

OUR PRODUCTS

EnableLLOY⁸²⁵

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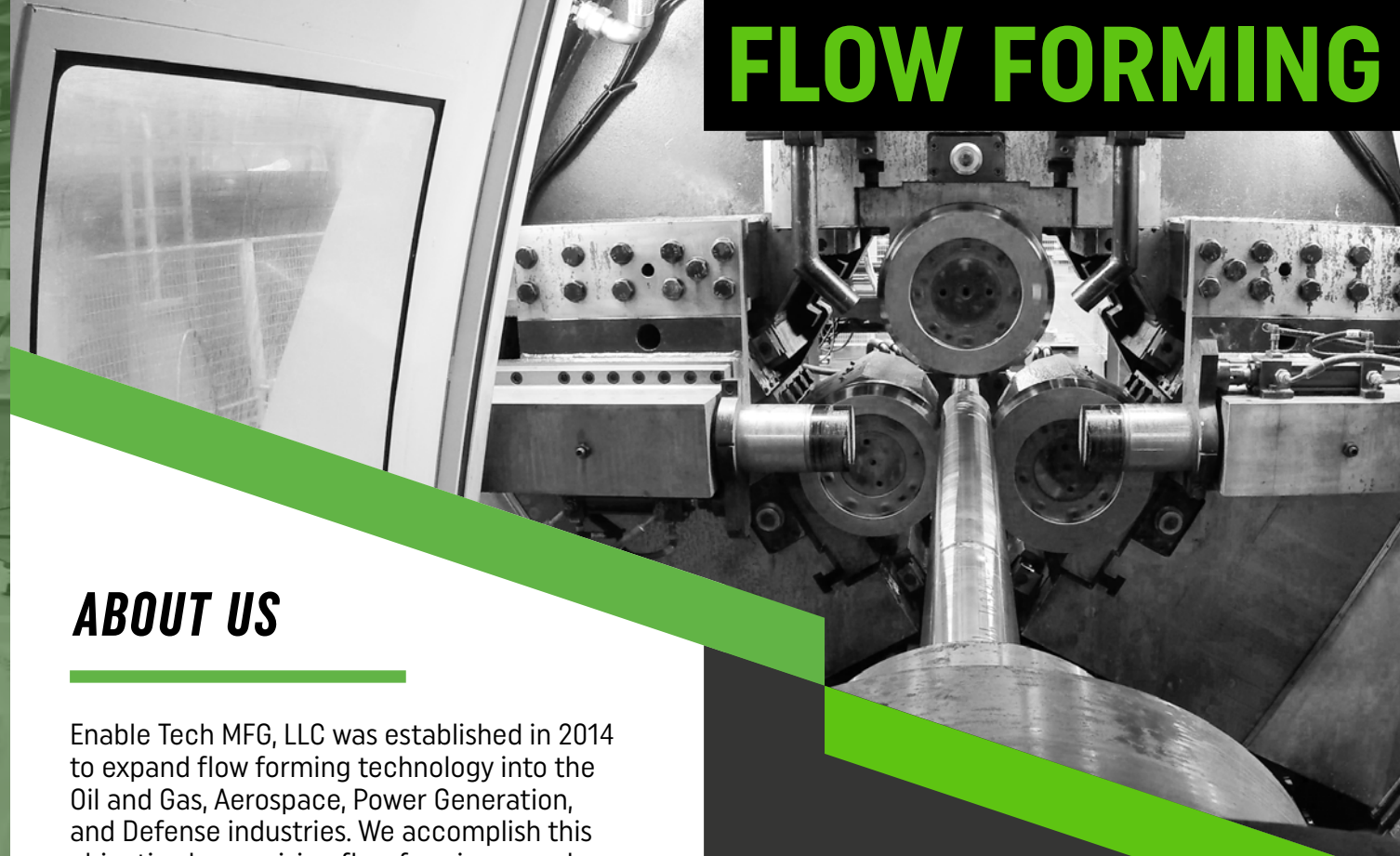
EnableLLOY⁵⁰

EnableLLOY²²

EnableLLOY⁷¹⁸

EnableLLOY³⁵

Call us today
for more information



FLOW FORMING

ABOUT US

Enable Tech MFG, LLC was established in 2014 to expand flow forming technology into the Oil and Gas, Aerospace, Power Generation, and Defense industries. We accomplish this objective by precision flow forming seamless, cold-worked tubulars that maximize the physical and mechanical properties of nickel, cobalt, titanium, stainless and steel alloys.

Enable Tech's flow formed tubes have proven to be excellent solutions for extreme environments and critical applications.



