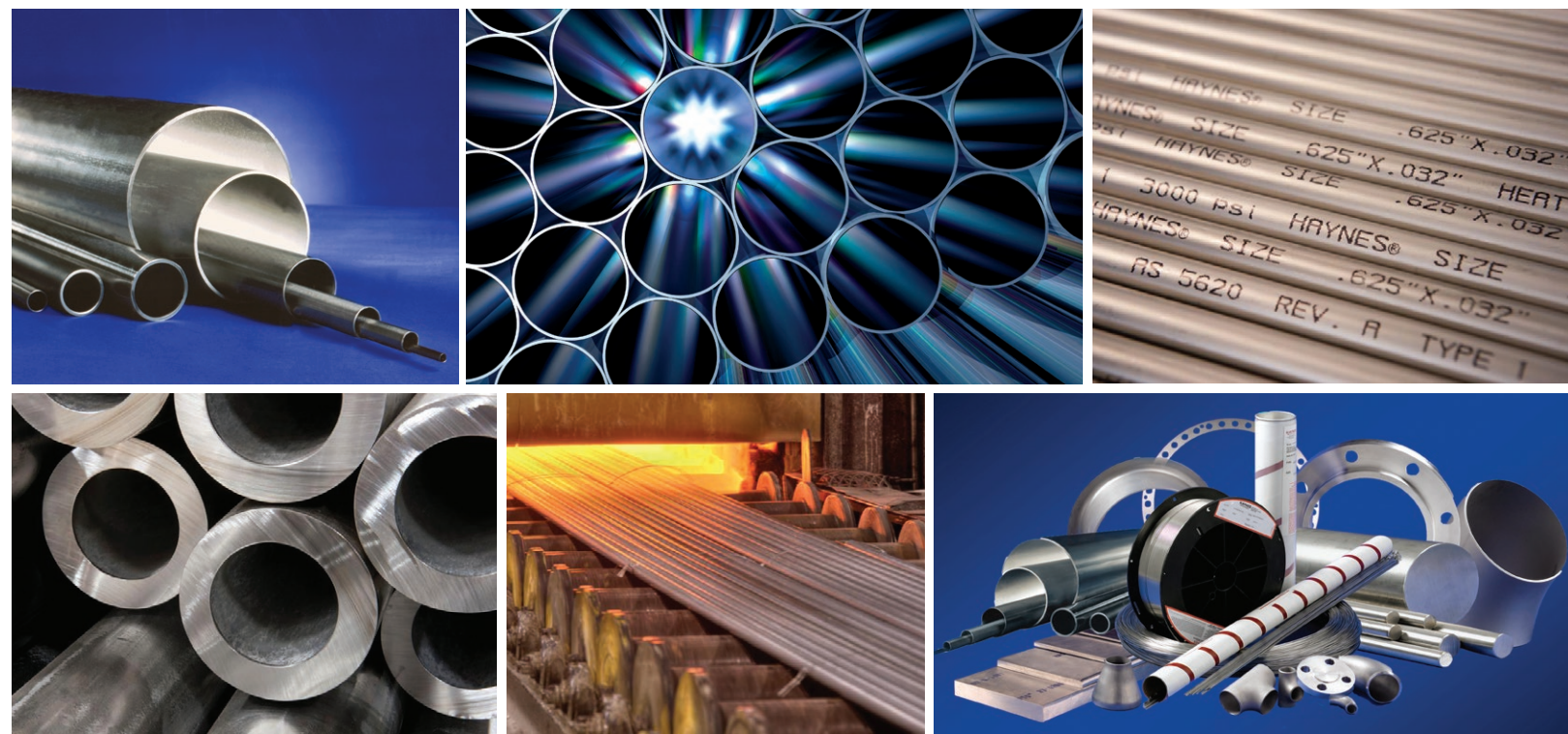


HAYNES

International

Tubular Products and Capabilities



High-temperature Alloys

Corrosion-resistant Alloys

HAYNES

International

Haynes Tubular Products, established in 1976 and located in Arcadia, Louisiana, is devoted exclusively to the production of the highest quality nickel, cobalt, and titanium pipe and tubing.

We are the premier choice in innovative solutions for demanding applications. Our welded and seamless high-performance alloy tubulars are manufactured to the exacting requirements of aerospace, gas turbine, chemical processing, power pollution control, oil and gas, refining, agricultural, pulp and paper, marine, and many other industries.



