relationships

HARD FACING (Moderate - Abrasion Impact)

NEXA HARD-2

For Moderate Abrasion - Impact Condition

Classification:
AWS: Proprietary

Applications of the Product

- Excavators, Conveyor parts
- Wobbler ends, Cams
- Plough shares
- Girth gears in cement and power plants
- Supporting rollers of Kiln tyres
- Gear shafts
- Shear blades

Characteristics of the Product

- Rutile coated electrode C, Mn, Si, Cr
- Machinable with carbide tools
- Good combination of abrasion and impact properties
- Recommended buffer layer of NEXA 7016 on hard base materials
- Air hardenable deposit
- High weld metal recovery
- Resistant to friction

Mechanical Properties of Weld

Property	Hardness (BHN)	Layers
Typical Values	340-410	Two Layers

Welding Currents - AC (80 OCV)/DCEN

Size	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	100-140	150-190	200-240

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

100°C for min. 30mins

NexaWeld & Flux LLP
Welding Relationships

HARD FACING (High Abrasion)

NEXA HARD-3

For High Abrasion and Moderate Impact

Classification:
AWS: Proprietary

Applications of the Product

- Dis-integrator hammers
- Bulldozer blades, Bucket lip
- Crane wheels, Caterpillar treads
- Excavator teeth, Shear blades
- Metal cutting and forming tools
- Cane cutting knives

Characteristics of the Product

- Rutile coated electrode C, Mn, Si, Cr
- Non machinable
- Resistance against high stress abrasion and friction
- Recommended buffer layer of NEXA 7016 on hard base materials
- Air hardenable deposit
- Resistant to spalling and cracking
- Can withstand moderate impact

Mechanical Properties of Weld

Property	Hardness (BHN)	Layers
Typical Values	540-580	Three Layers

Welding Currents - AC (80 OCV)/DCEP

Size	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	100-140	150-190	200-240

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

100°C for min. 30mins

NexaWeld & Flux LLP
Welding Relationships

HARD FACING (High Abrasion)

NEXA HARD-3LH

For High Abrasion & Moderate Impact

Classification:
AWS: Proprietary

Applications of the Product

- Crushers and hammers
- Shear blades
- Crane wheels, Caterpillar treads
- Bamboo chipper knives
- Excavator teeth
- Metal to mineral wear application
- Bulldozer blades, Bucket lip
- Dis-integrator hammers

Characteristics of the Product

- Basic type coating C, Mn, Si, Cr
- Recommended buffer layer of NEXA 7016 on hard base materials
- Can withstand moderate impact
- Air hardenable non machinable weld
- Resistance against high stress abrasion and friction
- Resistant to spalling and cracking

Mechanical Properties of Weld

Property	Hardness (BHN)	Layers
Typical Values	560-600	Three Layers

Welding Currents - AC (80 OCV)/DCEP

Size	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	100-130	150-180	200-240

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

HARD FACING (High Abrasion)

NEXA HARD-5

Graphite Coated Electrode

Classification:
AWS: Proprietary

Applications of the Product

- Concrete Mixer Blades
- Screw Conveyors
- Cement Die Rings
- Scraper Blades
- Muller Tyres, Dippers
- Plough Shares
- Oil Expeller Worms
- Excavator Teeth

Characteristics of the Product

- Basic type coating C, Mn, Si, Cr
- Deposit surface does not deteriorate through furrowing, local plastic flow and micro cracking
- Resistant to scratching and grinding abrasion
- Non machinable alloyed cast iron deposit
- Weld deposit can withstand severe abrasion, moderate impact and metal to metal wear

Mechanical Properties of Weld

Property	Hardness (BHN)	Layers
Typical Values	500-600	Three Layers

Welding Currents - AC (80 OCV)/DCEP

Size	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	100-130	150-180	180-220

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

150°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

HARD FACING (High Impact - Work Hardenable)

NEXA HARD-MN

For High Manganese Steel

Classification:
AWS: Proprietary

Applications of the Product

- Rock crushing jaws
- Mn steel rails
- Dredger bucket teeth
- Hammers
- Cement grinding rings
- Suitable for build-up and cushioning
- Austenitic Mn steel castings
- Crusher mantles

