

2021

SELECTION GUIDE BY INDUSTRY

HARDFACING, REPAIR & MAINTENANCE



PROVEN PRODUCTS AND POWERFUL EXPERTISE TO KEEP YOU UP AND RUNNING.

When it comes to industrial equipment, wear and tear are inevitable. However, an extended shutdown or unplanned breakdown can bring your operation to a sudden – and costly – halt. At ESAB, we understand that every industry has unique needs and challenges for keeping machinery in working order. As the global leader of welding and cutting, we offer complete solutions specialised for a variety of repair and maintenance applications. From a wide selection of high quality filler metals designed to extend component life to innovative and rugged equipment, ESAB is here to maximise your productivity and investment. Just as your operation depends on machinery to get the job done, you can count on ESAB to deliver industry leading products along with unmatched materials and application knowledge.

CEMENT INDUSTRY

ESAB's cement industry products and services offer the greatest quality and value – either for extending the life of new components with hard facing alloys or restoring worn-out parts to minimise downtime. Our experienced team is ready to put our application knowledge to work for your operation – on the ground or in the workshop – by recommending materials and providing complete, high-productivity solutions.



MINING, QUARRYING, AND EARTH MOVING INDUSTRIES

When it comes to repair and maintenance for mining applications, there is no one-size fits-all approach. ESAB provides ready made solutions tailored to your machinery's wear rate and specific needs. With our application and materials expertise, we can help your team complete welding tasks quicker, minimise wear on components, reduce the number of spares you need on hand, and substantially lower cost-per-ton of aggregate produced.



POWER GENERATION INDUSTRY

ESAB has extensive experience in helping power plants repair and restore vulnerable components. Our application engineers work closely with your operation and determine the best materials and processes to minimise scheduled maintenance and downtime, improve wear-life, and deliver superior results. Additionally, ESAB filler metals are simple to implement without switches materials, well documented, and offer exceptional procedure control, deposition efficiency, and predictability



AGRICULTURE

Since agricultural equipment and usage varies greatly, product selection and technical solutions are extremely important for repair and maintenance. With our complete portfolio, ESAB offers unmatched flexibility. After studying your application, our team can recommend economical options that achieve the highest level of quality, including target hardness, deposition rate, and a spatter level. In addition to filler metals, ESAB offers innovative technology and processes to enhance your overall productivity.



SUGAR MILL INDUSTRY

With decades of experience supporting sugar mills, we understand the entire process as well as the cost-benefit challenges of reclaiming seasonal equipment. With a wide range of high quality products, ESAB is your single-source partner for all applications. Our turnkey solutions are backed by dedicated R&D and engineering teams, and designed to extend component life by 80-150%.



STEEL MILL INDUSTRY

Material selection is critical for extending component life and avoiding unnecessary downtime. To recommend the most effective and cost-effective solution, our team evaluates the wear problem areas, considers post-weld specifications, and answers difficult technical questions. Through this process, ESAB offers the potential to extend service intervals or, in some cases, skip a shutdown period. Steel mills can further enhance productivity with our complete solutions, including automation technology



A GLOBAL PORTFOLIO OF LEADING BRANDS

A mix of global and regional brands, all with their own specialty creating an unparalleled range to maximise the industry reach

AMI® // ARCAIR® // EXATON® // FILARC® // GASARC® // GCE® // STOODY® // TBI® // THERMAL DYNAMICS® // TWECCO® // VICTOR®

As the global leader of welding and cutting, ESAB understands the unique challenges of your industry, and offers complete solutions specialised for repair and maintenance applications.

Trusted filler metals.

Our extensive portfolio features the top brands in Filler Metals – including Stoodly, Filarc and ESAB – designed to extend component life.

Innovative, rugged equipment.

From manual welding to automation to cutting, ESAB equipment offers the performance and durability for demanding work environments.

Enhanced productivity.

Take your productivity to the next level with Value Added Engineering, ESAB Digital Solutions, and more.

Unmatched service and support.

ESAB products are supported by industry-leading materials and application knowledge to help you get the job done and maximise your investment.

The ESAB APPLICATION SPECIALISTS have used all their experience gained in the field to provide the most suitable and complete welding solutions for repair, maintenance and surfacing

MULTI-PROCESS EQUIPMENT

RELIABLE EQUIPMENT FOR YOUR WORKSHOPS

The WARRIOR 500i with its ROBUSTFEED PRO wire feeder offers flexibility for your repair, maintenance and hardfacing tasks.

Designed to withstand the harshest environments, this versatile power source will allow you to change welding processes with ease.

