

## PRODUCT OVERVIEW

**POLYSTEEL 21M**— a cobalt-based metal cored wire, forms a low carbon, austenitic deposit with dispersed hard carbides which offer excellent high temperature strength and impact resistance. Due to the low weight percent carbide phase, this alloy can be work hardened to obtain optimal hardness properties. POLYSTEEL 21M is resistant to thermal shock, galling, corrosion, and cavitation erosion which make this alloy ideal for steam and fluid control valve bodies and seats as well as hot-die materials. This alloy can be applied to all weldable steels, including all grades of stainless steel.

## TYPICAL DEPOSIT CHARACTERISTICS:

⇒ Abrasion Resistance	Moderate
⇒ Impact Resistance:	Excellent
⇒ Corrosion Resistance:	Good
⇒ Deposit Layers:	Multiple
⇒ Deposit Cross Checks:	No
⇒ Magnetic:	No
⇒ Hot Wear Hardness	Good
⇒ Machineability:	Carbide Tools

## SPECIFICATION:

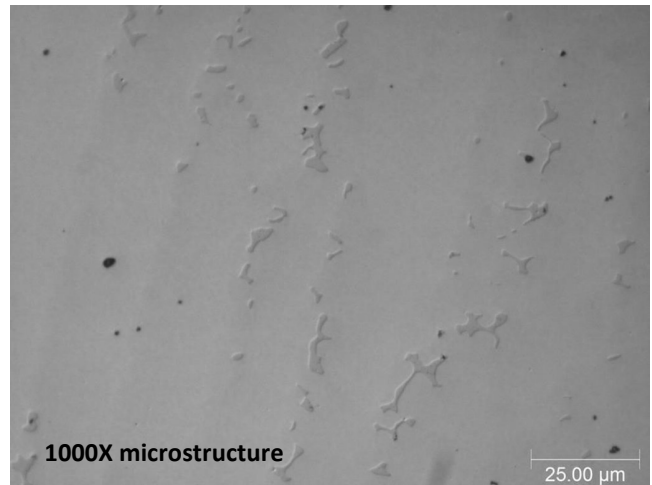
AWS A5.21                      ERCCoCr-E

## APPLICATION

- ⇒ Steam valves
- ⇒ Hot shears
- ⇒ Forging dies
- ⇒ Piercing plugs
- ⇒ Chemical and petrochemical valves

## NOMINAL CHEMICAL COMPOSITION (wt%)

This alloy conforms to AWS A5.21-2011 ERCCoCr-E chemical composition requirements



## RECOMMENDED WELDING PARAMETERS:

Diameter	Current	Voltage	Amperage	Shielding Gas	Wire Extension	Position
.045" (1.2mm)	DCEP	22-24	150-170	Argon	1/2" - 3/4"	Flat
.062" (1.6mm)	DCEP	26-28	280-300	Argon	1/2" - 3/4"	Flat

The properties listed are typical and not to be construed as guaranteed values. Actual properties may vary depending on customer operating conditions.

## STANDARD SIZES & PACKAGING:

Diameter	Packaging	Part Number
.045" (1.2mm)	33# Spool	021M045LWS01
.062" (1.6mm)	33# Spool	021M062LWS01