Characteristics of the Product

- Basic type coating C, Mn, Si
- Crack free and sound weld
- Exhibit excellent work hardening characteristics under severe impact conditions
- Easily machinable
- Typical 12% Mn deposit
- Ideal for gouging type abrasion wear

Mechanical Properties of Weld

Property	Hardness (BHN)	Hardness (BHN)	Layers
Typical Values	170-230 (As Welded)	540-580 (Work Hardened)	Two Layers

Welding Currents - AC (80 OCV)/DCEP

Size	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	100-140	150-190	200-250

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)

250°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

Nickel Alloy Electrodes

NEXA - NM

Cast Iron Non Machinable Electrode

Classification:
AWS: AWS A/SFA 5.15 E St

Applications of the Product

- Welding of cast iron parts for all types of general reclamation or repair work
- Guards on machine tools
- Sealing oil-soaked cast iron parts
- Joining cast iron to mild steel
- Repairing foundry defects
- Cast iron furnace equipment
- Motor and generator housings
- Suitable for thin and thick sections

Characteristics of the Product

- Low hydrogen type electrode
- Improved crack resistivity
- Excellent colour match to cast iron
- Ni free non machinable deposit
- Strong and rigid joint between cast iron parts
- Ideal as a base layer to seal contaminations

Chemical Composition of Weld

Element	C	Mn	Si
Typical Values (%)	<0.15	<0.6	<0.15

Mechanical Properties of Weld

Property	Hardness
Typical Values	250-400 BHN

Welding Positions

Welding Currents - AC/DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm
Current	60-90	100-130	140-180

Packaging

10KGs Carton, 5 Packets of 2KGs Each
10KGs Carton, 10 Packets of 1KG Each

Conditions (Pre-Drying)

250°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

NON FERROUS (Cu Alloys)

NEXA BRONZE

Welding Electrode for Copper and Bronze

Classification:
AWS: AWS A/SFA 5.6 ECuSn-A

Applications of the Product

- Welding of Copper or Bronze to steel
- Brass, Galvanized iron, Malleable Iron
- Cast iron welding where colour match is not necessary
- Impeller blades, Valve seats
- Ship propellers, Bearings, Bushing
- Joining dissimilar metals such as mild steel to phosphorus bronze and brass

Characteristics of the Product

- Copper-Tin electrode
- Typical 93% Cu-6% Sn deposit
- Due to high heat conductivity of Cu alloys, preheat of 260-370°C is recommended for heavy sections
- No preheat is required on thin sections and ferrous base material

Chemical Composition of Weld

Element	Cu	P	Sn	Fe
Typical Values (%)	>93	0.05-0.35	4-6	0.25

Mechanical Properties of Weld

Property	UTS (MPa)	EL%
Typical Values	>240	>20

Welding Positions

Welding Currents - DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm
Current	40-70	70-100	110-140

Packaging

Packing of 10 kg box containing 10 plastic cartons of 1 kg each.
Packing of 10 kg box containing 5 vacuum packed cartons of 2 kg each.

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NexaWeld & Flux LLP
Welding Relationships

CAST IRON

NEXA MONEL 67

For Repair and Welding of Cast Iron

Classification:
AWS: AWS A/SFA 5.15 ENiCu-B

Applications of the Product

- Repair of cast iron castings
- Rebuilding worn surfaces
- Correcting machining errors on castings
- Well suited for Gears, machinery parts, Pump bodies
- Joining cast iron to steel

Characteristics of the Product

- Graphite based coating
- Machinable weld
- No need of preheating
- Monel type weld deposit
- Minimum dilution ensures shallow but sufficient depth of fusion

Chemical Composition of Weld

Element	C	Mn	Si	Fe	Ni	Cu
Typical Values (%)	0.35-0.55	<2.3	<0.75	3-6	60-70	25-35

Mechanical Properties of Weld

Property	Hardness (BHN)
Typical Values	<200

Welding Positions

Welding Currents - AC (70 OCV)/ DCEP

Size	3.15 x 350 mm	4.0 x 350 mm
Current	80-110	110-140

Packaging

Standard carton packing of 10 kg box containing 1 cartons of 10 kg each.

