

### PRODUCT OVERVIEW

**POLYSTEEL 6** (Cobalt Alloy 6) is designed for high temperature applications. POLYSTEEL 6 provides excellent wear resistance to abrasion as well as in metal to metal applications. Wear resistance is provided by the complex chromium and tungsten carbides that are supported in a rich cobalt matrix. POLYSTEEL 6 is also resistant to oxidation up to its melting range and can be satisfactorily specified in sour gas as well as other corrosive applications.

### APPLICATION

Typical applications include shaft sleeves, bushings, steam erosion on turbine blades, hot working tools, guide rolls, mixer paddles, mechanical seals, and various types of valve trim. It should be noted that it is possible to put this hardfacing down on different sized areas crack free though care should be taken when selecting a base material.

### STANDARD SIZES

#### Diameter

- .045" (1.2mm)
- .062" (1.6mm)
- .093" (2.4mm)
- .125" (3.2mm)
- .157" (4.0mm)
- .187" (4.8mm)

### POLYSTEEL 6 CHEMISTRY, PERFORMANCE, AND SPECIFICATIONS

This alloy conforms to AWS 5.21 ERCoCr-A chemical composition requirements.

#### Properties

⇒ Hardness: 40-44 HRC (2 layer deposit)

#### Specifications

- ⇒ AWS 5.21 ERCoCr-A
- ⇒ UNS R30006

### RECOMMENDED WELDING PARAMETERS

| Diameter       | Current | Voltage | Amperage |
|----------------|---------|---------|----------|
| .045" (1.2mm)  | DC-     | 20-24   | 80-100   |
| .062" (1.6mm)  | DC-     | 20-24   | 80-100   |
| .125" (3.18mm) | DC-     | -       | 115-135  |
| .157" (4.0mm)  | DC-     | -       | 145-165  |
| .187" (4.8mm)  | DC-     | -       | 175-195  |

The properties listed are typical and not to be construed as guaranteed values. Actual properties may vary depending on customer operating conditions. Polymet makes no warranties of merchantability and fitness for a particular purpose, except as expressly stated in Polymet's terms and conditions.