WARRIOR 500i CC/CV - 380V 3-phase

- High duty cycle (400A at 100%)
- Small footprint
- Multi-process (GMAW / MMA / GOUGING / TIG lift arc)
- Electrode type selector (Rutile / Basic / Cellulosic)

ROBUSTFEED PRO OFFSHORE

- Waterproof (IP 44) and shockproof box
- New ultra-precise wire feed system
- Integrated column flow meter in the wire feeder
- Integrated heating resistor to prevent moisture build-up in the filler metal
- Multiple storage compartments for spare parts
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- Numerous storage compartments for spare parts
- 5 ergonomic handles for slinging

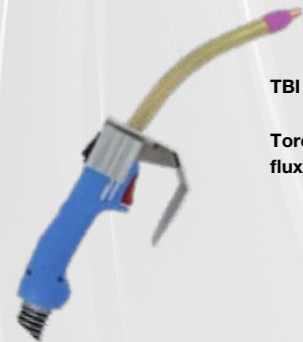


DESCRIPTION

0465350883	Warrior™ 500i CC/CV
0445800882	Robust Feed Pro Offshore (including flow meter and heating resistor)
0446160982	Harness, 95 mm ² , air-cooled, 10 m, including cable gland

OPTIONS & ACCESSORIES

0446081880	Robust feed wheel kit
0446082880	Tension reduction device for torch
0445850032	Knurled drive rolls for cored wires (C) (1.2-1.4 mm)
0445850033	Knurled drive rolls for cored wires (C) (1.6-1.6 mm)
10401077	MAG torch TWECO spray master (length 4.5m)
0700025522	TIG torch SR-B 26V 4m OKC50 (torch with valve for LiveTIG)
111P142330	TBI MOG 70 - 3m - Euro connector (torch body without swan neck)
111P101015	MOG 70 - 30° Swan neck
0000701981	Coil adapter



TBI MOG 70 (with 30° swan neck)

Torch specially designed for gas-free flux-cored wire applications



TWECO SPRAY MASTER 450

With a duty cycle of 450A at 60%, the Spray Master 450 is the ideal torch for use in the most hostile environments

MULTI-PROCESS EQUIPMENT



LEADING EDGE EQUIPMENT FOR YOUR WORKSHOPS

If you need even more power, this new Warrior 750i is optimised for your ARCAIR gouging activities, delivering a record current of 820A at 60%.

WARRIOR 750i CC/CV - 380V 3-phase

- Very high duty cycle 750 to 100%
- Multi-process (GMAW / MMA / Gouging / TIG lift arc)
- Electrode type selector (Rutile / Basic / Cellulosic)
- Use of Arcair electrodes up to Ø13mm

ROBUSTFEED PRO OFFSHORE

- Waterproof (IP 44) and shockproof box
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DESCRIPTION

0445555880	Warrior™ 750i CC/CV
0445800882	Robust Feed Pro Offshore (including flow meter and heating resistor)
0446160982	Harness, 95 mm ² , self-cooled, 10 m, including cable gland

OPTIONS & ACCESSORIES

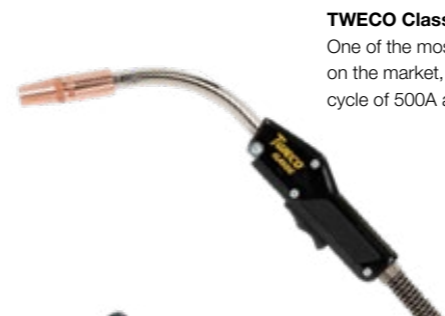
0446081880	Robust feed wheel kit
0446398880	4-wheel trolley
0446082880	Tension reduction device for torch
0445850032	Knurled drive rolls for cored wire (C) (1.2-1.4 mm)
0445850033	Knurled drive rolls for cored wire (C) (1.6-1.6 mm)
10501113	MAG TWECO Classic torch No. 5 (length 4.5m)
0700025522	TIG torch SR-B 26V 4m OKC50 (torch with valve for LiveTIG)
91201000	Tweco TITE - Electrode holder
111P142330	TBI MOG 70 - 3m - Euro connector (torch body without swan neck)
111P101015	MOG 70 - 30° Swan neck
0000701981	Coil adapter

DESCRIPTION

61082007	Torch with 3 m 360° swivel cable and insulated connection kit
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CONSUMABLES - CUTSKILL PENCIL

0446081880	Robust feed wheel kit
0446398880	4-wheel trolley
22033003C	Spiked copper electrodes - 4.8 mm x 30.5 cm
22043003C	Spiked copper electrodes - 6.4 mm x 30.5 cm
22053003C	Spiked copper electrodes - 7.9 mm x 30.5 cm
22063003C	Spiked copper electrodes - 9.5 mm x 30.5 cm
24084003C	Foldable copper electrodes - 12.7 mm x 43.2 cm



TWECO Classic No. 5

One of the most robust air-cooled torches on the market, the Classic No. 5 has a duty cycle of 500A at 60%



TWECO-TITE

This electrode holder is designed to use electrodes up to Ø 6mm. It has a 45° head and a capacity of 400A.

ARC AIR RANGE

TORCHE K4000

The reliability of ARCAIR equipment is no longer in question. The ARCAIR K4000 gouging torch is the essential equipment for your power source and can deal with all situations.

- 1000A
- 360° swivel cable



EQUIPMENT FOR STICK ELECTRODE WELDING

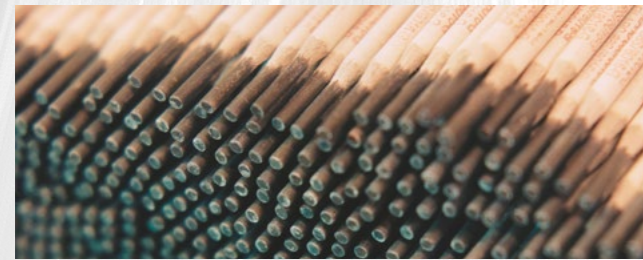
COMPACT & POWERFUL

The Renegade ES 300 is a compact inverter that offers the welder a high duty cycle (300A at 40%) and an exceptional power-to-weight ratio. It is equipped with an automatic input voltage detector and can be connected to either a 220V single phase or a 380V three phase supply.

