



Techniwear HT24-28M

Description:

Techniwear HT24-28M wire is a high heat resistant wire with excellent metal-to-metal wear characteristics. Techniwear HT24-28M deposits a low carbon austenitic cobalt type alloy with excellent work hardenability, high temperature, strength, and impact resistance. These deposits are quite stable during thermal cycling, making them a favorite for hot die materials. Resistance to galling (self-mated), corrosion and cavitation erosion make Techniwear HT24-28M a good choice for valve trim on steam and fluid control valve bodies and seats. It bonds well to all weldable steels, including stainless.

Applications:

Augers, chemical and petrochemical valves, conveyer screws, exhaust seats, extrusion dies for aluminum, forging dies, forging dies, furnace parts, gas turbine buckets, hot metal handling, hot punches, hot shears, hot trim dies, hydro-turbine cavitation repair, ladles, piercing plugs, rolling dies, steam valves, steel mill guides, valve seats, valve stems, etc.

Chemistry:

Propriety blend of;	Cobalt	Chromium	Iron	Molybdenum	Nickel	Other
	50-70%	23-40%	2-7%	2-7%	1-5%	Remainder

Typical Deposit Characteristics

Hardness as welded	30-37 Rc
Work hardened	43- 48
Elevated temperature hardness	~30 Rc @ 1100 °F ~28 Rc @ 1500 °F ~26 Rc @ 1700 °F
Impact Resistance	Excellent
Corrosion resistance	Good
Hot hardness	Excellent
Magnetism	Non-magnetic
Surface cross check	No

Welding Parameters

Diameter, In. (mm)	.045 (1.2)	1/16 (1.6)
Current, Amp. DCEP	180 - 200	280 - 300
Voltage	25 - 27	26 - 28
Shielding Gas	Argon	Argon
Wire Extension	1/2" - 5/8"	5/8" - 3/4"
Position	Flat	Flat

Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.



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Preheating & Postcooling Information

Base Metal	Preheat Temp.		Postheat
	°F	°C	
Low carbon Steel (up to 40%C) for thin sections only	Not Required	Not Required	Air Cool
Low Carbon Steel (up to 40%C) for thick sections only High Carbon Steel (over 40%C) for thin sections only Low Alloy Steels (up to 10% alloy) for thin sections only	200-600	93-315	Slow-Cool
High Carbon Steels (over 40%C) for thick sections only Low Alloy Steel (up to 10% alloy) for thick sections only	300-600	148-315	Slow-Cool
Air-Quench Steels	1100- 1200	593-648	Slow-Cool
High Chromium-Nickel (Austenitic) Stainless Steels (304, 309, 316, etc.) thin sections only	Not Required	Not Required	Air-Cool
High Chromium-Nickel (Austenitic) Stainless Steels (304, 309, 316, etc.) thick sections only	200-500	93-260	Slow-Cool
High Chromium-Nickel (Martensitic) Stainless Steels (410, 416, 420, etc.) thick sections only	400-600	204-315	Maintain at 400°-600° for 4 hrs. per 1 inch thickness, then reduce heat 50° F (10°C) till cool.
High Chromium-Nickel (Ferritic) Stainless Steels (430, 442, 446, etc.) thick sections only	200-600	93-315	Maintain at 200°-600° for 4 hrs. per 1 inch thickness, then reduce heat 50° F (10°C) till cool.
High Temperature Nickel Alloys (400, 600, 601, 718, etc.)	200-500	93-260	Stress Relieve

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