Conditions (Pre-Drying)

150°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

CAST IRON

NEXA Nickel

Machinable Pure Nickel Electrode

Classification:
AWS: AWS A/SFA 5.15 ENi-CI

Applications of the Product

- Repair of broken heavy castings, machine bases, motor blocks, sprockets, valve bodies, impellers, pump casting and gears
- Joining cast iron to steel
- Suitable for thin walled grey cast iron
- Building up on cast iron parts exposed to corrosive liquids
- Joining and build up of grey cast iron and malleable iron
- Correcting machining errors on castings
- Sliding tables for machine tools

Characteristics of the Product

- Graphite based coating
- Minimum base metal dilution and penetration
- Soft, ductile and machinable weld with adequate strength
- Easy and intimated fusion with all grades of cast iron
- High Ni alloyed electrode
- Electrode welds cast iron the cold way
- No need of preheating even for large complicated castings

Chemical Composition of Weld

Element	C	Mn	Si	Fe	Ni	Cu
Typical Values (%)	<2	<2.5	<4	<8	>93	<2.5

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	Hardness (BHN)
Typical Values	276-448	262-414	3-6	135-218

Welding Positions

Welding Currents - AC (70 OCV)/ DCEP

Size	3.15 x 350 mm	4.0 x 350 mm
Current	70-100	110-140

Packaging

Standard carton packing of 10 kg box containing 1 cartons of 10 kg each.

Conditions (Pre-Drying)

150°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

CAST IRON

NEXA Cast FN30

For Repair and Welding of Cast Iron

Classification:
AWS: Proprietary

Applications of the Product

- Repair of broken heavy castings
- Pump casting and gears, Cast iron dies, Gear boxes, Gear teeth
- Foundry defects, Machine build up
- Joining cast iron to steel
- Welding and repairing of all cast iron components
- Transmission housings, Couplings
- Best suited for welding of Nodular graphite iron, Malleable iron subject to heavy wear
- Correcting machining errors on castings

Characteristics of the Product

- Ni-Fe type machinable electrode
- Porosity free welding
- No need of preheating for large heavy castings
- Dense, soft and ductile weld with adequate strength
- Controlled dilution and penetration

Chemical Composition of Weld

Element	C	Mn	Si	Fe	Ni	Cu	Al
Typical Values (%)	<2	<2.5	<4	Bal	27-35	<2.5	<1

Mechanical Properties of Weld

Property	Hardness (BHN)
Typical Values	190 Max

Welding Positions

Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm
Current	50-70	80-110	120-160

Packaging

Standard carton packing of 10 kg box containing 1 cartons of 10 kg each.

Conditions (Pre-Drying)

150°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

CAST IRON

NEXA Cast FN50

For Repair and Welding of Cast Iron

Classification:
AWS: AWS A/SFA 5.15 ENiFe-Cl

Applications of the Product

- Repair of broken heavy castings
- Pump casting and gears, Cast iron dies, Gear boxes, Gear teeth
- Foundry defects, Machine build up
- Joining cast iron to steel
- Welding and repairing of all cast iron components
- Transmission housings, Couplings
- Best suited for welding of Nodular graphite iron, Malleable iron subject to heavy wear
- Correcting machining errors on castings

Characteristics of the Product

- Ni-Fe type machinable electrode
- Porosity free welding
- No need of preheating for large heavy castings
- Dense, soft and ductile weld with adequate strength
- Controlled dilution and penetration

Chemical Composition of Weld

Element	C	Mn	Si	Fe	Ni	Cu	Al
Typical Values (%)	<2	<2.5	<4	Bal	45-52	<2.5	<1

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	Hardness (BHN)
Typical Values	400-579	296-434	6-18	165-218

Welding Positions

Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm
Current	50-70	80-110	120-160

Packaging

Standard carton packing of 10 kg box containing 1 cartons of 10 kg each.