RENEGADE ES 300

High duty cycle (400A at 100%)

- Multi-voltage 230 /380
- Special cellulosic mode
- Robust box
- 3 programmable memories
- Easy-to-read digital display
- Live TIG function



STICK ELECTRODE WELDING

OK GPC (GOUGING / DRILLING / CUTTING)

The OK GPC electrode has been specially designed for drilling/cutting. Its electric arc generates a blast that drives out the molten material.

It can be used with a simple MMA power source and is an alternative to gouging when traditional Arcair equipment cannot be used for small dismantling operations.

PLASMA CUTTING

The OK GPC electrode has been specially designed for drilling/cutting. Its electric arc generates a blast that drives out the molten material.

It can be used with a simple MMA power source and is an alternative to gouging when traditional Arcair equipment cannot be used for small dismantling operations.



DESCRIPTION	
0445100880	Renegade ES 300i, with cable (3 m) and power socket
OPTIONS & ACCESSORIES	
0445139880	Single / 3-phase plug adapter
0445197880	Shoulder strap
0700006888	Electrode holder kit, Handy 300, OKC 50, 5 m
0445870880	Digital remote control MMA 3, with 10 m cable and 6-spindle connector
0700025522	TIG torch SR-B 26V 4m OKC50 (torch with valve for LiveTIG)

DESCRIPTION	
2103253030	OK 21.03 2.5 X 350 (OK GPC)
2103323020	OK 21.03 3.2 X 350 (OK GPC)
2103403020	OK 21.03 4.0 X 350 (OK GPC)



DESCRIPTION	
0559113304	ESAB Cutmaster 80 6.1m SL60 400V 3ph CE
0559117304	ESAB Cutmaster 100 6.1m SL60 400V 3ph CE
0559119304	ESAB Cutmaster 120 6.1m SL100 400V 3ph CE
OPTIONS & ACCESSORIES	
5-0061	Cutmaster Black series spare parts kit
7-8910	Deluxe circular cutting guide
7-8911	Straight cutting guide

PERSONAL PROTECTION EQUIPMENT & ACCESSORIES



SENTINEL A50 AIR

- Heavy duty nylon shell
- Tint adjustment from 5 - 13
- Ergonomic Halo™ headband with 5-point harness
- 100 x 60 mm field of view
- Colour touch screen control panel
- GRIND mode for grinding



G40 AIR

- Lightweight shell
- Heavy duty nylon shell
- Mineral glass 90 x 110 mm
- Comfortable headband



DESCRIPTION	
Sentinel A50 Air Prepared for filter unit (including headband hose and sealing cloth)	0700000801
PAPR with standard hose 850 mm	0700002300
PAPR with long hose 1000 mm	0700002301



DESCRIPTION	
G40 Air 90 x 110 Prepared for filter unit (including headband hose and sealing cloth)	0700000440
PAPR with standard hose 850 mm	0700002300
PAPR with long hose 1000 mm	0700002301

DESCRIPTION	
FR/leather Jacket, size M	0700500408
FR/Leather Jacket, size L	0700500409
FR/Leather Jacket, size XL	0700500410
FR/Leather Jacket, size XXL	0700500411
FR/Leather Trousers, size M	0700500467
FR/Leather Trousers, size L	0700500466
FR/Leather Trousers, size XL	0700500468
FR/Leather Trousers, size XXL	0700500469
MIG curved gloves, M	0700500418
MIG curved gloves, L	0700500420
MIG curved gloves, XL	0700500421
MIG curved gloves, XXL	0700500422
Hand protector aluminium	0700010009
Multi-function pliers	0000134716

HARDFACING WELDING - BASIC PRINCIPLE

Hardfacing welding frequently involves the following three steps:

1. Buttering passes: Buttering is used to make a deposit that will dilute the carbon and alloy content of the base metal. It is used as an intermediate deposited metal between the base metal and the final hardfacing deposit. Its purpose is:

- To create a good bond between the base metal and the hardfacing.
- To avoid embrittlement of the hard facing layer
- To reduce stress effects
- To limit the effect of dilution

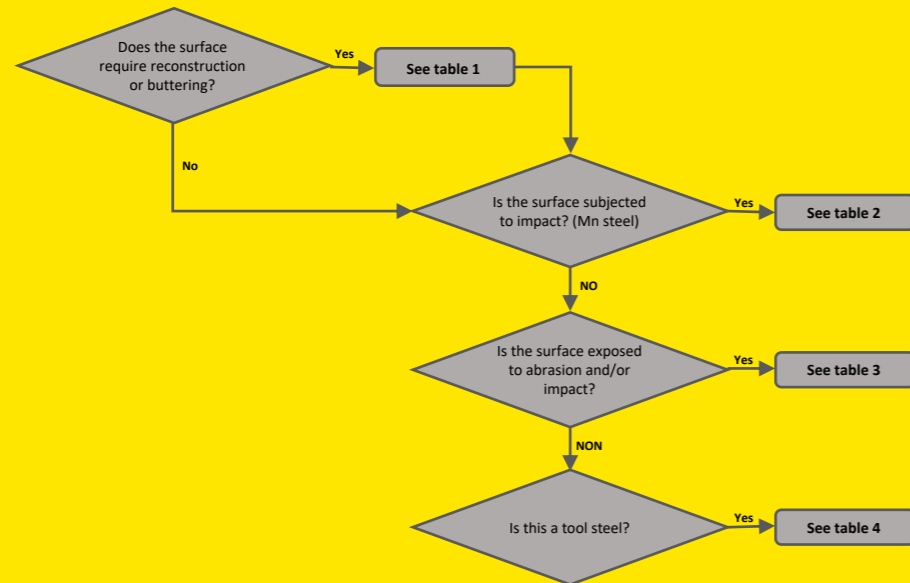
For underlays, austenitic filler metals are widely used. The type of filler metal for the underlay depends on the base metal and the type of wear.

