valency™

ISO 9001-2015

valency

PRODUCT BROCHURE

- BIS, IBR & RDSO APPROVED ELECTRODES FOR CS & SS
- LOW HEAT INPUT MAINTENANCE ALLOYS
- STAINLESS STEEL MIG, TIG & FC WIRES
- FLUX CORED WIRES FOR JOINING & WEAR FACING
- THERMAL SPRAY TORCH & POWDERS
- COLD WELDING PRODUCTS
- TUBULAR ELECTRODES
- "ARMADUR" WEAR PLATE

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JOINING AND F ABRICA TION OF STEELS

STICK ELECTRODES

PRIMEARC- 13 (AWS : E6013 / IS 814 ER 4212 X) (AC / DC+)
RUTILE COATED, ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, RADIOGRAPHIC WELD.
Applications: Pipes, Boilers, Coaches & Wagons, Bridges, Pressure vessels
Properties: Y.S.330 N//mm^2 min, U.T.S. 420-480 N/mm^2, Elongation 22% min., CVN at 0°C 47 J min.

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	60-85	85-120	120-160	160-220

VALENCY LH 76 (AWS : E7016 / IS 814 ER 5426 H3 X) (AC / DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, HIGH STRENGTH, GOOD DUCTILITY & IMPACT STRENGTH, RADIOGRAPHIC WELD.
Applications: Low & Medium Carbon Steels, Heavy Sections, gears, sprockets
Properties (Typical): U.T.S. 550 N/mm^2, Elongation, 25%,CVN at -30°C 80 J

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	70-100	100-140	135-175	165-220

VALENCY LH 78 (AWS : E7018 / IS 814 ER 5426 H3 X) (AC / DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, HIGH STRENGTH, AROUND 115% RECOVERY, GOOD DUCTILITY & IMPACT STRENGTH UPTO -30°C, RADIOGRAPHIC WELD, FOR DYNAMIC LOAD.
Approvals: IBR/BIS/M.N.DASTUR
Applications: Low & Medium Carbon Steels, Pressure Vessels, Boilers, Penstocks, Heavy Sections etc.
Properties (Typical): U.T.S. 580 N/mm^2, Elongation 26%,CVN at -30°C 100 J

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	80-100	100-150	150-200	200-250

VALENCY LH 78 (Spl.) (AWS : E7018-1 / IS 814 ER 5426 H3 X) (AC / DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, HIGH STRENGTH, AROUND 115% RECOVERY, GOOD DUCTILITY & IMPACT STRENGTH UPTO -50°C, EXCELLENT RADIOGRAPHIC QUALITY WELD, SUITABLE FOR DYNAMIC LOAD CONDITION.
Applications: Low & Medium Carbon Steels, Pressure Vessels, Boilers, Penstocks, Heavy Sections etc.
Properties (Typical): U.T.S. 600 N/mm^2, Elongation 26%, CVN at -30°C 110 J

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	80-100	100-150	150-200	200-250

VALENCY LH 78 A1 (AWS : E7018-A1) (AC / DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, LOW ALLOY, HIGH STRENGTH, FOR 0.5% Mo STEELS, CREEP RESISTANCE UPTO 525°C
Applications: Welding of 0.5 Mo steels, plates, pressure vessel pipes etc.
Properties (Typical) : U.T.S. 540 N/mm^2, Y.S. 480 N/mm^2, Elongation 26%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	75-100	100-140	150-190	190-240

VALMET 8018 B2 (AWS A 5.5 : E8018 B2) (AC / DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, LOW ALLOY, HIGH STRENGTH, 1.25 Cr/0.5%, Mo TYPE, CREEP RESISTANCE UPTO 525°C
Applications: Welding of 0.5Cr-0.5 Mo steels, 1.00 Cr -1.00 Mo steels plates, etc.
Properties (Typical) : U.T.S. 570 N/mm^2, Y.S.520 N/ mm^2, Elongation 24% min.

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	70-100	100-140	135-175	165-220

VALMET 9018 B3 (AWS A 5.5 : E9018 B3) (AC/ DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, LOW ALLOY, HIGH STRENGTH DEPOSIT FOR 2.25 Cr/1.0 Mo TYPE STEELS, CREEP RESISTANCE UPTO 600°C
Applications: Welding of 2.25 Cr/1.0 Mo, Cr-Mo-V steels as well as cast steels of similar composition.
Properties (Typical): U.T.S. 650 N/mm^2, Y.S.540 N/mm^2, Elongation 22%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	70-100	100-140	135-175	165-220

VALMET 8018 W2 (AWS A 5.5 : E8018 W2) (AC/ DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, IRON POWDER, 0.5 Cr.-0.7 Ni-0.5Cu TYPE DEPOSIT. RESISTS HIGH TEMPERATURE ATMOSPHERIC CORROSION.
Applications: Welding of weathering steels like corten steels used in railways, chemical and petrochemical industries.
Properties (Typical) : U.T.S. 600 N/mm^2, Y.S.520 N/ mm^2, Elongation 26%, CVN at -20°C 30 J

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	90-120	100-150	135-200	190-270

VALMET 8018 G (AWS A 5.5 : E8018 G) (AC / DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, IRON POWDER, LOW ALLOY, HIGH STRENGTH DEPOSIT
Applications: Welding High Tensile fine grained steels, good impact up to -30°C
Properties (Typical) : U.T.S. 650 N/mm^2, Y.S.540 N/ mm^2, Elongation 22%,

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	80-110	110-150	150-200	200-260

VALMET 9018 G (AWS A 5.5 : E9018 G) (AC / DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, IRON POWDER, LOW ALLOY, HIGH STRENGTH DEPOSIT
Applications: Welding High Tensile fine grained steel, good impact up to -30°C
Properties (Typical): U.T.S. 650 N/mm^2, Y.S.540 N./ mm^2, Elongation 22%, CVN at -40° C 30 J

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	80-115	95-140	130-190	180-260

VALMET 11018 G (AWS A 5.5 : E11018 G) (AC / DC+)
BASIC COATED, ALL POSITION, LOW HYDROGEN, IRON POWDER, LOW ALLOY, HIGH STRENGTH DEPOSIT
Applications: Welding High Tensile steels requiring good toughness properties e.g. HSLA & Q & T steels, earthmoving components etc.
Properties (Typical): U.T.S.800 N/mm^2, Y.S.720 N/ mm^2, Elongation 22%, CVN at -40°C 30 J

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	80-115	95-140	130-190	180-260

JOINING AND FABRICATION OF STAINLESS STEELS

A. STICK ELECTRODES

VALSTAIN A (AWS : E308-16) (AC / DC+)
ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 19Cr/10 Ni TYPE WELD, GOOD CORROSION RESISTANCE IN OXIDISING MEDIA LIKE NITRIC ACID
Applications: Welding of AISI 301, 302, 304, 308 and 308L type stainless steels
Typical Properties: U.T.S. 585 N /mm^2, Elongation 38 %

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

VALSTAIN B (AWS : E316 -16) (AC / DC+)
ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 18Cr/12 Ni/2 Mo TYPE WELD, SUPERIOR CORROSION RESISTANCE SPECIALLY IN SULPHURIC ACID MEDIA. BETTER HEAT AND CREEP RESISTACE THAN E-308 TYPE
Applications: Welding of AISI 316 & 317 type Plates, Pipes and for joining of wrought and cast materials of similar composition.
Properties (Typical) : U.T.S. 590 N/mm^2, Elongation 36%, Ferrite Number 5-6

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	70-100	100-140	140-180

JOINING AND FABRICATION OF STAINLESS STEELS

A. STICK ELECTRODES

VALSTAIN C (AWS : E309 -16) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 25Cr/12 Ni TYPE WELD, SUPERIOR RESISTANCE TO CORROSION & OXIDATION UPTO 1000°C

Applications: Welding of AISI 309/309 S types,18/8 stainless steels to M.S. or low alloy steels, manganese steels to M.S.,18/8 clad steels and self hardening type steels on which heat treatment after welding not possible.

Properties (Typical) : U.T.S. 620 N/mm^2, Elongation 35%,Ferrite Number 12-18

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	70-120	100-140	140-190

VALSTAIN CMO (AWS : E 309 Mo -16) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 25Cr/12Ni/2.5 Mo TYPE WELD, HIGH STRENGTH, EXCELLENT CRACK RESISTIVITY IN DISSIMILAR METAL WELDING. SUPERIOR RESISTANCE TO CORROSION & OXIDATION UPTO 1100°C

Applications: Welding of 309 & 317 type stainless to M.S. or low alloy steels, clad side of 18-11-Mo clad steels, overlay on ferritic steels, buffer layers etc.

