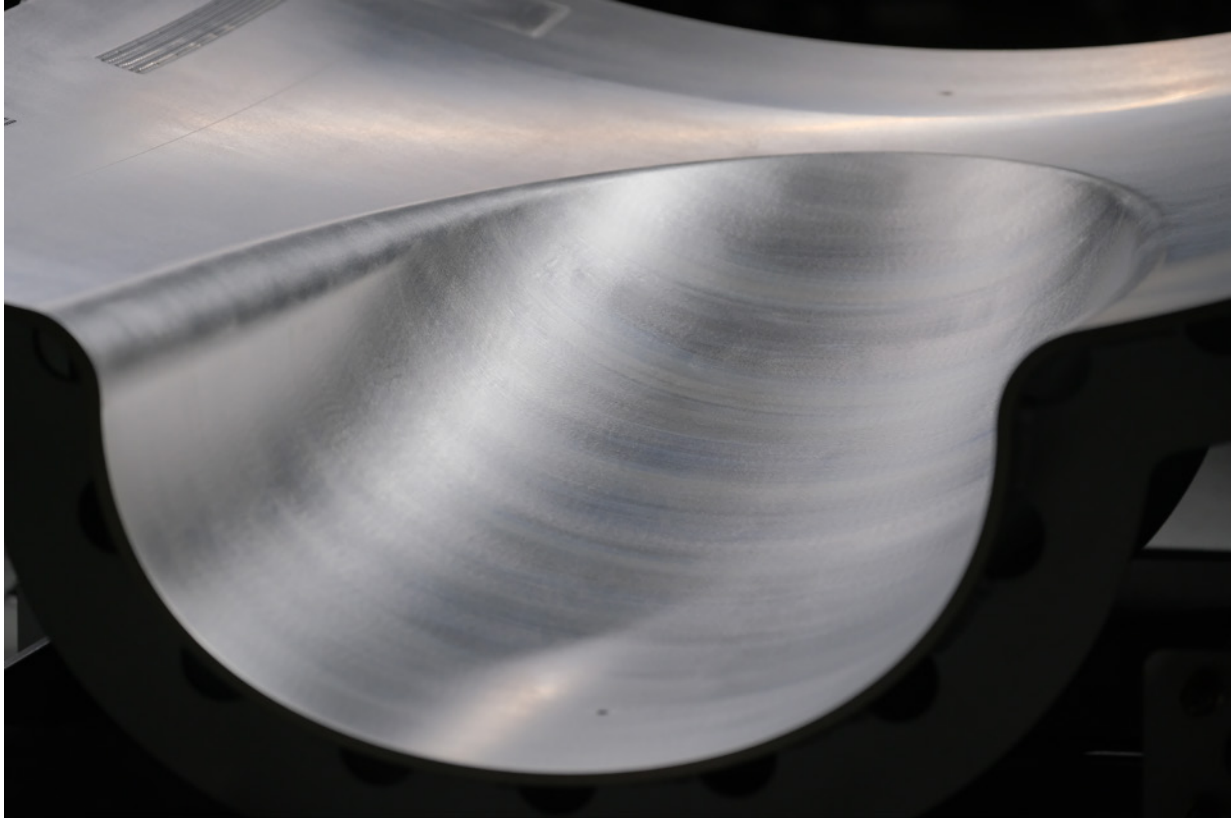


INVAR 36



KEY FEATURES

Invar 36 is known for its extremely low coefficient of thermal expansion (CTE). Its moderately high-strength, good ductility and toughness, along with excellent fatigue and mechanical properties at cryogenic temperatures makes Invar 36 ideal for applications such as: tooling and dies for aerospace composite part fabrication, liquified gas storage and transportation, cryogenic components and more.

Typical Applications »

Tooling and Dies for Aerospace Composite Part Fabrication

Liquified Gas Storage and Transportation

Cryogenic Components

NOMINAL MECHANICAL PROPERTIES

GMAAM ⁽¹⁾	Heat Treatment ⁽³⁾	Room Temperature Strength			Toughness	Rockwell	CTE ⁽²⁾
		YS @ 0.2% Off (ksi)	UTS (ksi)	Elong (%)			
Wire Feedstock					ft-lbs @ 70 °F	Rockwell B	in / (in °F)
Invar 36	Full anneal [@ 1350 °F]	50	70	25	30	90	2.2 * 10 ⁻⁶ max

(1) Gas Metal Arc Additive Manufacturing (GMAAM)

(2) Corresponds to the following temperature range: 77 °F – 400 °F

(3) Post-weld heat treatment: At temperature for 2 hours, furnace 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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Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.