2. Build-up passes:

The most worn areas should be rebuilt to the original thickness before hardfacing.

Important: When rebuilding to original thickness is needed, the use of filler metals such as G3Si1, ER70S6, E7018, etc. is strongly discouraged. All these filler metals are optimised to favour penetration and are less resistant to work hardening. In order to guarantee the best support for a hardfacing layer, the underlay requires a high degree of work hardening and good control of the dilution.

3. Hardfacing: Hardfacing is the process of depositing a layer of metal that is adapted to the types of stresses that the surface of a component is subjected to in order to increase its service life. Hardfacing is usually limited to one, two or three layers.



UNDERLAY, BUFFER LAYER, BUTTERING & REBUILDING



THE MAIN BASE METALS INVOLVED IN HARDFACING		
BASE METAL	ADVANTAGES	APPLICATIONS
Manganese steel (13% Mn)	Very good strain hardening properties	Railway rails, crusher hammers, mills, public works equipment, bucket teeth, anvils, etc.
Low alloy steel	Low cost	Hardfac bucket teeth, Hardox plate, etc.
Hardened steel	High degree of hardness,	Drive shafts, cutting tools, saw blades, etc.
Cast iron	Complex shaped parts	Engine blocks, exhaust manifolds, pump bodies, pulleys, etc.

HOW TO IDENTIFY A STEEL.				
MAGNETISM	FILE TEST	COLOUR	GRINDING	TYPE OF METAL
Magnetic	Soft	Dark grey	Yellow streak sparks	Carbon steel / Cast steel
	Hard	Dark grey	Yellow and white streak sparks + flakes	High carbon steel, low alloy steel
	Soft	Matte grey	Red streak sparks + flakes	Cast iron
	Hard	Shiny grey	Large yellow & red sparks	Chrome steel
Non-magnetic	Soft	Matte grey	Yellow and white streak sparks + flakes	Manganese steel
	Hard	Light silver grey	Large yellow & red sparks	Austenitic stainless steel

Base metal	Objective	Coated electrode	Diameter					Wire	Diameter				
			2.5	3.2	4	5	0.8		1.0	1.2	1.6		
Manganese steel (Mn 13%)	Reconstruction of worn surface	OK 13 Mn		X	X	X	OK Tubrodur 13Mn						X
		OK 14 MnNi (1)		X	X	X	OK Tubrodur 15CrMn O/G (2)						X
		Stoody 2110			X								
	Crack repair	OK 68.82	X	X			OK Autrod 312 (16.75)		X	X			
		OK 67.45	X	X	X		OK Tubrodur 200 OD						X
		Stoody 2110			X		OK Autrod 16.95 (18.8.Mn)	X	X	X	X	X	
Repair with dissimilar (heterogeneous) joint	OK 68.82	X	X			OK Autrod 312 (16.75)		X	X				
	OK 67.45	X	X	X		OK Autrod 16.95 (18.8.Mn)	X	X	X	X	X		
	Stoody 2110			X									
Low alloy steel	Reconstruction prior to hardfacing in one layer without impact wear	No buffer layer											
	Reconstruction prior to hardfacing in one layer with impact wear	OK Weartrode 30		X	X	X	OK Tubrodur 35 G M						X
Hardened steel	Reconstruction prior to hardfacing in one layer without impact wear or crack repair,	OK NiFe CI-A	X	X	X		Nicore 55					X	
	Reconstruction prior to hardfacing in one layer with impact wear	OK Weartrode 30		X	X	X	OK Tubrodur 35 G M					X	
		OK 67.45	X	X	X								
Cast iron (GS and malleable)(3)	Reconstruction prior to hardfacing in one layer or crack repair,	OK NiFe CI-A	X	X	X		Nicore 55					X	
Steel of unknown composition (excluding cast iron)	Reconstruction prior to hardfacing in one layer	OK 67.45	X	X	X		OK Tubrodur 200 OD					X	
		OK 68.82	X	X			OK Autrod 312 (16.75)		X	X			
							OK Autrod 16.95 (18.8.Mn)	X	X	X	X	X	