Conditions (Pre-Drying)

150°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

CAST IRON

NEXA Cast FN60

For Repair and Welding of Cast Iron

Classification:
AWS: AWS A/SFA 5.15 ENiFe-Cl

Applications of the Product

- Repair of broken heavy castings
- Pump casting and gears, Cast iron dies, Gear boxes, Gear teeth
- Foundry defects, Machine build up
- Joining cast iron to steel
- Welding and repairing of all cast iron components
- Transmission housings, Couplings
- Best suited for welding of Nodular graphite iron, Malleable iron subject to heavy wear
- Correcting machining errors on castings

Characteristics of the Product

- Ni-Fe type machinable electrode
- Porosity free welding
- No need of preheating for large heavy castings
- Dense, soft and ductile weld with adequate strength
- Controlled dilution and penetration

Chemical Composition of Weld

Element	C	Mn	Si	Fe	Ni	Cu	Al
Typical Values (%)	<2	<2.5	<4	Bal	55-62	<2.5	<1

Mechanical Properties of Weld

Property	UTS (MPa)	YS (MPa)	El%	Hardness (BHN)
Typical Values	400-579	296-434	6-18	165-218

Welding Positions

Welding Currents - AC (70 OCV)/DCEP

Size	2.5 x 350 mm	3.15 x 350 mm	4.0 x 350 mm
Current	50-70	80-110	120-160

Packaging

Standard carton packing of 10 kg box containing 1 cartons of 10 kg each.

Conditions (Pre-Drying)

150°C for min. 1hr

NexaWeld & Flux LLP
Welding Relationships

Low Heat Electrode

NEXA - NiCrFe-3

NON FERROUS (Ni Alloys)

Classification:
AWS: AWS A/SFA 5.11 ENiCrFe-3

Applications of the Product

- Welding of wrought and cast form of Ni-Cr-Fe alloys to themselves and to carbon steels
- Welding of ASTM E163/166/167/168, Inconel 600 and similar nickel alloys\r\n
- Fabrication of Corrosion resistant tanks, Furnace components\r\n
- Joining carbon, SS or low alloy steel or combinations of any of them
- Joining Ni based alloys to steel
- Applications in Refineries, Foundries, Heat exchanger, Pressure vessel, Chemical plants\r\n

Characteristics of the Product

- Ni-Cr-Fe type deposit
- Outstanding strength and resistance to corrosion from normal to high temperatures
- Ductile weld resistant to thermal shocks and hot cracking
- For overlay applications minimum three layers must be deposited
- Application from cryogenic to 480 C

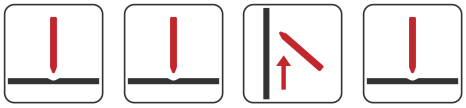
Chemical Composition of Weld

Element	C	Mn	Si	Fe	Ni	Ti	Cr	Nb+Ta	Cu
Typical Values (%)	0.1 max	5.0-9.5	1.0 max	10 max	59.0 min.	1.0 max	13-17	1-2.5	0.5 max

Mechanical Properties of Weld

Property	UTS (MPa)	EL%
Typical Values	>550	>30

Welding Positions



Welding Currents - DCEP

Size	3.15mm x 350mm	4.00mm x 350mm
Current	90-120	150-180

Packaging

10 KG Carton, 5 Packets of 2KGs Each

Conditions (Pre-Drying)

250-300°C for minimum 1 hr.

NEXA GOUGING

Gouging and Cutting

Classification:
AWS: Proprietary

Applications of the Product

- For chamfering, gouging and making grooves in all conductive metals
- Removing flashers and risers in foundry castings
- Cutting of metal parts on building sites
- For removing defective welds and rivets without using oxyacetylene and compressed air
- For bevelling cracks in machine frames without dismantling

Characteristics of the Product

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

Welding Currents - AC/DCEP

Size	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	180-250	250-300	300-350

Packaging
Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

Conditions (Pre-Drying)
100°C for min. 1hr

NEXA CUTTING

Gouging and Cutting

Classification:
AWS: Proprietary

Applications of the Product

- Cutting and piercing of steel, cast iron, copper materials, aluminium
- Dismantling work at sites
- Oxyacetylene or compressed air need not be used
- Excellent for burning rivets
- Cutting out unwanted metal in foundry castings

Characteristics of the Product

- Cutting electrode with special coating
- The kerfs are clean and narrow
- Produce negligible slag
- Special coating gives a stable arc during the cutting or piercing process
- Suitable for all positions

Welding Currents - AC/DCEP

Size	3.15 x 450 mm	4.0 x 450 mm	5.0 x 450 mm
Current	180-230	200-300	250-350

Packaging

Standard carton packing of 20 kg box containing 4 cartons of 5 kg each.

