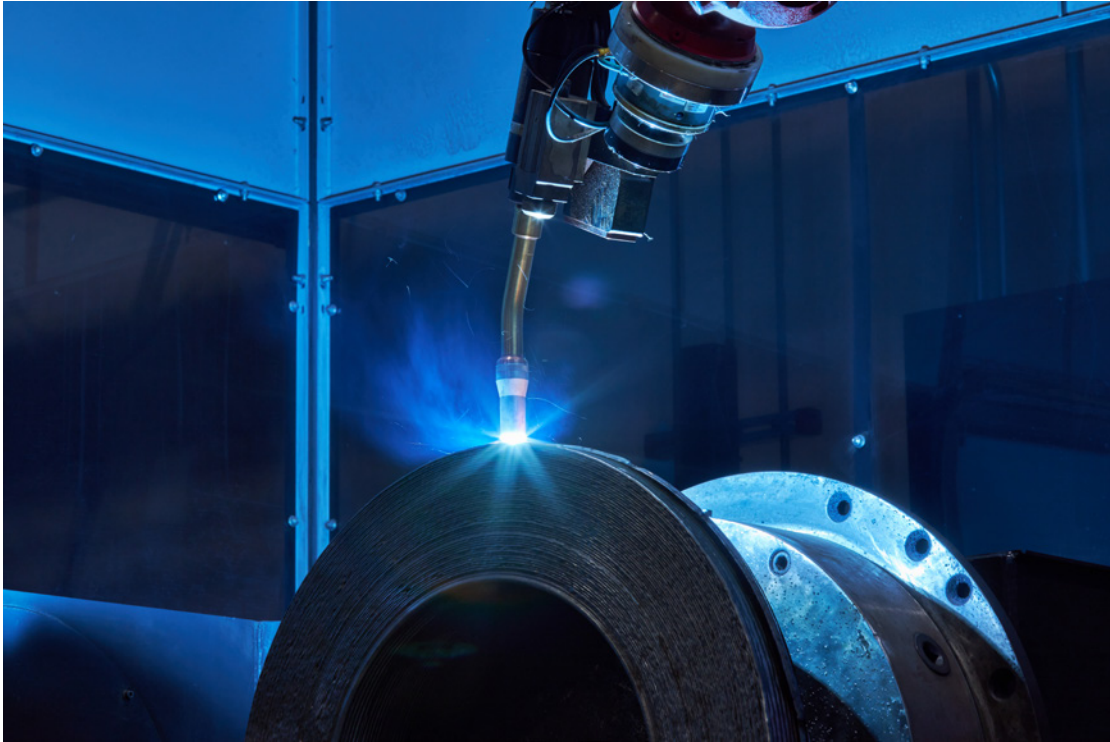


17-4 PH STAINLESS STEEL



KEY FEATURES

17-4 PH stainless steel offers a combination of high strength, good corrosion resistance, and toughness. It withstands corrosive attacks better than most hardenable stainless steels. Its high strength is maintained to approximately 600° F and it is resistant to crack propagation. This makes 17-4 PH stainless steel ideal for applications such as: aerospace structures, nuclear waste processing and storage, petroleum refining, pulp and paper processing, chemical processing and more.

17-4 PH stainless steel mechanical properties compare favorably to the following stainless steel grades:

ASTM A564, Type 630

ASTM A693, Type 630

ASTM A705, Type 630

ASTM A747, Grade CB7Cu-1

Typical Applications »

- Aerospace structures
- Nuclear waste processing and storage
- Petroleum refining
- Pulp and paper processing
- Chemical processing

NOMINAL MECHANICAL PROPERTIES

GMAAM ⁽¹⁾	Heat Treatment	Room Temperature Strength			Toughness	
		YS @ 0.2% Off (ksi)	UTS (ksi)	Elong (%)	ft-lbs @ 70 °F	ft-lbs @ -20 °F
17-4 PH	None	50	160	10	20	-
	H900 ⁽²⁾	165	185	15	20	-
	H1025 ⁽³⁾	140	160	18	30	20
	H1150 ⁽⁴⁾	100	140	21	45	35

(1) Gas Metal Arc Additive Manufacturing (As-Printed)

(2) Two-step heat treat: 1900° F with air cool; 900° F with air cool

(3) Two-step heat treat: 1900° F with air cool; 1025° F with air cool

(4) Two-step heat treat: 1900° F with air cool; 1150° F with air cool

Test Results

Test results for mechanical properties were obtained from GMAAM deposits produced and tested according to prescribed standards. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any GMAAM component before use in the intended application. This data is for illustrative purposes only. Actual results may vary.

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