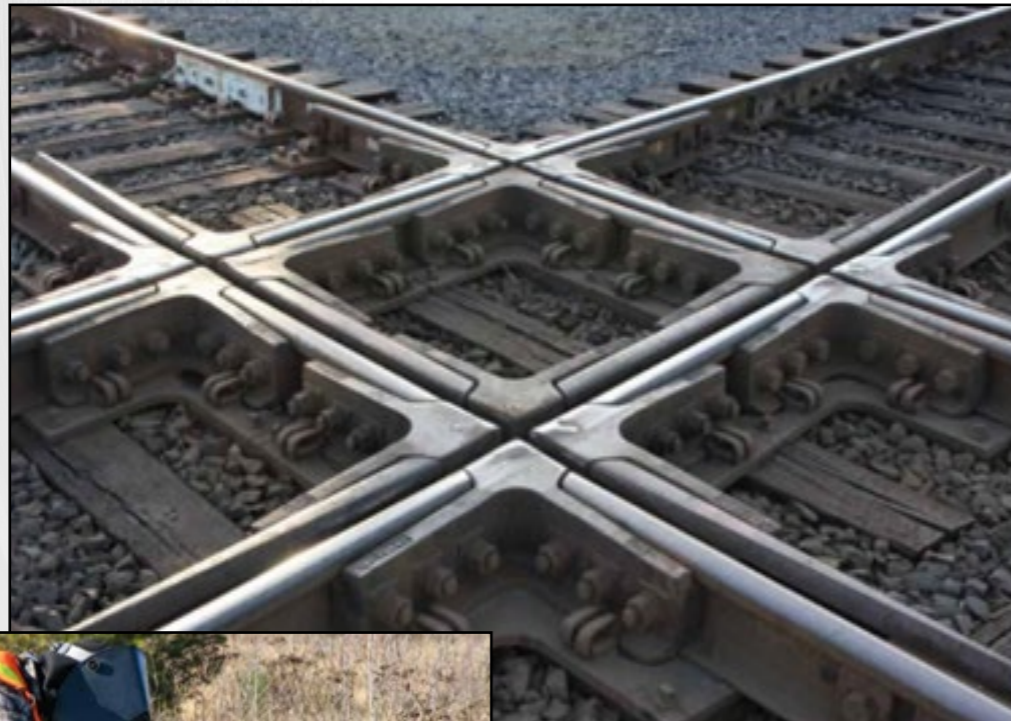
(1) Better resistance to cracking
 (2) To be reserved for humid environments
 (3) Nodular and grey cast iron are weldable



HARDFACING - MANGANESE STEEL

Manganese steels are mainly used for impact resistance. Their work hardening ability is such that the more they are work hardened, the harder they become (railway rails, sledgehammer, etc.). These steels do not like heat, so they should not be preheated. It is preferable to weld them at the lowest possible inter-pass temperature.

Procedure	Product designation	Diameter (mm)						Type	Wear resistance			Machining	Cross checking of the bead	Observations
		2.5	3.2	4	5	1.2	1.6		Low	Moderate	Severe			
Coated electrode	OK 13Mn (86.08)		x	x	x			Abrasion Impact Corrosion Temperature	Low Moderate Severe	Grinding	No	- Welding in all positions except downward - Hardens under work hardening (cold work)		
	OK 14MnNi (86.28)		x	x	x			Abrasion Impact Corrosion Temperature	Low Moderate Severe	Grinding	No	- Better resistance to cracking - Flat welding - Work hardens		
	Stoody 2110				x			Abrasion Impact Corrosion Temperature	Low Moderate Severe	Carbide tools Grinding	No	- Chemistry equivalent to 15CrMn - No limitation on the number of layers deposited - Work hardens - Hardened: 50-55 HRC in 2 layers		
Flux-cored with or without shielding gas	OK Tubrodur 13Mn O/G (15.60)						x	Abrasion Impact Corrosion Temperature	Low Moderate Severe	Grinding	No	- Open arc or CO2 - Can be used as an underlay as well as a hardfacing		
	OK Tubrodur 15CrMn O/G (15.65)						x	Abrasion Impact Corrosion Temperature	Low Moderate Severe	Grinding	No	- Open Arc or under pure CO2 - Can be used on carbon, low alloy and Mn steels		