NexaWeld & Flux LLP
Welding Relationships

Mild Steel Flux Cored Wire

NEXA 71T1

Carbon Steel Based Flux Cored Wire (RDSO)

Classification:
AWS: AWS 5.20 E71-T1
IS: ET531RC9-H5

Applications of the Product

- Welding of C-Mn steel with tensile strength up to 500 MPa
- Chemical plant machinery, Hulls
- Construction equipment, Farm machinery,Rolling stocks
- Bridges, Shipbuilding, Towers, Cranes
- Storage tanks, Structural steel
- General carbon steel fabrication

Characteristics of the Product

- Rutile type gas shielded FCW wire
- Easy slag removal, smooth weld bead
- Suitable for high quality single & multi pass welds
- Radiographic quality weld
- Low fumes, Minimal spatters
- High deposition rate
- All position capability

Chemical Composition of Weld

Element	C	Mn	Si	S	P	Ni	Cr	Cu	V	Mo
Typical Values (%)	<0.12	<1.75	<0.9	<0.03	<0.03	<0.5	<0.20	<0.35	<0.08	<0.03

Mechanical Properties of Weld

Property	UTS	YS (MPa)	El%	CVN Imp (-20 C)	Hydrogen in Weld Metal
Typical Values	490-670	>390	22	60	<4ml/100gm

Welding Positions

Welding Currents

Size	1F	3G	4G
Current	180-300	150-260	150-250

Packaging

15KGs and 12.5KGs Spool - 1.2mm and 1.6mm

NexaWeld & Flux LLP
Welding Relationships

Low Alloy: Flux Cored Wire

NEXA - 81T1

For Atmospheric Corrosion Resistant Steel

Classification:
AWS: AWS 5.29 E81T1-W2 C

Applications of the Product

- Designed for welding of Atmospheric Corrosion Resistant Steels
- Suitable for joining weathering grade steels conforming to ASTM SA-588, SA-242 etc.
- Suitable for steel grades like RESCO, Corton & ITACOR

Characteristics of the Product

- Rutile base all position flux cored wire for welding of low alloy
- Having good slag detachability & excellent bead appearance with CO2 shield
- Having stable and smooth arc
- This wire is designed for welding CORTON grade weather resistance steels.

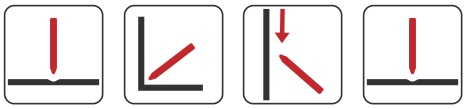
Chemical Composition of Weld

Element	C	Mn	Si	S	P	Cr	Ni	Cu
Typical Values (%)	<0.12	0.5-1.3	0.35-0.80	<0.03	<0.03	0.45-0.70	0.4-0.8	0.3-0.75

Mechanical Properties of Weld

Property	UTS (N/mm2)	YS (N/mm2)	El%	CVN Impact (-20 C)	Hydrogen in Weld Metal
Typical Values	550-690	>470	>19	60	<4ml/100gm

Welding Positions



Welding Currents

Size	1F	2G	4F
Current	180-250	120-210	150-200

Packaging

15kgs and 12.5kgs Vacuum packed plastic spool

NexaWeld & Flux LLP
Welding Relationships

Low Alloy: Flux Cored Wire

NEXA - 91T1

For Specialised Low Alloy Steel

Classification:
AWS: AWS 5.29 E 91T1-D1 C

Applications of the Product

- Used for welding steel to IS 8500-91 grade 540B and 590B
- Also used for IS 2002-92 grade III, IS:1875-92 class III A or other equivalent steel.