Properties (Typical): U.T.S. 640 N/mm^2, Elongation 35%, Ferrite Number 12-20

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	70-110	100-150	140-190

VALSTAIN D (AWS : E 310-16) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 25Cr/20Ni TYPE AUSTENITIC WELD, SUPERIOR RESISTANCE TO SCALING UPTO 1100 -1150°C

Applications: Welding of AISI 309 & 310 stainless steels, Heat exchangers, heat treatment boxes, furnace plates, elements etc.

Properties: Y.S.330 N//mm^2 min, U.T.S. 42-48 Kg/mm^2, Elongation 22% min., CVN at 0°C 47 J min.

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

VALMET 308 L (AWS : E 308L-16) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY,SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, WITH EXTRA LOW CARBON TYPE WELD, EXCELLENT RESISTANCE TO CORROSION IN OXIDISING MEDIA.

Applications: Welding of AISI 301, 302, 304, 304L, 308 & 308L types, Stainless steels wagons etc.

Properties (Typical): U.T.S. 575 N/mm^2, Elongation 40%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

VALMET 316L (AWS : E 316 L-16) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 18Cr/12 Ni/2 Mo WITH EXTRA LOW CARBON TYPE WELD, EXCELLENT RESISTANCE TO INTERGRANULAR CORROSION & CAVITATION.

Applications: Welding of AISI 316, 316L, 317 & 317L types for applications requiring corrosion & heat resistance in chemical, fertilizer, paper & food industries etc.

Properties (Typical) : U.T.S. 615 N/mm^2, Elongation 38 %

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

VALMET 316 L (CF) (AWS : E 316 L-16 [nearest]) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 18Cr/12 Ni/2 Mo WITH EXTRA LOW CARBON TYPE & ZERO FERRITE IN WELD FOR EXCELLENT CORROSION RESISTANCE & RADOGRAPHIC QUALITY

Applications: For welding and cladding of 316 urea grade steels and other 18Cr/12Ni/2 Mo steels used in chemical & fertilizer industries

Properties (Typical): U.T.S. 600 N/mm^2, Elongation 38 %

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

VALMET 309 L (AWS : E 309 L-16) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 24 Cr/12 Ni WITH EXTRA LOW CARBON TYPE ALLOY GIVING EXCELLENT COMBINATION OF HIGH STRENGTH, DUCTILITY, HEAT & CORROSION RESISTANCE

Applications: For welding of AISI 309L type steels, carbon steels to S.S., joining of Manganese steels to mild steels etc.

Properties (Typical): U.T.S. 620 N/mm^2, Elongation 35%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

VALMET 310 (AWS : E 310-16) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 25 Cr/20 Ni TYPE ALLOY GIVING EXCELLENT RESISTANCE TO HEAT & SCALING UPTO 1200°C

Applications: For welding of AISI 310 type steels, as required in heat exchangers, furnace plates etc.

Properties (Typical): U.T.S. 620 N/mm^2, Elongation 32%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

VALMET 317 L (AWS : E 317 L) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 18 Cr/12Ni/ 3Mo WITH EXTRA LOW CARBON TYPE DEPOSIT GIVING MAXIMUM RESISTANCE TO STRESS CORROSION, HOT CRACKING & CHEMICAL CORROSION AT HIGH TEMPERATURE

Applications: For welding of AISI 316L or equivalent grades for corrosion resistance to sulphuric , sulphurous & phosphoric acid media

Properties : U.T.S. 610 N/mm^2, Elongation 36%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

VALMET 318 (AWS : E 318 16) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 18 Cr/12Ni/ 2.5 Mo COLUMBIUM STABILZED TYPE DEPOSIT FOR RESISTANCE TO CORROSION & PITTING GIVING IMPROVED CREEP STRENGTH.

Applications: For welding of matching grades of steels.

Properties (Typical): U.T.S. 550 N/mm^2, Elongation 25%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

VALMET 347 (AWS : E 347 16) (AC /DC+)

ALL POSITION, EASY STRIKING, RESTRIKING & DETACHABILITY, SMOOTH BEAD, FINE RIPPLES, MINIMAL SPATTER, 18 Cr/10 Ni COLUMBIUM STABILZED TYPE DEPOSIT GIVING EXCELLENT RESISTANCE TO INTERGRANULAR CORROSION

Applications: For welding of AISI 347 or equivalent grades of stainless steels.

Properties: U.T.S. 600 N/mm^2, Elongation 34%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

B. GMAW WIRES

VALMIG 308L (DC +) (AWS A 5.9 : ER 308L)

EXTRA LOW CARBON 19 Cr/ 10Ni/ TYPE S.S. WIRE FOR METAL INERT GAS WELDING OF MATCHING TYPES OF SS. GIVING EXCELLENT RESISTANCE TO INTERGRANULAR CORROSION.

Gas Shilding : Ar/Ar-O_2

Properties (Typical) : U.T.S. 600 N/mm^2, Elongation 36%

Diameters : 1.20 mm, 1.60 mm & 2.00 mm

VALMIG 309L (DC +) (AWS A 5.9 : ER 309L)

EXTRA LOW CARBON 24 Cr/ 13Ni/ TYPE S. S. WIRE FOR METAL INERT GAS WELDING OF MATCHING TYPES OF SS. AND DISSIMILAR STEEL COMPOSITIONS SUCH AS AISI 304 TO CARBON MANGANESE STEELS & CARBON STEELS.

Gas Shilding : Ar/Ar-O_2

Properties (Typical) : U.T.S. 620 N/mm^2, Elongation 36%

Diameters : 1.20 mm, 1.60 mm & 2.00 mm

VALMIG 316L (DC +) (AWS A 5.9 : ER 316L)

EXTRA LOW CARBON 24 Cr/ 13Ni / 2.5 Mo TYPE S.S. WIRE FOR METAL INERT GAS WELDING OF MATCHING TYPES OF STAINLESS STEELS.

Gas Shilding : Ar/Ar-O_2

Properties (Typical) : U.T.S. 600 N/mm^2, Elongation 35%

Diameters : 1.20 mm, 1.60 mm & 2.00 mm

JOINING AND FABRICATION OF STAINLESS STEELS

C. GTAW WIRES

VALTIG 308L (DC +) (AWS A 5.18 : ER 308L)

EXTRA LOW CARBON 19 Cr/ 10Ni/ TYPE S.S. FILLER ROD FOR TUNGSTEN INERT GAS WELDING OF MATCHING TYPES OF SS. GIVING EXCELLENT RESISTANCE TO INTERGRANULAR CORROSION. USED FOR ROOT RUN OF AISI 304 & 304 L TYPE S.S.

Gas Shilding : Ar/Ar-O_2

Chemical Composition % (Wire) : C 0.02, Mn 1.75, Si 0.45, Cr.19.0, Ni 10.0

Diameters : 1.20 mm, 1.60 mm & 2.00 mm

VALTIG 309L (DC +) (AWS A 5.9 : ER 309L)

EXTRA LOW CARBON 24 Cr/ 13Ni/ TYPE S.S. WIRE FOR METAL INERT GAS WELDING OF MATCHING TYPES OF SS. AND DISSIMILAR STEEL COMPOSITIONS SUCH AS AISI 304 TO CARBON MANGANESE STEELS & CARBON STEELS.

C. GTAW WIRES

Gas Shilding : Ar/Ar-O_2

Chemical Composition % (Wire) : C 0.02, Mn 1.75, Si 0.45, Cr.23.0, Ni 13.0

Diameters : 1.20 mm, 1.60 mm & 2.00 mm

VALTIG 316L (DC +) (AWS A 5.9 : ER 316L)

EXTRA LOW CARBON 24 Cr/ 13Ni / 2.5 Mo TYPE S.S. WIRE FOR METAL INERT GAS WELDING OF MATCHING TYPES OF STAINLESS STEELS.