HARDFACING - ANTI-ABRASION



Procedure	Product designation	Diameter (mm)						Type	Wear resistance			Hardness	Machining	Cross checking of the bead	Observations
		2.5	3.2	4	5	1.2	1.6		Low	Moderate	Severe				
Low impacts	Coated electrode	Stoody Super 20						X				60 - 65 HRC carbon steel	Grinding	YES	- High hardness in one layer (maximum 2 layers) - Alloy of Chromium, Molybdenum, Tungsten carbides - Operating temperature T<593°C
		Stoody VANCAR						X				59 - 62 HRC	Grinding	Depends on the application	- Can be used as a multilayer - Operating temperature up to 480°C
	Flux Cored wires with or without shielding	Stoody 970-G							X	X		67 - 71 HRC	Grinding	NO	- GAS (Argon + 2%CO2) - Chromium-free filler metal
		Stoody SA/Super 20							X			60 - 65 HRC on carbon steel	Grinding	YES	- High hardness in one layer (maximum 2 layers) - Alloy of Chromium, Molybdenum, Tungsten carbides - Operating temperature T<593°C
		VANCAR-O							X			59 - 62 HRC	Grinding	Depends on the application	- Open arc (or CO2) - Can be used as a multilayer
		Stoody 145							X			55 - 61 HRC	Grinding	YES	- Open arc - Complex carbide alloys (Cr, Mo, Nb, V, W) - Operating temperature T<980°C
		Stoody 155FC							X			35 - 45 HRC	Grinding Diamond grinding	NO	- Very good corrosion resistance - Nickel based tungsten carbide with very good weldability - Can be used as a multilayer and underlay for Stoody 160FC
		Stoody 160FC							X			40 - 45 HRC	Grinding Diamond grinding	Depends on the application	- Very good corrosion resistance - Ni-based tungsten carbide with very good weldability - Maximum 2 layer deposit
	Moderate impacts	Coated electrode	OK Weartrade 50 (OK 83.50)	X	X	X						/	Grinding	NO	- Flat and ledge welding - Very good weldability even with an unsophisticated welding power source
			OK Weartrade 50T (OK 80.16)	X	X	X						45 HRC	Grinding	NO	- Flat welding - Operating temperature up to 400°C
OK Weartrade 55 (OK 80.17)					X	X	X					50 HRC	Grinding	NO	- Flat and ledge welding - Very good weldability even with an unsophisticated welding power source
OK Weartrade 55HD (84.58)			X	X	X	X						57 HRC	Grinding	NO	- Good corrosion resistance - Welding in all positions except downward - High efficiency electrode
OK Weartrade 60T (84.78)			X	X	X							60 HRC	Grinding	NO	- Excellent corrosion resistance - Flat welding - Operating temperature up to 400°C
Stoody Super 20						X						60 - 65 HRC on carbon steel	Grinding	YES	- High degree of hardness in one layer (maximum 2 layers) - Alloy of Chromium, Molybdenum, Tungsten carbides - Operating temperature T<593°C
Solid wire		OK Autrodur 38 G M (13.89)						X				35 - 40 HRC	Grinding	NO	- Solid wire under pure CO2, Ar+2%CO2 or Ar+18%CO2 - Underlay or surfacing passes
		OK Autrodur 56 G M (13.91)						X				50 - 60 HRC	Grinding	NO	- Solid wire under pure CO2 or Ar+18%CO2 - Underlay or surfacing passes
		OK Tubrodur 60GM (15.50)						X	X			60 HRC	Grinding	NO	- Flux-cored wire under gas
		Stoody 965 AP-G						X				57 - 62 HRC	Grinding	NO	- Flux-cored wire in all positions - GAS (Argon + 18% or 25%CO2) - Very good balance between abrasion and impact
Flux-cored with or without gas shield	Stoody 964 AP-G						X				58-64 HRC	Grinding	NO	- Flux-cored wire in all positions - GAS (Argon + 18% or 25%CO2) - Tool steel reinforced with refined carbides	
	OK Tubrodur 55 OA (14.70)						X				55 HRC	Grinding	NO	- Open arc - Good resistance to corrosion	
	Stoody CP 2000						X	X			58 - 64 HRC	Grinding	YES	- Open arc - Alloy of refined Chromium and Molybdenum carbides - Operating temperature T<1200°C	
Severe impacts	Cored wire with or without shielding gas	Stoody 600					X				55 - 63 HRC under first layer	Grinding	NO	- Open arc - Steel reinforced with Titanium carbides - Deposits of up to 4 layers	
		Stoody 670					X				55 - 57 HRC	Grinding	NO	- Excellent weldability - Cored wire under gas (Argon + 2%O) - Steel reinforced with Niobium carbides	

HARDFACING - TOOL STEEL



TABLE 4: Repair and surfacing of tool steels such as punches, HSS, etc.

Procedure	Product designation	Diameter (mm)						Type	Wear resistance			Hardness	Machining	Cross checking of the bead	Observations
		15	12	4	3	12	14		Low	Moderate	Severe				
MMA	OK Tooltrode 50 (OK 85.58)	X	X	X				Abrasion Impact Corrosion Temperature	Low	Moderate	Severe	/	Grinding	NO	Welding in all positions except downwards Operating temperature up to 550°C
	OK Tooltrode 60 (85.65)	X	X	X				Abrasion Impact Corrosion Temperature	Low	Moderate	Severe	/	Grinding	NO	Flat and ledge welding
Flux-cored with or without gas shield	Stoody 102-G						X	Abrasion Impact Corrosion Temperature	Low	Moderate	Severe	48 - 52 HRC 2 - 3 layers	Carbide tool Grinding	NO	Open arc or GAS (AR+2%CO2 or CO2) Deposit close to AISI H-12 tool steel Operating temperature up to 593°C
	Stoody 102-O						X	Abrasion Impact Corrosion Temperature	Low	Moderate	Severe	58 - 66 HRC 2 - 3 layers	Carbide tool Grinding	NO	GAS (Argon + 18%CO2) AISI M-7 weld metal for high-speed steels Maintains excellent abrasion resistance up to 538°C (1000°F)
	Stoody 966-G						X	Abrasion Impact Corrosion Temperature	Low	Moderate	Severe	62 - 67 HRC 2 layers	Grinding	NO	GAS (Argon + 18%CO2)Weld metal similar to AISI M-7 for high speed steels Improved abrasion resistance compared to Stoody M7-G Maintains excellent abrasion resistance up to 538°C (1000°F)

Alloys with Chromium or complex carbides are not recommended for use under friction, pressure or rolling.



