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A Lincoln Electric Company

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	Alloys	AWS A5.21:2001	Nominal Chemical Composition										HRc Hardness
			C	Cr	Co	W	Ni	Fe	Si	Mo	Mn	Other	
Cobalt	WT-1	ERCoCr-C	2.3	30	Bal.	13	<3	<3	0.8	<1	<1		48-59
	WT-3		2.4	32	Bal.	13	<3	<3	1	<1	<1		51-63
	WT-4		0.8	30	Bal.	14	<3	<3	1.5	<1	<1		44-50
	WT-6	ERCoCr-A	1.1	28	Bal.	4	<3	<3	1.1	<1	<1		38-48
	WT-6H		1.3	30	Bal.	5.5	1	1	1.3	<1	<1		42-49
	WT-12	ERCoCr-B	1.4	29	Bal.	8	<3	<3	1.5	<1	<1		44-52
	WT-12H		1.7	29	Bal.	8	<3	<3	1.5	<1	<1		44-54
	WT-21	ERCoCr-E	0.25	27	Bal.		2.5	<3	<1	5	<1		27
	WT-25		0.1	20	Bal.	15	10	<3	1	<0.5	1.5		12
	WT-32	ERCoCr-F	1.7	26	Bal.	12	23	<3	1.4	<0.6	<0.3		32-46
	WT-190	ERCoCr-G	3.2	26	Bal.	14	<3	<3		<1	<1		50-62
	WT-306		0.4	25	Bal.	2	5				<0.5	Nb 6	36
	WT-400		0.08	8	Bal.				2.6	29			51-58
	WT-800		0.08	17	Bal.				3.5	29			54-62
Nickel	WT-30		0.2	7			Bal.	2	2.2		<0.2	B 1.5	28-36
	WT-40	ERNiCr-A	0.4	11			Bal.	2	2.2		<0.2	B 2	35-42
	WT-50	ERNiCr-B	0.6	13			Bal.	4	3.7		<0.2	B 3	45-56
	WT-56	ERNiCr-B/C	0.6	12.5			Bal.	3.3	3.3		<0.2	B 2.7	50-58
	WT-60	ERNiCr-C	0.7	14			Bal.	4.5	4		<0.2	B 3	54-62
	WT-700		0.08	15			Bal.		3.5	32			42-48
	WT Ni-60		0.4	16			Bal.	20	3	<0.5	<0.5		30

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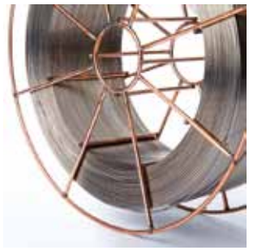
Wear-resistant alloys









International manufacturer of nickel- and cobalt-based alloys

Rods | Wires | Electrodes | Powders
Centrifugal Castings | Investment Castings
Sand Castings | Wrought Bars

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Global wear-resistant solutions for a demanding world

Established in 1990, Weartech International is a leading manufacturer of cobalt- and nickel-based wear-resistant alloys. We produce our hardfacing consumables and alloy castings at our modern foundries in the USA and in Europe. Our fully equipped machine shops in both locations supply finish machined components for use in hostile of environments worldwide.

Cobalt- and Nickel-based Hardfacing **Consumables**

Our alloys are available as hardsurfacing rods, electrodes, wires and powders to suit your needs. Each alloy is specially formulated with multiple quality control steps to resist various types of wear; abrasion, corrosion, galling, oxidation and erosion.

1 Rods

Our continuous-cast rods are available in a wide range of diameters and lengths for use with TIG or oxy-acetylene welding processes. Both industry standard and customised compositions can be produced to meet your specific requirements.

2 Wires

Our range of cobalt-base flux-cored wires is suitable for both automatic and semi-automatic application. The standard alloys are used for MIG/MAG welding whilst specially modified versions can be used for open arc welding. Solid wires for TIG welding are also available.

3 Electrodes

Weartech's hardfacing electrodes deposit quickly, with excellent weldability and slag removal, producing smooth, sound coatings.

4 Powders

Our range of atomised cobalt- and nickel-base powders includes specific alloy compositions and sieve cuts for use with PTA, laser cladding, HVOF and flame spraying techniques.

Cobalt-based wear-resistant **Components**

Weartech's foundries in California and Wales manufacture cast components using a variety of methods. Our alloys are available as centrifugal castings, lost wax investment castings and sand castings. A variety of stock bar sizes are also kept in stock from which components can be machined. Our engineers will choose the most suitable manufacturing process for your component or to conform to your purchasing specification.

1 Centrifugal Castings

Dense cylindrical castings with a uniform fine grain structure can be produced using the centrifugal casting process. Spun castings can be supplied as proof-machined tubes or parted off into rings or other shorter parts. Components typically manufactured using this process include sleeves, bushes, piston rings and valve seats.

2 Lost Wax Investment Castings

The investment casting process minimises the finish machining required. Complex parts can be produced with certain as cast features within a +/- 0.1mm tolerance. This process is particularly suitable for high volume production of valve components, small bushings or rings and thermowell tips.

3 Sand Castings

The sand casting process is ideal for producing large or non-cylindrical components such as roll end bushes for the steel industry or conical valves for hydro-electric power stations. Bars produced by this method can be machined to produce a wide variety of finished components.

4 Wrought Bars

The mechanical properties of cast bars can be further improved by a hot working process to form wrought bars. Through changes to the bar's grain structure the hot hardness and tensile strength of WT-6B are both increased.