Gas Shilding : Ar/Ar-O_2

Chemical Composition % (Wire): C 0.02, Mn 1.80, Si 0.40, Cr.19.5, Ni 12.0, Mo 2.5

Diameters : 1.20 mm, 1.60 mm & 2.00 mm

LOW HEAT INPUT CONSUMABLES FOR MAINTENANCE & REPAIR

A. ELECTRODES FOR STEEL & DISSIMILAR ALLOYS

VALMATIC (AC /DC+)

ALL POSITION, CONTACT WELDING, EASY DETACHABILITY, EXCELLENT BEAD FINISH,

Applications: Air Conditioning parts, Machine guards, Doors & Windows

Properties: U.T.S. 450-500 N/mm^2, Elongation 22%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	50-90	90-130	140-170	170-220

VALMET 516 LH (AC /DC+)

ALL POSITION, LOW HYDROGEN, HIGH STRENGTH & RECOVERY, RADIOGRAPHIC.

Applications: Low & Medium Carbon Steels, Heavy Sections, Restrained joints under dynamic load, such as crane jigs & booms Chassis etc.

Properties: U.T.S. 550-600 N/mm^2, Elongation 26%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	70-100	100-140	130-175	165-220

VALMET 506 MLH (AC /DC+)

ALL POSITION,LOW HYDROGEN, HIGH STRENGTH, GIVING HIGH IMPACT RESISTANCE & DUCTILITY UPTO 525°C

Applications: For joining & build up of carbon- moly steels, medium high tensile & low alloy steels, boilers, pressure vessels, pipes & tubes of such composition.

Properties: U.T.S. 570-620 N/mm^2, Elongation 22%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	70-100	100-140	130-175	165-220

CRONIMO 536 (AC /DC+)

BASIC, MEDIUM HEAVY COATED, LOW HYDROGEN, DEPOSITING WELD METAL OF 1%Cr/2.5% Ni/ 0.70%Mo TYPE

Applications: Welding of HT steel machinery parts, earth moving, automobile, chemical plant parts and armor plates using Ni-Cr-Mo steels, Repairing steam turbine rotors etc.

Properties: U.T.S. 720-750 N/mm^2,Elongation 22%,CVN at -60°C 5.0KgM

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	70-100	100-140	130-175	165-220

VALMET 526 (AC /DC+)

WORK HARDENING ALLOY FOR JOINING & REPAIRING CRACKS IN MANGANESE STEELS (12%) AND JOINING MN STEELS TO OTHER STEELS

Applications: Shovels, Buckets, Sprockets, Track Pads, Crushers etc.

Properties : U.T.S. 650 N/mm^2, Elongation 30-40%, min.

Hardness : As Deposited 160 BHN Work hardened 440 BHN

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-120	100-160	140-190

VALMET 5260 (AC /DC+)

WORK HARDENING ALLOY FOR JOINING & REPAIRING CRACKS IN MANGANESE STEELS (12%) AND JOINING MN STEELS TO OTHER STEELS

Applications: Shovels, Buckets, Sprockets, Track Pads, Crushers etc.

Properties: U.T.S. 650 N/mm^2, Elongation 30-40%, min.

Hardness : As Deposited 160 BHN Work hardened 440 BHN

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-120	100-160	140-190

CAMN 56 (AC/DC+)

HIGH MANGANESE STEELS,MANGANESE STEEL TO MILD STEEL, CARBON, LOW ALLOY & STAINLESS STEELS, CUSHION LAYER ON FATIGUED MANGANESE & OTHER STEELS PRIOR TO HARDFACING.

Applications: Shovels, Buckets, Sprockets, Track Pads, Crushers etc.

Properties: U.T.S. 650 N/mm^2, Elongation 30-40% min.

Hardness: As Deposited 160 BHN Work hardened 440 BHN

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-120	100-160	140-190

MNX 221 (AC/DC+)

JOINING & REPAIR OF HIGH MANGANESE STEELS, MANGANESE STEEL TO MILD STEEL, CARBON STEEL & SS, CUSHION LAYER ON FATIGUED MANGANESE & OTHER STEELS

Applications: Shovels, Excavator Buckets, Sprockets, Track Pads, Jaw crushers, pinions

Properties: U.T.S. 680-700 N/mm^2, Elongation 30-35%

Size (mm)	3.15	4.00	5.00
Current (Amps)	75-130	100-160	140-190

VALMET 576 (AC/DC+)

FOR JOINING STAINLESS STEEL TO MILD STEEL & CARBON STEEL, OVERLAYS & CUSHION LAYER

Applications : Shafts, Valve seats & faces, roller journals, bucket cracks, hammers, jaw crushers.

Properties: U.T.S. 680 N/mm^2, Elongation 30%, Hardness 160-180 BHN

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-120	100-150	140-190

VALMET 586 OCM (AC/DC+)

FOR JOINING & REPAIR OF LOW, MEDIUM & HIGH ALLOY STEEL OR STEEL OF UNKNOWN COMPOSITION, SUPERIOR CRACK RESISTANCE, WELDABILITY & MACHINABILITY

Applications: Gears, tool steels, dies, shafts, cushion layer.

Properties: U.T.S. 800-850 N/mm^2, Elongation 20-22% min.

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	75-130	100-165	130-180

LOW HEAT INPUT CONSUMABLES FOR MAINTENANCE & REPAIR

VALMET 586 (AC/DC+)

SUPERIOR ELECTRODE FOR UNKNOWN, DISSIMILAR, DIFFICULT TO WELD STEELS.

Applications: Gears, tool steels, dies, shafts, cushion layer.

Properties: U.T.S. 820-860 N/mm^2, Elongation 24% (Typical)

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	75-130	100-165	130-180

VALMET 586 FG (AC/DC+)

DEPOSITS CONTROLLED & FINE GRAINED DUPLEX AUSTENO FERRITIC WELD, HIGH STRENGTH, TOUGHNESS, DUCTILITY AND CRACK RESISTIVITY. OUTSTANDING WELD CHARACTERISTICS

Applications: joining, surfacing, & repair of high alloy, high strength, difficult to weld, unknown & dissimilar steels components & also manganese steels.

Properties: U.T.S. 820-860 N/mm^2, Elongation 24% (Typical)

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	75-130	100-165	130-180

VALMET 588 (AC/DC+)

PRECISELY BALANCED FINE GRAINED DEPOSIT GIVING DUPLEX STRUCTURE OF AUSTENITE & FERRITE WITH SUPERB WELDABILITY

Applications: Gear Box , Gear Teeth, Shafts, Tools & Dies, Joining Wear plates, Leaf Spring, Cushion Layer

Properties: U.T.S. 860 N/mm^2, Elongation 24%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	75-130	100-165	130-180

VALMET FVW 01 (AC/DC+)

Cr/Ni/Mo ALLOYED HIGH STRENGTH, HIGH CRACK RESISTANT SS ALLOY

Applications: Joining and surfacing of armour plates, tough low alloy steels, as buffer layer prior to roll surfacing etc.

Properties: U.T.S. 735 N/mm^2, Elongation 36%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	75-130	100-165	130-180

B. ELECTRODES FOR CAST IRON

VALMET 26 (AC/DC+)

SPRAY TRANSFER, NON MACHINABLE WELD FOR RUSTY, CORRODED, OIL SOAKED IRON PARTS

Applications: machine frames, oil pump, pump housing, foundry defects

Properties: U.T.S. 380-430 N/mm^2

Size (mm)	2.5	3.15	4.00	5.00
Current (Amps)	50-70	60-110	80-130	100-170

CASTOMAC 238 (AC/DC+)

NODULAR IRON CASTING, CAST IRON TO M.S. JOINING WITH HIGH CARCK RESITIVITY, MACHINABLE WELD GIVING GOOD COLOUR MATCH

Applications: Repair of welding defects of heavy castings sections,pump casing, engine head, valve bodies, motor body, foundry defects cladding.

Properties: U.T.S. 380-420 N/mm^2, Hardness 190-210 B.H.N.

