Technical Datasheet

# PMET 854 Haynes 230

May 2021

## PRODUCT OVERVIEW

**Pmet 854** is a nickel based superalloy alloyed primarily with chromium, tungsten, and molybdenum. This alloy exhibits fantastic oxidation resistance up to 2100F and offers excellent strength at temperatures above 1800F. Pmet 854 has a low thermal expansion coefficient and resistance to grain coarsening at high temperatures making this alloy attractive for aerospace and power industries. This alloy is commonly welded using GTAW and GMAW processes and is moderate/difficult to machine, however can be machined by most conventional methods.

## TYPICAL DEPOSIT CHARACTERISTICS:

- ⇒ Density 0.327 lb/in$^3$
- ⇒ Melting Point: 2450 F
- ⇒ Coefficient of Thermal Expansion (X $10^{-6}K^{-1}$): 13
- ⇒ Oxidation Resistance: Excellent
- ⇒ Corrosion Resistance: Great
- ⇒ Machinability: Moderate

## APPLICATION

- ⇒ Combustion Cans
- ⇒ Ammonia Burners
- ⇒ Thermocouple Protection Tubes
- ⇒ Transition Ducts

## SPECIFICATION

AMS 5839C, AWS A5.14/ERNiCrWMo-1

## NOMINAL CHEMICAL COMPOSITION (wt%)

| Ni | Cr | W | Mo | Co | Fe | Al | Mn | Si | C | La |
|---|---|---|---|---|---|---|---|---|---|---|
| BAL | 22.0 | 14.0 | 2.0 | <5.0 | <3.0 | 0.3 | 0.5 | 0.4 | 0.1 | 0.02 |

## MECHANICAL PROPERTIES:

| Tensile Strength | | Yield Strength | | Elongation |
|---|---|---|---|---|
| Ksi | MPa | Ksi | MPa | % |
| 115 | 793 | 50 | 310 | 35 |

## STANDARD SIZES & PACKAGING:

| Diameter | Packaging |
|---|---|
| 0.031” (0.8 mm) | 18” and 36” Cut Lengths and 25# LWS |
| 0.035” (0.9 mm) | 18” and 36” Cut Lengths and 25# LWS |
| 0.045” (1.2 mm) | 18” and 36” Cut Lengths and 25# LWS |
| 0.062” (1.6 mm) | 18” and 36” Cut Lengths and 25# LWS |

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