CONTACT US

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*Innovation
Engineering
Advanced Technology*

WHAT IS FLOW FORMING?

Flow forming is a chipless metal forming process for manufacturing seamless, cold-worked tubulars.

During the flow forming process, a metal tubular is elongated over an inner mandrel to achieve exact dimensions 4–6x the original length. Three rollers apply a compressive force to the outside of the tubular, forcing the alloy beyond its yield point, a process known as plastic deformation. As the outside diameter reduces, the material flows, elongating the metal tubular until the specified wall thickness and length are achieved.



THE NEXT GENERATION OF PRECISION TUBULARS

RESULTS OF FLOWFORMING

Enable Tech's flow forming technology excels at producing engineered solutions that provide net tubular products with increased strength, increased material utilization, refined microstructures, and superior surface finishes.

Metallurgical

- Engineered physical and mechanical properties
- Yield strength increases of 100%+
- Refined Microstructures
- Expanded material selection

Dimensional

- Net forming to finished dimensions and tolerances
- Precision roundness, straightness and concentricity
- Superior surface finishes
- Thin variable wall thickness can be formed

BENEFITS OF FLOW FORMING



Specifications Produced

AMS
NACE
ASTM
Customer Specific
Military



Cost Effective

Enables lower-cost alloys to achieve properties of higher-cost alloys saving money by reducing material costs.



Increased Performance

Extended wear properties and higher pressure ratings. Nickel Alloy mechanical properties at a fraction of the cost.



Time Saved

Net dimensions eliminate lengthy lead times. Just thread and ship.



Reduced Scrap

Increased material utilization equals better yields. Less scrap means more money saved.



Improved Safety

No threat of Chronic Beryllium Disease or the expensive manufacturing accommodations associated with it.

EnableLLOY® PERFORMANCE

ENABLE TECH SERVICES

FLEXIBLE/NO MINIMUMS
 MECHANICAL TESTING
 PROGRAM MANAGEMENT
 JUST-IN-TIME PROGRAMS
 ENGINEERING SUPPORT
 METALLURGICAL SUPPORT

SPECIFICATIONS PRODUCED

AMS
 ASTM
 MILITARY
 NACE
 CUSTOMER SPECIFIC

STANDARD SIZES

OUTSIDE DIAMETER 1.20" - 24.00"
 WALL THICKNESS .020" - .750"
 LENGTH 240" MAX

STANDARD TOLERANCES

INNER DIAMETER +/- .005"
 OUTSIDE DIAMETER +/- .005"
 STRAIGHTNESS +/- .005"/FT
 SURFACE FINISH ID (μinch) 32
 SURFACE FINISH OD (μinch) 32

*POINT OF REFERENCE ONLY AS EXACT TOLERANCES ARE DEPENDENT ON THE MATERIAL, SIZE, AND WALL THICKNESS

ALLOYS FORMED

NICKEL 718, 625, 725, 400, 600, 800, 825, 925, C276, C22, Alloy X, CuNi
 STAINLESS 300 series, nitronics, 17-4 PH, 15-5 PH, 17-7 PH, P550
 TITANIUM Grade 2, Grade 5, Grade 9
 COBALT MP35N, L605
 ALUMINUM 6061, 7075
 STEEL 4130, 4140, 4340, 8620

ALLOY MECHANICALS

ENABLELLOY GRADE	UNS	CONDITION	APPLICABLE SPECIFICATION
ENABLELLOY 50 (XM-19)	S20910	AS FLOWFORMED	
ENABLELLOY 15-15 (CARTECH 15-15HS MAX)		AS FLOWFORMED	
ENABLELLOY 718	N07718	AS FLOWFORMED	
ENABLELLOY 22 (C22)	N06022	AS FLOWFORMED	
ENABLELLOY 35 (MP35N)	R30035	AS FLOWFORMED	
ENABLELLOY 35 NACE (MP35N)	R30035	FLOWFORMED AND AGED 1300F°/4HR	NACE MR0175
ENABLELLOY 35 NACE (MP35N)	R30035	FLOWFORMED AND AGED 1350F°/4HR	NACE MR0175
ENABLELLOY 825	N08825	AS FLOWFORMED	

TYPICAL ROOM TEMP PROPERTIES

.2% YS KSI	UTS KSI	% ELONGATION	HRC
195	220	15	41
195	232	10	45
192	221	12	43
208	238	15	44
180	214	21	45
221	233	20	48
222	238	17	47
154	157	20	38

*TYPICAL ROOM TEMP PROPERTIES HAVE BEEN ACHIEVED IN THE PAST BUT CAN NOT BE GUARANTEED.