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	50-70	60-110	80-130	100-170

MPCI 228 (AC/DC+)

HIGH STRENGTH NICKEL IRON ALLOY ELECTRODE FOR CAST IRON TO M.S. JOINING WITH HIGH CARCK RESITIVITY, MACHINABLE DUCTILE WELD

Applications: Pump casing, engine head, valve bodies, motor body, foundry defects, auto parts, cladding, heavy cast iron sections

Properties: U.T.S. 350-400 N/mm^2

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	50-70	60-110	80-130	100-170

CASTODYNE 2384 C (AC/DC+)

SUPERIOR WELDABILITY & MACHINABILITY RECOMMENDED FOR PATCHING UP WELDING DEFECTS WITH EXCELLENT COLOUR MATCHING

Applications: Cast Iron roll & other foundry defect rectification, cast iron die cladding & for nodular iron

Properties: U.T.S. 380-430 N/mm^2

Size (mm)	2.5	3.15	4.00	5.00
Current (Amps)	40-70	60-110	80-130	100-170

CASTODYNE 2386 (AC/DC+)

EXCELLENT BONDING & MACHINABILITY, VERY HIGH CRACK RESISTANCE, MAXIMUM WELD SOUNDNESS

Applications: Cast Iron roll & other foundry defect rectification, cast iron die cladding & for nodular iron

Properties: U.T.S. 380-420 N/mm^2

Size (mm)	2.5	3.15	4.00	5.00
Current (Amps)	40-70	60-110	80-130	100-170

MPCI 220 (AC/DC+)

SOFT & DUCTILE HIGH NICKEL ELECTRODE

Applications: Cast iron gears & pulleys, housing, machine bases, engine blocks (water jacket), filling up blow holes etc.

Properties: U.T.S. 350-380 N/mm^2.

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	50-70	60-110	80-130	100-170

SDM 240 (AC/DC+)

STRONG, DUCTILE & MACHINABLE REPAIR OF CAST IRON PARTS

Applications: For filling, joining, building up & repair of castings, sugar mill rollers, cast iron gears & pulleys, housing, machine bases, engine blocks (water jacket), filling up blow holes etc.

Properties: U.T.S. 330-400 N/mm^2. Hardness: 140-170 BHN

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	50-70	60-110	80-130	100-170

SDM 250 (AC/DC+)

VERY HIGH NICKEL ALLOY, MINIMAL BASE METAL DILUTION, VERY SOFT & DUCTILE DEPOSIT.

Applications: Foundry Castings, sugar mill rollers, cast iron gears & pulleys, housing, machine bases, engine blocks (water jacket), filling up blow holes etc.

Properties: U.T.S. 320-380 N/mm^2, Hardness 110-130 BHN

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	50-70	60-110	80-130	100-170

CASTO SUPER 0077 (AC/DC+)

ONE ELECTRODE FOR ALL TYPES OF CAST IRON. SUPERB WELDABILITY, MAXIMUM CRACK RESISTANCE, EXCELLENT WELDABILITY

Applications: A versatile electrode for all Foundry Castings, sugar mill rollers, cast iron gears & pulleys, housing, machine bases, engine blocks (water jacket), filling up blow holes etc.

Properties: U.T.S. 320-400 N/mm^2, Hardness 130-170 BHN

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	50-70	60-110	80-125	110-170

C. ELECTRODES FOR HEAT & CORROSION RESISTANCE

NICONEL 2424 (AC/DC+)

HIGH RECOVERY NICKEL ALLOY ELECTRODE, EXCELLENT RESISTANCE TO CORROSION, OXIDATION & THERMAL SHOCK AT HIGH TEMPERATURE .ALSO SUITABLE FOR CRYOGENIC RANGE

Applications: Joining & overlaying of Nickel & Nickel Chrome alloys, HK alloys, furnace parts, dissimilar parts, cryogenic & high temperature equipments & for Inconel type of alloys.

Properties: U.T.S. 630 N/mm^2

Size (mm)	2.50	3.15	4.0
Current (Amps)	55-90	75-120	115-180

NICONEL 2525 (AC/DC+)

HIGH RECOVERY NICKEL ALLOY ELECTRODE, EXCELLENT RESISTANCE TO CORROSION, OXIDATION & THERMAL SHOCK AT HIGH TEMPERATURE .ALSO SUITABLE FOR CRYOGENIC RANGE

Applications: Joining & overlaying of Nickel & Nickel Chrome alloys, HK alloys, furnace parts, dissimilar parts, cryogenic & high temperature equipments & for Inconel type of alloys.

Properties: U.T.S. 630 N/mm^2

Size (mm)	2.50	3.15	4.0
Current (Amps)	55-90	75-120	115-180

LOW HEAT INPUT CONSUMABLES FOR MAINTENANCE & REPAIR

HK 3040 (AC/DC+)

SPECIALLY DESIGNED HIGH CARBON, CHROMIUM & NICKEL BEARING ALLOY WITH GOOD CREEP RUPTURE PROPERTIES UPTO 1150°C

Applications: For Welding HK 30, HK 40 alloys, refprmer tubes, AISI 309 & 310 type s.s, heat exchangers, furnace parts, heating element, heat treatment boxes, kiln cooler plates, reaction vessels etc

Properties (Typical): U.T.S. 600 N/mm^2, Elongation 35%

Size (mm)	3.15	4.00
Current (Amps)	75-120	130-165

NICARB-1150 (AC/DC+)

HIGH CARBON, CHROMIUM & NICKEL BEARING ALLOY, FOR WITH-STANDING HIGH TEMP. UPTO 1150°C. HIGH CREEP RUPTURE PROLONGED LIFE AT ELEVATED TEMPERATURE

Applications: Welding & repairing of heat resistant castings for use in oxidizing & reducing atmosphere at high temp. in fertilizer, oil refinery & petrochemical industries.

Properties: U.T.S. 600-620 N/mm^2. Total Cr+Ni content above 50%

Size (mm)	2.50	3.15	4.0
Current (Amps)	55-90	75-120	115-180

VALMET 2290 (AC/DC+)

HIGH RECOVERY (150%), NICKEL, CR, MO, CO BASED ALLOYGIVES EXCELLENT THERMAL SHOCK RESISTANCE WITH SUPERIOR RUPTURE STRENGTH & CORROSION RESISTANCE IN OXIDIZING ACIDS AND CHLORINE. ALSO RESISTANT TO DEFORMATION AT HIGH TEMPERATURE UPTO 1100°C UNDER STATIC AND CYCLIC LOAD.

Applications: Joining and overlaying of Alloy 600, 617, 625 & 825

Properties: U.T.S. 880 N/mm^2

Size (mm)	2.50	3.15	4.0
Current (Amps)	70-90	100-130	110-150

VALMET 2293 LN (AC/DC+)

NITROGEN BEARING 22Cr/ 9 Ni / 3 Mo WITH EXTRA LOW CARBON IDEAL FOR WELDING DUPLEX STAINLESS STEELS. ALSO GIVES EXCELLENT CORROSION RESISTANCE IN MARINE ENVIRONMENTS.

Applications: Low & Medium Carbon Steels, Heavy Sections, gears, sprockets etc.

Properties (Typical): U.T.S. 730 N/mm^2, Elongation 25%

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	60-80	80-110	110-140	145-175

VALMET 068 (AC/DC+)

FULLY AUSTENITIC NI/CR ALLOY SUITABLE FOR JOINING AND BUILD UP ON FERROUS ALLOYS, NICKEL AND NICKEL ALLOYS, COPPER AND COPPER ALLOYS CONFORMING TO AWS : 5.11 NiCrFe3 (Modified).

Applications: Hot rolling Guides, Tools and Dies, Reaction Vessels etc.

Properties (Typical): U.T.S. 625 N/mm^2, Elongation 35%

Size (mm)	2.50	3.15	4.00
Current (Amps)	40-65	70-100	100-130

D. SILVER BRAZING

VALBRAZE 403 BARE (OXY- ACETYLENE)

SILVER BEARING, THIN FLOWING ALLOY FOR JOINING COPPER TO COPPER, BRASS & BRONZE GIVING STRONG, DUCTILE & LEAK PROOF

Applications: Armature, electric motor, regrigeration tubes, heat exchangers.

Properties:- Bonding Temperature 660°C, self fluxing on copper to copper Available in 1.60 mm & 3.20 mm sizes, For Copper alloys Valency Flux 403 should be used.

VALBRAZE 405 BARE (OXY-ACETYLENE)

VERSATILE HIGH STRENGTH, EXTREMELY THIN FLOWING ALLOY FOR JOINING STEEL, S.S., BRASS & BRONZE GIVING STRONG DUCTILE & LEAK PROOF JOINT.