Stoody M7-G applied to scrap metal recycling shredder knives



OK Tooltrode 50 applied to gears

ITEM NUMBERS

Table 1 : Buttering, underlay

Procedure	Designation	Dimension	Article code
Coated electrodes	OK 13Mn	3.2x450	8608324030
	OK 13Mn	4.0x450	8608404020
	OK 13Mn	5.0x450	8608504020
	OK 14MnNi	3.2x450	8628324030
	OK 14MnNi	4.0x450	8628404020
	OK 14MnNi	5.0x450	8628504020
	Stoody 2110 CTD	4.0x350	10202800
	OK 68.82 (1/4 VP)	2.5x300	6882252010
	OK 68.82 (1/2 VP)	3.2x350	6882323070
	OK 67.45 (1/4 VP)	2.5x300	6745252010
	OK 67.45 (1/2 VP)	3.2x350	6745323070
	OK 67.45 (1/2 VP)	4.0x350	6745403060
	OK Weartrode 30 (1/2 VP)	3.2x450	8328324060
	OK Weartrode 30 (1/2 VP)	4.0x450	8328404060
	OK Weartrode 30 (3/4 VP)	5.0x450	8328504060
	OK NiFe-CI-A (1/4 VP)	2.5x300	9258252010
	OK NiFe-CI-A (1/4 VP)	3.2x350	9258323010
OK NiFe-CI-A (1/2 VP)	4.0x350	9258403060	
Flux-cored	OK Tubrodur 13Mn O/G	Ø1.6	1560167740
	OK Tubrodur 15CrMn O/G	Ø1.6	1565167730
	OK Tubrodur 35 G M	Ø1.6	1540167630
	Nicore 55	Ø1.2 (4x5kg)	35UN124600
	OK Tubrodur 200 OD	Ø1.6	1471167730
	OK Autrod 312	Ø1.0	1675109820
	OK Autrod 312	Ø1.2	1675129820
	OK Autrod 16.95	Ø0.8	1695089820
	OK Autrod 16.95	Ø1.0	1675109820
	OK Autrod 16.95	Ø1.2	1675129820
	OK Autrod 16.95	Ø1.6	1695169820

Table 2 : Manganese steels

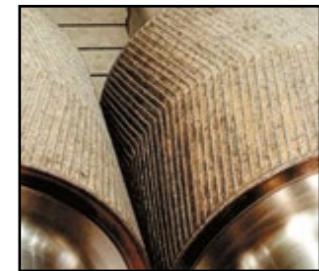
Procedure	Designation	Dimension	Article code
Coated electrodes	OK 13Mn	3.2x450	8608324030
	OK 13Mn	4.0x450	8608404020
	OK 13Mn	5.0x450	8608504020
	OK 14MnNi	3.2x450	8628324030
	OK 14MnNi	4.0x450	8628404020
	OK 14MnNi	5.0x450	8628504020
Flux-cored	Stoody 2110 CTD	4.0x350	10202800
	OK Tubrodur 13Mn O/G	Ø1.6	1560167740
	OK Tubrodur 15CrMn O/G	Ø1.6	1565167730



Laboutry shear hardfacing with the Stoody 964 APG.

Table 3 : Anti-abrasion

Type	Procedure	Designation	Dimension	Article code
Low impacts	Coated electrodes	Stoody Super 20 CTD	4.0x350	46521010
		Stoody Vancar-E	4.0x350	11327600
	Flux-cored	Stoody 970-G	Ø1.2	11994800
		Stoody 970-G	Ø1.6	11996200
		SA Super 20	Ø1.6	11456000
		Stoody 145	Ø1.6	12031900
		Stoody Vancar-O	Ø1.6	11420200
		Stoody 155FC	Ø1.6	12022600
	Stoody 160FC	Ø1.6	12022500	
Moderate impacts	Coated electrode	OK Weartrode 50	2.5x350	8350253030
		OK Weartrode 50	3.2x350	8350323030
		OK Weartrode 50	4.0x450	8350404020
		OK Weartrode 50 T	2.5x350	8016253030
		OK Weartrode 50 T	3.2x450	8016324030
		OK Weartrode 50 T	4.0x450	8016404020
		OK Weartrode 55	4.0x450	8017404020
		OK Weartrode 55	5.0x450	8017504020
		OK Weartrode 55	6.0x450	8017604020
		OK Weartrode 55 HD	2.5x350	8458253030
		OK Weartrode 55 HD	3.2x450	8458324030
		OK Weartrode 55 HD	4.0x450	8458404020
		OK Weartrode 55 HD	5.0x450	8458504020
		OK Weartrode 60 T	3.2x350	8478323030
		OK Weartrode 60 T	4.0x450	8478404020
		OK Weartrode 60 T	5.0x450	8478504020
	Solid wires	Stoody Super 20 CTD	4.0x350	46521010
		OK Autrodur 38 G M	Ø1.2	1389127700
		OK Autrodur 56 G M	Ø1.2	1391127700
		OK Tubrodur 60 G M	Ø1.2	155012773V
	Flux-cored	OK Tubrodur 60 G M	Ø1.6	1550167730
		Stoody 965 AP-G	Ø1.2	11807800
		Stoody 964 AP-G	Ø1.2	11970600
		OK Tubrodur 55 O A	Ø1.6	1470167730
		Stoody CP2000	Ø1.2	11907600
		Stoody CP2000	Ø1.6	11886500
		Stoody 600	Ø1.6	11886600
	Severe impacts	Flux-cored	Stoody 670	Ø1.6



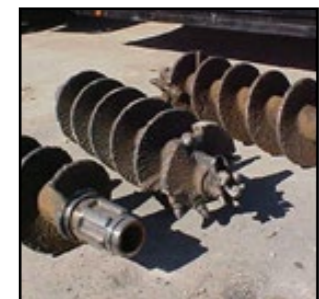
Stoody 600 applied on an ore crusher.