Characteristics of the Product

- All position flux cored wire for welding of low alloy steel, Carbon – Moly steel
- Gives radiographic quality with CO2 shielding
- It gives stable and smooth arc with good slag detachability & excellent bead finish

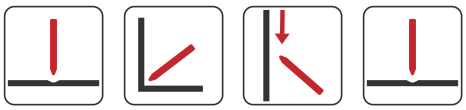
Chemical Composition of Weld

Element	C	Mn	Si	S	P	Mo
Typical Values (%)	<0.12	1.25-2.0	<0.8	<0.03	<0.03	0.25-0.55

Mechanical Properties of Weld

Property	UTS (N/mm2)	YS (N/mm2)	El%	CVN Impact (-20 C)	Hydrogen in Weld Metal
Typical Values	620-760	>540	>17	30	<4ml/100gm

Welding Positions



Welding Currents

Size	1F	2G	4G
Current	180-250	120-210	150-200

Packaging

15 kgs and 12.5kgs vacuum packed plastic spool.

NexaWeld & Flux LLP
Welding Relationships

Mig Welding Wire

NEXA - Mig 1.2

Carbon Steel Mig Welding Wire

Classification:
AWS: AWS A5.18 ER70S-6

Applications of the Product

- Construction and mining equipment
- Thin sheet metal, Auto body
- Shaft build-up, General Fabrication
- Railcar construction and repair, Frame fabrication
- Pressure Vessels and LPG Cylinders
- Farm implements, Steel casings
- Root pass pipe welding, Tanks, Structural steel components
- High-speed robotic, automatic and semi-automatic welding applications

Characteristics of the Product

- Smooth Wire Feeding
- Radiographic quality weld
- Higher level of de-oxidizers makes it suitable for applications where dirt, rust or mill-scale is present
- Can be use with 100% CO , Ar+CO 2 2

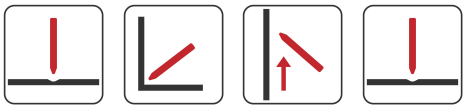
Chemical Composition of Weld

Element	C	Mn	Si	S	P	Cu
Typical Values (%)	0.06-0.15	1.4-1.85	0.8-1.15	<0.035	<0.025	<0.5

Mechanical Properties of Weld

Property	YS (N/mm2)	UTS (N/mm2)	El%	CVN Impact (J) (-30°C)
Typical Values	>400	>490	>22%	>27

Welding Positions



Welding Currents

Size	0.8mm	1.0mm	1.2mm	1.6mm
Current	80-250	100-250	120-400	150-450

Packaging

15 KGs Spool
13.5KGs Spool

NexaWeld & Flux LLP
Welding Relationships

Mig Welding Wire

NEXA - Mig 0.8

Carbon Steel Mig Welding Wire

Classification:
AWS: AWS A5.18 ER70S-6

Applications of the Product

- Construction and mining equipment
- Thin sheet metal, Auto body
- Shaft build-up, General Fabrication
- Railcar construction and repair, Frame fabrication
- Pressure Vessels and LPG Cylinders
- Farm implements, Steel casings
- Root pass pipe welding, Tanks, Structural steel components
- High-speed robotic, automatic and semi-automatic welding applications

Characteristics of the Product

- Smooth Wire Feeding
- Radiographic quality weld
- Higher level of de-oxidizers makes it suitable for applications where dirt, rust or mill-scale is present
- Can be use with 100% CO , Ar+CO 2 2

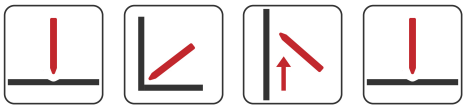
Chemical Composition of Weld

Element	C	Mn	Si	S	P	Cu
Typical Values (%)	0.06-0.15	1.4-1.85	0.8-1.15	<0.035	<0.025	<0.5

Mechanical Properties of Weld

Property	YS (N/mm2)	UTS (N/mm2)	El%	CVN Impact (J) (-30°C)
Typical Values	>400	>490	>22%	>27

Welding Positions



Welding Currents

Size	0.8mm	1.0mm	1.2mm	1.6mm
Current	80-250	100-250	120-400	150-450

Packaging

15 KGs Spool
13.5KGs Spool