Applications: Electrical contacts, carbide tool tip, high speed tools, instruments, wire mesh & filters, hospital & hotel equipment

Properties: Bonding Temperature 600°C, Available in Rod 1.60 mm & Shin 25mm x 0.075mm

VALBRAZE 450 BARE (OXY-ACETYLENE)

VERSATILE LOW MELTING, EXTREMELY THIN FLOWING HIGH SILVER ALLOY FOR COPPER, NICKEL, CARBON, STEELS, ALLOY STEELS, CARBIDES & SS

Applications: Electrical contacts, carbide tip, Wire mesh, Instruments, hospital, & hotel equipment, Thin Tubing

Properties: Bonding Temperature 600°C, Available in Rod 1.60 mm & Shin 2.5mm x 0075mm ms.

E. ALUMUNIUM & ALUMINIUM ALLOYS

VALBRAZE 110 BARE (OXY-ACETYLENE)

THIN FLOWING ALLOY FOR HIGH STRENGTH FILLET, TEE, LAP & FLANGE JOINTS OF ALUMINIUM PARTS GIVING GOOD COLOUR MATCH

Applications: Furniture, radio instruments, containers, air conditioning ducts, tubes etc..

Properties: U.T.S. 240 N/mm^2. Bonding Temp. 570°C, Available in Rod 1.60 mm, 2.50 mm & 3.15 mm dia ., To be used with Valency Flux 110

VALBRAZE 105 BARE (OXY-ACETYLENE)

BEAD FORMING TYPE ALLOY FOR BUILDING UP AND JOINING OF ALUMINIUM PARTS, EXCELLENT FOR POOR FIT UP JOINTS.

Applications: Aluminium housing, fans, tubular frames, containers, furniture, radio instruments, containers, air conditioning ducts, tubes etc.

Properties: U.T.S. 220-240 N/mm^2. Bonding Temp. 590°C, Available in Rod 2.50 mm & 3.15 mm dia., To be used with Valency Flux 105

VALBRAZE 150C (Flux Coated Oxy Acetylene)

FOR CAST IRON PARTS, ALSO SUITABLE FOR STEEL PARTS, HAVING SUPERIOR FLOW ON FERROUS & COPPER ALLOYS

Applications: Car bodies, galvanized sheet, exhaust manifold, C.I. housing, dissimilar metal combination

Properties: U.T.S. 460 N/mm.^{2}(Available in 3.15 mm dia. Also available 150 B Bare with corresponding 150 Flux)

VALBRAZE 180C (Flux Coated for Brazing)

HIGH STRENGTH WEAR RESISTANT ALLOY WITH LOW CO-EFFICIENT OF FRICTION & WORK HARDENING PROPERTY FOR MACHINABLE OVERLAYS ON C.I., M.S. & LOW CARBON STEELS. CAN BE USED FOR JOINING ALSO

Applications: Spur gear teeth, Worn bearing area, worn shaft, valve seat etc.

Properties: U.T.S. 460 N/mm^2 Bonding Temp. 780^{0}C, Remelt Temp. 890^{0}C, Hardness 180 BHN (As Deposited), 240 BHN (Work Hardened)
(Available in 3.15 mm dia.)

F. COPPER, BRASS & BRONZE

BRONZOCAR 32 (DC+) (AC/DC+)

FOR OVERLAY ON COPPER ALLOYS & JOINING COPPER ALLOYS TO C.I. & STEEL, MACHINABLE, GOOD COLOUR MATCH WITH BRONZE

Applications: Bronze impellers, gear teeth, soft bearing overlay, marine components, Can be applied on steel, C.I. & Bronze both for build up & joining.

Properties: U.T.S. 350 N/mm^2, Hardness 75-80 RB (As deposited), 90-95 RB (Work Hardened)

Size (mm)	3.15	4.00
Current (Amps)	90-130	100-160

(Bronzocar 32 also available in AC)

BRONZAL 10 (DC+) (AC/DC+)

MULTIPURPOSE ELECTRODE FOR ALUMINIUM BRONZE, COPPER ALLOYS, STEEL & C.I., HAVING GOOD SEA WATER & CHEMICAL CORROSION RESISTANCE

Applications: Marine pumps & valves, ship propellers, impellers, bearing sliding surface

Properties: U.T.S. 420-450 N/mm^2 Hardness - 130-150 BHN

Size (mm)	3.15	4.00
Current (Amps)	90-110	120-140

LOW HEAT INPUT WEAR RESISTING ALLOY

A. STICK ELECTRODES

VALDUR 30 (AC/DC+)

MACHINABLE OVERLAY WITH HIGH IMPACT RESISTANCE

Applications: Sugar mill pinion, tractor sprockets, roller rails, wobblers

Properties: Hardness - RC 28-32 (As deposited), RC 35-40(Work Hardened)

Size (mm)	3.15	4.00	5.0
Current (Amps)	100-125	120-160	150-200

VALMET CA 035 (AC/DC+)

SPATTER FREE WELD, TOUGH, RESISTANT TO ABRASION, IMPACT & SHOCK

Applications: Track Links, idlers, Tractors, Sprockets, Rollers, Shafts & Gear Teeth, Low & Medium Carbon Steels, Heavy Sections, gears, sprockets etc.

Properties (Typical): Hardness - RC 35 (As deposited)

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	90-125	110-135	80-130	130-185

VALDUR 40 (AC/DC+)

DEPOSITS A TOUGH, WEAR RESISTANT ALLOY RESISTING HEAVY IMPACT & ROLLING LOAD WITH GOOD RESISTANCE TO MEDIUM ABRASIVE WEAR.

Applications: Rollers, Tractor Idler Wheels, Pins, Links, Gears, Clutches, Shafts, Carbon Steel Rail Points & Crossings

Properties: Hardness -RC 38 - 42

Size (mm)	3.15	4.00	5.0
Current (Amps)	85-115	120-160	150-200

VALDUR 50 (AC/DC+)

HIGH ABRASION RESISTANT IRON CARBIDE TYPE DEPOSIT

Applications: Buckets, shovels, plough shears, screw conveyors

Properties: Hardness - RC 53-55

Size (mm)	3.15	4.00	5.0
Current (Amps)	100-125	120-180	150-200

CTR 3 (AC/DC+)

HIGH ALLOYED ELECTRODE, AIR HARDENABLE, WITHSTANDS SEVERE ABRASION AND MODERATE IMPACT. ALSO RESIST CORROSION & SCALING

Applications: Hot & cold punching dies, chipper knives, crusher hammer, rock drill

Properties: Hardness - RC 57-60.

Size (mm)	3.15	4.0	5.0
Current (Amps)	75-110	100-140	130-170

VALDUR 600 LH (AC/DC+)

CR-MO-V ALLOY FOR HIGH ABRASION & MODERATE IMPACT RESISTANCE

Applications: Hot & cold punching dies, chipper knives, crusher hammer, rock drill

Properties: Hardness - RC 58-62

Size (mm)	3.15	4.0	5.0
Current (Amps)	75-110	100-140	130-170

TUFNEL 42 (AC/DC+)

OVERLAY ON MANGANESE STEEL PARTS

Applications: Bucket teeth, sprockets, hammers, jaw crushers, track pads.

Properties: Hardness - 180-220 BHN (As deposited)
400-450 BHN (Work hardened)

Size (mm)	3.15	4.0	5.0
Current (Amps)	100-125	120-160	150-200

VALDUR 45 (AC/DC+)

WORK HARDENING, HIGHEST IMPACT RESISTANCE OVERLAY ON MANGANESE STEEL AND OTHER STEELS

Applications: Railway frogs & crossings, hammers, jaw crushers, excavator teeth, track pads.

Properties: Hardness - 220-240 BHN (As deposited)
450-500 BHN (Work hardened)

Size (mm)	3.15	4.0	5.0
Current (Amps)	100-140	120-160	150-200

VALDUR 45 (S) (AC/DC+)

RICHLY ALLOYED, CR/MO/NI/V TYPE ALOY HAVING SUPERIOR WORK HARDENING CHARACTERISTICS & IMPACT RESISTANCE FOR SURFACING & BUILD -UP OF AUSTENITIC MANGANESE COMPONENTS .

Applications: Surfacing & build-up of Crusher Jaws, hammers, roll crushers, mining machineries, dipper teeth etc.

Properties (Typical): Hardness - 210-250 BHN (As deposited)
480-550 BHN (Work hardened)

Size (mm)	3.15	4.00	5.00
Current (Amps)	100-140	150-130	130-175

CA 042

WEAR RESISTANT, HIGH STRENGTH, WORK HARDENABLE FOR SURFACING & JOINING OF MANGANESE STEEL

Applications: Low & medium carbon steels, heavy sections, gears, sprockets etc.