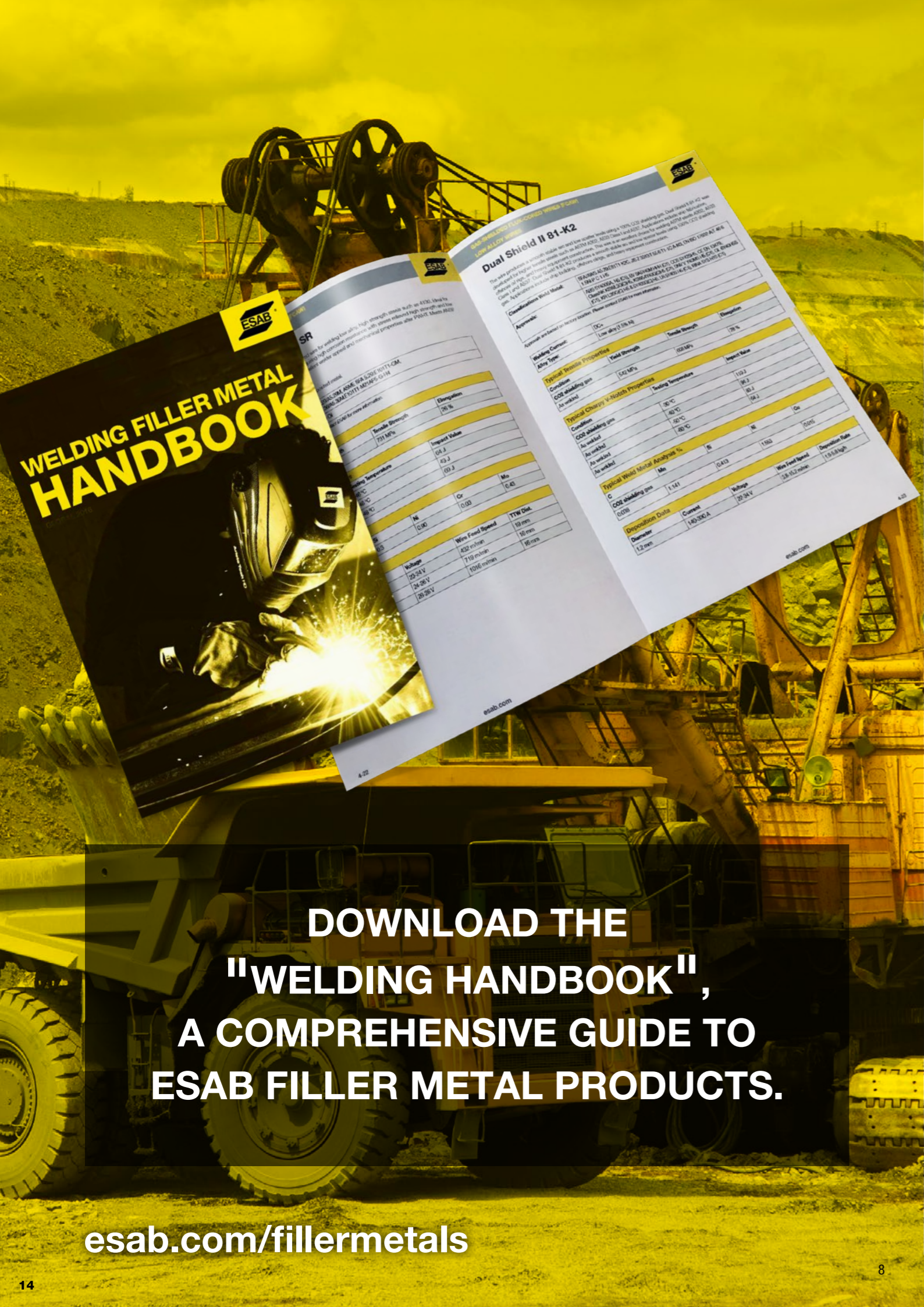
Stoody Vancar applied to excavation teeth.

Table 4: Tool steels

Procedure	Designation	Dimension	Item number
Coated electrodes	OK Tooltrode 50	3.2x350	8558323030
	OK Tooltrode 50	4.0x350	8558403020
	OK Tooltrode 50	5.0x350	8558503020
	OK Tooltrode 60	2.5x350	8565253030
	OK Tooltrode 60	3.2x350	8565323030
	OK Tooltrode 60	4.0x350	8565403020
Flux cored	Stoody 102-G	Ø1.2	11422300
	Stoody 102-O	Ø1.6	11426800
	Stoody M7-G	Ø1.2	11810800
	Stoody 966-G	Ø1.6	11981400



Repair of conveyor auger with the Stoody 160 FC



NOTES:

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