Properties (Typical): Hardness - 180-200 BHN (As deposited)
400-430 BHN (Work hardened)

Size (mm)	2.50	3.15	4.00	5.00
Current (Amps)	40-70	60-100	80-130	130-175

WR 86 (AC/DC+)

SEVERE ABRASION RESISTANT OVERLAY ON DIPPER TEETH, BUCKET, HAMMER

Applications: Cement grinder rings, road rippers, plough shears, oil expeller worms.

Properties: Hardness - RC 58-62

Size (mm)	3.15	4.0	5.0
Current (Amps)	80-130	100-150	140-210

ROLLEX 6700 (AC/DC+)

DEPOSITS VERY HIGH CHROMIUM CARBIDE ALLOY IN A CREEP RESISTANT DUROMATRIX FOR RESISTING HIGH TEMPERATURE ABRASION AND IMPACT

Applications: Coal Bend Pipes & Nozzles, Dredge Cutters, Mill guides, Paddles & Wear Pads etc.

Properties: Hardness - RC 58-60

Size (mm)	3.15	4.0	5.0
Current (Amps)	80-125	120-160	150-200

CRCN 60
(AC/DC+)

HIGH CHROMIUM IRON ALLOY FOR RESISTING MULTIPLE WEAR OF ABRASION, FRICTION AND OXIDATION

Applications: Augur screws, guide, wear pads, conveyors, sugar mill fibrizer, hammers.

Properties: Hardness - RC 57-60

Size (mm)	3.15	4.0	5.0
Current (Amps)	80-125	120-160	150-200

VALDUR 3000N (AC/DC+)

HIGH RECOVERY, RESISTANT TO HIGH TEMP. ABRASION & EROSION ON CARBON STEEL, AUSTENITIC MANGANESE STEEL & SOME GRADES OF C.I.

Applications: Overlay on Sinter Breaker Arms, Hot Slag Conveyors, Clinker Chains, Bullet Guides, Coke Pusher Shoes, Augers & Slurry pumps

Properties: Hardness - RC 61-65

Size (mm)	3.15	4.0	5.0
Current (Amps)	100-130	140+180	180-220

ABRADUR 6764 HRA (AC/DC+)

DEPOSITS ALLOY CONTAINING HIGH PROPORTION OF STABILIZED HIGH ALLOY CARBIDES GIVING SUPERIOR WEAR RESISTANCE TO SEVERE ABRASION EVEN ABOVE 1000C°. DEVELOPS HIGH HARDNESS EVEN IN ONE PASS

Applications : Mill Hammers, Sledge hammers, Scraper Blades, Coal Crushers, Dredger Cutters, TPRF Roller, Wear Plates etc

Properties : Hardness - RC 63-68

Size (mm)	3.15	4.0
Current (Amps)	100-150	100-150

LOW HEAT INPUT WEAR RESISTING ALLOY

DIETUF 101 (AC/DC+)

HIGH ALLOY, WEAR RESISTANT, TOUGH, RESISTANT TO REPETITIVE IMPACT

Applications: Build up of Drop Forging Dies & tools, Joining of Forging Tools, Repair of worn out & missing profile , Build up of pinion & gear teeth

Properties: Hardness - RC 38-42

Size (mm)	3.15	4.0	5.0
Current (Amps)	90-130	125-165	155-195

DIETUF 105 (AC/DC+)

FOR BUILDING UP OF FORGING DIES & TOOLS INCLUDING H11 & H12

Applications: Build up of gears, pinions, rolls etc., Repair of worn out or missing profile

Properties: Hardness - RC 50-52

Size (mm)	3.15	4.0	5.0
Current (Amps)	100-120	125-165	155-195

VALDUR 108 (AC/DC+)

FOR BUILDING UP OF THE CUTTING EDGE OF TRIMMING DIES

Applications: Hot shear blades, slides, press casting dies, heading & trimming dies, forging saddles, hot cutting dies.

Properties: Hardness - RC 42-46 (As deposited) RC 50-52 (Work hardened)

Size (mm)	3.15	4.0	5.0
Current (Amps)	100-120	125-165	155-195

TCK - 60 (AC/DC+)

HIGH SPEED STEEL TYPE HEAT TREATABLE DEPOSIT

Applications: Composite high speed steel dies extruders, trimming dies, hot punches.

Properties: Hardness - RC 57-60

Size (mm)	3.15	4.0	5.0
Current (Amps)	90-130	125-165	155-195

VALDUR 058 (AC/DC+)

CR-MO-VA ALLOY WITH STABILIZER FOR VERY HARD OVERLAY ON TOOLS AND MACHINE PARTS SUBJECTED TO HIGH FRICTIONAL WEAR AND HEAVY IMPACT

Applications: Composite high speed steel dies extruders, trimming dies, hot punches.

Properties: Hardness - RC 57-60

Size (mm)	3.15	4.0	5.0
Current (Amps)	90-130	125-165	155-195

VALMET 8600 (AC/DC+)

SPECIAL ELECTRODE FOR HOT METAL HANDLING PARTS & TOOLS

Applications: Swaging die, hot forging & press tools, het shear blades, coal burner activators, piercing punches & mandrels, vats.

Properties: Hardness - RC 20 (deposited) RC 35 (Work hardened)

Size (mm)	2.50	3.15	4.0
Current (Amps)	80-100	95-120	140-200

DUROCOB 6U (AC/DC+)

SUPERIOR COBALT BASED ALLOY FOR WEAR RESISTANT OVERLAYS ON CARBON & ALLOY STEELS. CRACK FREE DEPOSIT, WITHSTAND CORROSION & ABRASION AT VERY HIGH TEMPERATURE

Applications: Chemical valve seats, pump sleeves, wear pads, screw conveyors, Drill Collars

Properties: Hardness - RC 40 (As deposited)

Size (mm)	2.50	3.15	4.0
Current (Amps)	55-90	75-120	115-180

DUROCOB 12 U (AC/DC+)

SPECIAL Co-Cr-W ALLOY FOR WEAR RESISTANT OERLAYS ON CARBON STEELS, ALLOY STEELS AND CAST IRON HAVING SUPERIOR ABRASION, FRICTION & CORROSION RESISTANCE AT HIGH TEMPERATURE GIVING HIGH HOT HARDNESS

Applications: Chemical valve seats, pump sleeves, wear pads, screw conveyors.

Properties: U.T.S. 700 N/mm^2 Hardness - RC 45-50.

Size (mm)	2.50	3.15	4.0
Current (Amps)	55-90	75-120	115-180

DUROCOB 21 U (AC/DC+)

SPECIAL COBALT ALLOY GIVING MACHINABLE, CRACK FREE DEPOSIT HAVING EXCELLENT RESISTANCE TO IMPACT, EROSION,THERMAL SHOCK, CORROSION & OXIDATION AT VERY HIGH TEMP. & WORK HARDENING PROPERTIES.

Applications: Steam Valves, Exhaust Valves, Turbine Parts, Hot forming rolls & Dies etc.

Properties: Hardness - RC 30

Size (mm)	2.50	3.15	4.0
Current (Amps)	55-90	75-120	115-180

CHROMOLOY 14 (AC/DC+)

FOR TOUGH, MACHINABLE, CORROSION, OXIDATION, EROSION & CAVITATION RESSTANT OVERLAY & BUILD UP ON 13% CR STEEL

Applications: Hydraulic turbine, sugar mill trash plates, refiner cone, valves, die casting moulds, pump housing.

Properties: Hardness - RC 33-36.

Size (mm)	2.5	3.15	4.0	5.0
Current (Amps)	40-70	90-120	110-140	130-180

VALMET 414 N (AC/DC+)

NITROGEN BEARING MARTENSITIC TYPE CR-NI-MO STAINLESS STEEL ALLOY DEPOSIT HAVING EXCELLENT RESISTANCE TO CORROSION, EROSION AND METAL TO METAL FRICTION RESISTANCE AT HIGH TEMPERATURE. ALSO WITHSTANDS THERMAL SHOCKS. CAN BE USED FOR WEAR FACING AND JOINING.

Applications: Hot mill Rolls, Refiner Cones, Turbine Blades, Die Casting Moulds, Impellers, Valves

Properties (Typical): Elongation 18%

Size (mm)	2.50	3.15	4.00
Current (Amps)	60-80	90-110	110-150

CRUSHTEC 92 (AC/DC+)

HIGH RECOVERY, HIGH CARBON & CHROMIUM CONTENT, ROLLER ARCING ELECTRODE FOR DEPOSITING DROPLETS ON GRIPPER POINTS OF CANE CRUSHER ROLLERS.

Applications: For roller arcing of cast iron & cast steel sugar mill crusher rollers subject to combination of wear factors e.g. adhesion, abrasion, compression & erosion

Properties: Hardness - RC 60-63

Size (mm)	3.15	4.0
Current (Amps)	100-130	140-200

BELTEC 550 (AC/DC+)

MOLYBDENUM -NICKEL ALLOY DEPOSIT RETAINING VERY HIGH STRENGTH AND HARDNESS UPTO 570^{0}C. WELD METAL IS CRACK FREE AND WORK HARDENABLE.

Applications: Seat area of Blast Furnace Bells, Tong Pins, Furnace Rolls, Hot shear Blades, Knives, Valve seats, Rolling Mill Rolls etc.

Properties (Typical): Hardness (As Deposited : 51-57 RC, At 500^{0}C : 47 RC)

Size (mm)	3.15	4.00	5.00
Current (Amps)	85-120	110-175	155-220

VALMET HF 01 (AC/DC+)

ALL POSITION, TOUGH AIR HARDENING C-FE-CR ALLOY RESISTING HIGH IMPACT AND SHOCK LOADING IN SERVICE GIVING MAXIMUM HARDNESS WITHIN EASILY MACHINABLE RANGE

Applications: HEMM Parts, Rollers, Idlers, shafts, gears etc.

Properties (Typical): Hardness: 25-30 RC

Size (mm)	4.00	5.00
Current (Amps)	100-130	140-170

VALMET HF 05

DENSE, TOUGH, WEAR RESISTING ALLOY DEPOSIT, RESISTS HIGH ABRASION ON STEELS, HADFIELD MANGANESE STEELS AND MALLEABLE IRON .

Applications: HEMM Parts, Buckets Teeth, Coal Chutes, Scrapers, Crusher Plates etc.

Properties (Typical): RC 45-55

Size (mm)	4.00	5.00
Current (Amps)	140-200	160-210

LOW HEAT INPUT WEAR RESISTING ALLOY

B. TUBULAR ELECTRODES

TUBULARC 01 (AC/DC+)

HIGH RECOVERY, TUBULAR LOW HEAT INPUT ELECTRODE, DEPOSITING RICHLY ALLOYED PREFORMED CARBIDES DENSELY DISTRIBUTED IN A TOUGH AUSTENITIC DUROMATRIX WITH MINIMAL BASE METAL DILUTION. EXCELLENT ABRASION RESISTANCE COMBINED WITH OPTIMAL IMPACT RESISTANCE. PROLONGED SHELF LIFE & NO PRE DRYING AND SLAG REMOVAL NECESSARY.

Applications: Coal crushing jaws & hammers, I.D. fan blades, Bucket Lips & Teeth, Quarry screen, Bulldozer cutting edges, Mantles & Liners, Gyratory & Cone, Crusher parts, Scraper Blades, Blow Bars, Rolling Mill Guides, Agriculture Implements, Ball mill inner plates, Cement Crushing Roller

Properties (Typical): Hardness (As Deposited) 57- 62 HRC

Size (mm)	6.3	8.00	10.00
Current (Amps)	85 - 130	120-145	145-195

TUBULARC 02 (AC/DC+)

TUBULAR LOW HEAT INPUT ELECTRODE, DEPOSITING RICHLY ALLOYED PREFORMED CARBIDES DISTRIBUTED IN HIGH CONCENTRATION IN A TOUGH AUSTENITIC DUROMATRIX WITH MINIMAL BASE METAL DILUTION. DEPOSIT HAS EXCELLENT RESISTANCE TO SEVERE ABRASION & EROSION UNDER MODERATE IMPACT AT BOTH AMBIENT AND ELEVATED TEMPERATURE UP TO 800^{0} C

Applications: Sinter Breakers, Bells & Hoppers, Sinter Fans, Paulworth Chutes, Throat Armour Plates, Parts encountering high temperature erosion

Properties (Typical): Hardness (As Deposited) 62 - 68 HRC
Hardness (at 600^{0}C) 52 - 54 HRC

Size (mm)	6.3	8.00	10.0
Current (Amps)	85 - 130	120-145	145-195

SUPERDUR 7010 (AC/DC+)

TUNGSTEN CARBIDE BEARING TUBULAR ELECTRODE ALLOYED WITH NIOBIUM, CHROMIUM, VANADIUM & MOLYBDENUM THROUGH FLUX COATING. MAXIMUM RESISTANCE TO ABRASION, FRICTION AND ALSO TO HEAT & CORROSION.

Applications: Tool Bits, Scrapers, Blades, Fly-ash conveyors, Augers, tongs etc.

Properties (Typical): Hardness - 65-72 HRC

Size (mm)	5.00
Current (Amps)	130-225

C. FLUX CORED WIRES

VALCOR - 200 ST

AUSTENITE STAINLESS STEEL WITH WORK HARDENING AND HIGH PLASTICITY, CORROSION AND HIGH TEMPERATURE RESISTANCE.

Alloys Basis : Cr - Ni - Mn

Applications: For joining and buffer layer on Steel, Stainless Steel, Manganese Steel, Earthmoving Machinery, Railway frogs and crossing, Steel mill rolls.

Properties : Hardness : 180 - 200 BHN [As deposited]
350 - 400 BHN [Work Hardened]

	OA	MAG	SA
Size (mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 250

FULLY AUSTENITE AND EXCELLENT WORK HARDENING. CONTAINS HIGH CHROMIUM AND MANGANESE. THE DEPOSIT IS NONMAGNETIC, TOUGH AND CRACK FREE.

Alloys Basis : Mn - Ni -Cr - Mo - V

Applications: Suitable for manganese steel old part hardfacing to combat repetitive impacts. Recommended for crusher, earth moving machinery, railway frogs & crossing.

Properties: Hardness : 200 - 220 BHN [As deposited]
400 - 550 BHN [Work Hardened]

	OA	MAG	SA
Size (mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 440

A LOW ALLOY WITH MULTILAYER DEPOSIT CAPABILITY. DEPOSIT IS MACHINABLE PREHEAT RECOMMENDED ON HIGH CARBON AND THICK BASE METAL.

C. FLUX CORED WIRES

Alloys Basis : Cr - Mn - V

Applications: Suitable for build up on mine car wheels, idlers, steel mill rolls, coupling.

Properties: Hardness : 420 - 440 BHN

	OA	MAG	SA
Size (mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 606

CRACK FREE DEPOSIT IN THE INTERMEDIATE RANGE. CAN COMBAT HIGH ABRASION WITH MODERATE IMPACT.

Alloys Basis : C - Cr - Mo - Va

Applications: Crushers, buckets lips and teeth.

Properties: Hardness : 540 - 580 BHN

	OA	MAG	SA
Size (mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR 240

HIGH IMPACT RESISTANCE WORK HARDENING DEPOSIT.

Alloys Basis : Mn - Ni - Cr

Applications: Manganese steel jaw crushers, hammers, mantels, buckets.

Properties: Hardness : 180 - 200 BHN [As deposited]
350 - 420 BHN [Work Hardened]

	OA	MAG	SA
Size (mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 300

A LOW ALLOYED DEPOSIT WHICH IS CRACK FREE, DUCTILE TOUGH AND MACHINABLE MULTILAYER BUILD UP POSSIBLE.

Alloys Basis : Cr -Mn - Mo

Applications: Crane Wheel , trunnions, gears, and shaft.

Properties: Hardness : 300 - 350 BHN

	OA	MAG	SA
Size (mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR CRC -60

HIGH CHROMIUM CARBIDE DEPOSIT FOR EXTREME GOUGING ABRASION WITH MODERATE IMPACT.

Alloys Basis : C - Cr- Mo -Va

Applications: Crusher rolls, table liner, coal & cement crushers and hammers. Slurry pipes and bends gyratory crusher cones and mantels extruder screws and beaters.

Properties: Hardness : 540 - 580 BHN

	OA	MAG	SA
Size (mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 606 Tic

A SPECIAL ALLOY WITH TITANIUM CARBIDE DISPERSED IN HARD ABRASION RESISTANT MATRIX. CAN COMBAT SLIDING ABRASION WITH IMPACT & PRESSURE.

Alloys Basis : C - Cr - Mo - Va - Tic

Applications: Cement crusher rolls, pulveriser rolls, hammers, crane cutting, knives, tamping tools.

Properties: Hardness : 540 - 600 BHN

	OA	MAG	SA
Size (mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 6265

HIGH ALLOY DEPOSIT WITH COMPLEX CARBIDES TO GIVE RESISTANCE TO SEVERE ABRASION AT HIGH. TEMPERATURE AT 6500 C AND ABOVE. TWO LAYERS ARE ADEQUATE.

Alloys Basis : C - Cr - Nb - Mo - Va - W

Applications: Sinter breakers and sieves in steel plant. Cement kilns, chute liners.

Properties: Hardness : 630 - 650 BHN

	OA	MAG	SA
Size (mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 101

A SPECIAL ALLOY HAVING FRICTIONAL AND IMPACT RESISTANCE AT HIGH TEMPERATURE. MULTILAYER BUILDS UP POSSIBLE.

Alloys Basis : LOW ALLOY

LOW HEAT INPUT WEAR RESISTING ALLOY

C. FLUX CORED WIRES

Applications: Impressions build up on forging die. Flood welding also possible. Can be used as buffer layer for high hardness build up.
Properties: Hardness : 380 - 420 BHN

	OA	MAG	SA
Size(mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 6430

GIVES a17% CHROMIUM FERRITE STAINLESS STEEL. USED FOR CORROSION AND WEAR RESISTANT SURFACING APPLICATION AT AMBIENT AS WELL AS HIGHER TEMPERATURE AT 9000 C.
Alloys Basis : Cr - Mn- Si
Applications: Can be used for surfacing, cladding and as buffer layers for buildup of steel mill rolls.
Properties: Hardness : 200 - 220 BHN

	OA	MAG	SA
Size(mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 6414N

A UNIQUE ALLOY WITH NITROGEN IN MARTENSITE STAINLESS STEEL. THE DEPOSIT HAS RESISTANCE TO CORROSION AND METAL FRICTION AT HIGH TEMPERATURE. THE DEPOSIT DOES NOT DEFORM EASILY. CAN WITHSTAND THERMAL SHOCKS.
Alloys Basis : Cr -Ni - Mo - N

C. FLUX CORED WIRES

Applications: Final build up on hot mill rolls on buffer layer of Valcor - 6430 deposit. Also recommended for turbine blades, impellers, refiner cones, die casting moulds and valves, continuous casting rolls.
Properties: Hardness : 400 - 430 BHN

	OA	MAG	SA
Size(mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR BLT -550

CRACK FREE DEPOSIT WITH HIGH TEMPERATURE ABRASION, FRICTION AND IMPACT RESISTANCE .
Alloys Basis : C -Cr - Mo -Ni
Applications: Blast furnace bell, furnace rolls, hot shear blade, rolling mill rolls.
Properties: Hardness : 500 - 550 BHN

	OA	MAG	SA
Size(mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

VALCOR - 105

EXCELLENT WELDING ON H 12 & H 13 TYPE OF FORGING DIE. CAN ALSO BE USED ON OTHER TYPE OF DIE STEEL.
Alloys Basis : MEDIUM ALLOY
Applications: For Impressions build up and flood welding. Repair of worn-out or missing profile. Build up of gear pinion and rolls.
Properties: Hardness : 500 - 520 BHN

	OA	MAG	SA
Size(mm)	1.6 - 3.2	1.6 - 2.4	2.4 - 4.0

SPRAY FUSE TYPE TORCH AND METAL ALLOY POWDERS

VALSPRAY PROCESS :

A precision metal spray method for build up and wear facing. VALSPRAY process is designed for precise and controlled deposit to build up, overlay, fill up and restore missing section or defect. Two important components of this unique and versatile system are.
1. Spray Torch
2. Metal alloys powders.

VALSPRAY 120 TORCH :

A specially designed oxy-acetylene torch stores powder in a hoper attached to the body of the torch which is drawn into oxyacetylene flow through mixing chamber and propelled on to the work piece. The deposit can now be fused by the same torch to make smooth, dense coating.
Deposition Rates : 0.5 to 2.5 Kg/Hour, Thickness 0.2 to 4.00mm
TORCH KIT : VALSPRAY TORCH 120 is available in a kit from comprising of main Torch, all Tips, Cleaner, Service tools, Powder Tube, in a carry box.

VALSPRAY 202 POWDER

Applications : C. I. Engine blocks, Exhaust manifold, Blowholes, Gear, C.I. glass moulds.
Hardness : RC 18 - 20 [Machinable]

VALSPRAY 225 POWDER

Applications : C. I. Steel, Stainless steel, Alloys steels glass moulds, Sprockets, gears, Clutch fingers, Tubes, Valves.
Hardness : RC 24 - 28 [Machinable]

VALSPRAY 402 POWDER

Applications : Steels, alloy steels, shafts, gears, sprockets moulds, forks, Tubes.
Hardness : RC 38 - 43 [Machinable]

VALSPRAY 602 POWDER

Applications : Steels & alloy steels, Wear pads, Cams, Screws, Patterns, Trash plates, Chains, Plungers, Valves.
Hardness : RC 60 - 63 [Finish by Grinding]

COLD WELDING PRODUCTS

Valency Cold Metals are two component compounds which when mixed, cure through molecular reaction to form a strong & durable anti-wear, anti-corrosion, anti erosion & tough surface so could be benefitted of in wide range conditions. These easy to work products characterize good bond strength to variety of engineering metals and other substrates. Available in putty or liquid form, the fully cured surface can be drilled, bored, tapped, machined or filled.
PRIME METAL : for versatile & long lasting repairs
Special features : • Hightech metal filled Cold Welding putty having high compression strength (132N/mm2) • With stands high temp (1800C) • High resistance to a broad range of corrosive chemicals & acids • Can be machined
Applications : Rebuilding shafts, battered keyways rebuilding of valves repairs of scored rams & restoring of bearing housings.
'Q' Metal : Fast curing & emergency repairs
Special features: • Superfast curing epoxy • It retains its tough steel structure that can be machined, drilled or tapped • Can be used on steel, copper, bronze concrete etc.
Applications : include sealing or transformer oil leaks, fuel pipe leaks & repairs or pipelines etc.

VAL-STEEL : For economic reliable & dependable workshop maintenance
Special features : • Requires no special skills, tools or equipment • Bonds to most engineering substates • It repairs patches & rebuilds on machine parts • Excellent resistance to many chemicals Oils, Petrol, Water, etc.

CERAMIX 'B' : Abrasion resistant cold metal product
Special features : • Ceramic rich cold weld product • Excellent to rebuild the parts subjected to friction & abrasion • It could be tool or ground finished to a smooth low friction finish.
Applications : Lining worn pump volutes, rebuilding shafts, Wear surfacing flanges & elbow, repairing valves.

CERAMIX 'F' : Excellent protection against pitting & cavitation
Special features : • It is a top coat layer formulation to protect surfaces against corrosion & pitting • Protects equipment exposed to corrosive atmospheres even upto 180℃ • It has exceptionally smooth finish
Applications: Resurfacing pump bodies & impellers building up gate valves, flanges etc.

CERAMIX 'FF' : For superior protection against bi-metallic corrosion
Special features : • It is brushable • Provides a smooth Glossy finish • Excellent resistance to sea water, Chemical corrosion, sand & other particle abrasion
Applications : Protection overlays on pump casings impellors, propellers, kort nozzles, excellent for tube sheet protection.

Valency Compounds Services Pvt. Ltd. is an ISO 9001:2008 accredited organisation and has been engaged in the service of Industries in India & abroad for two decades. Valency also has in its range a number of special consumables designed to meet the critical requirements of joining & fabrication. Valency, through its in-house R & D set up, has developed an extensive range of maintenance specific low heat input welding alloys and cold metal compounds designed with the aid of computer simulated field test data on wear & tear in various industrial applications due to factors like friction, abrasion, impact, heat, corrosion, erosion, cavitation etc. Valency products are backed by an elaborate quality assurance set up and a highly qualified technical support team supplemented by a widespread dealer network to provide pre and after sales service. Valency range of products are widely estabilished in almost all industries viz. Defence, Steel, Power, Cement, Oil Drilling, Mining, Paper, Automobiles, Railways, Sugar etc. Products are exported also.

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