Tubular product sizes for HAYNES® and HASTELLOY® alloys

- **Seamless:** 1/2" to 4-1/2"
- **Seamless Titanium:** 1/4" to 1-1/2"
- **Welded:** 1/2" to 8" Schedule 40



Seamless Pipe and Tubing

Seamless pipe and tubing is covered under the appropriate specifications. Cold-worked seamless pipe and tubing is produced from billets by either trepanning or extrusion followed by pilgering and/or drawing.

HAYNES® Ti-3Al-2.5V alloy

Ti-3Al-2.5V alloy was developed for aircraft hydraulic and fuel systems transmission lines, primarily because of its high strength-to-weight ratio. This ratio proved to be a major design advantage when used for hydraulic tubing lines, providing required strength levels, but more importantly, reducing weight by as much as 43% when compared to stainless steel.

Welded Pipe

Welded pipe is formed, welded, solution heat-treated, and tested in accordance with the appropriate specifications.

Welded Tubing

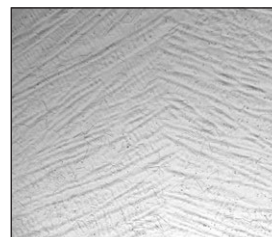
Welded tubing is made from strip by forming, welding, sizing or cold-working, solution heat treating, and testing in accordance with the applicable specifications. The classes of welded tubing available are as follows:

- As-welded and solution-annealed
- Welded and fully cold-reduced or welded and bead-worked

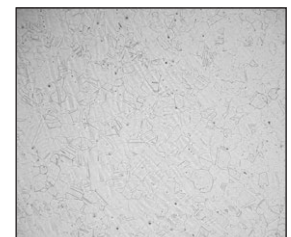
Bead-worked vs. welded and fully cold-reduced

Fully cold-reduced tubing is the cold reduction of both the weld seam and base metal (parent material). The minimum reduction is generally 20% of the total area and achieves optimum metallurgical conditions. Bead-worked tubing is the cold reduction of the weld seam only, generally reducing the weld seam only by 2-10%.

Photomicrographs of Weld Bead Magnified at 200x



Bead-worked



Fully Cold-reduced

Visit us at www.haynesintl.com for more information.

Corrosion-resistant Alloys					Specifications					Available Forms				
Alloy	UNS	Seamless Pipe & Tubing	Welded Pipe & Tubing	Fittings	Tubing		Pipe		Fittings					
					Welded	Seamless	Welded	Seamless						
HASTELLOY® B-3® alloy	N10675	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366 SB 462/B 462 SB 564/B 564	■	■	■	■	■					
HASTELLOY® C-4 alloy	N06455	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366	■	■	■	■	●					
HASTELLOY® C-22® alloy	N06022	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366 SB 462/B 462 SB 564/B 564	■	■	■	■	■					
HASTELLOY® C-22HS® alloy	N07022	B 983			●	●★	●	●★						
HASTELLOY® C-276 alloy	N10276	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366 SB 462/B 462 SB 564/B 564	■	■★	■	■★	■					
HASTELLOY® C-2000® alloy	N06200	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366 SB 462/B 462 SB 564/B 564	■	■	■	■	■					
HASTELLOY® G-30® alloy	N06030	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366 SB 462/B 462	■	■	■	■	■					
HASTELLOY® G-35® alloy	N06035	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366 SB 462/B 462	■	■	■	■	■					
HASTELLOY® HYBRID-BC1® alloy	N10362	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366	●	●	●	●	●					

High-temperature Alloys					Specifications					Available Forms				
Alloy	UNS	Seamless Pipe & Tubing	Welded Pipe & Tubing	Fittings	Tubing		Pipe		Fittings					
					Welded	Seamless	Welded	Seamless						
HAYNES® 25 alloy	R30605				●		●							
HAYNES® 188 alloy	R30188				●		●							
HAYNES® 214® alloy	N07214					●		●						
HAYNES® 230® alloy	N06230	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366	■	●	■	●	●					
HAYNES® 242® alloy	N10242	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366	●	●	●	●	●					
HAYNES® 263 alloy	N07263													
HAYNES® 282® alloy	N07208					●		●						
HAYNES® 556® alloy	R30556	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366	●		●		●					
HAYNES® 617 alloy	N06617	SB 167/B 167				●		●						
HAYNES® 625 alloy	N06625	AMS 5581 SB 444/B 444	AMS 5581 SB 704/B 704 SB 705/B 705	SB 366/B 366	■	■	■	■	●					
HAYNES® 625SQ® alloy	N06626		ASME Code Case No. 2276	ASME Code Case No. 2276	●	●	●	●	●					
HAYNES® 718 alloy	N07718	AMS 5589 AMS 5590 B 983			●	■	●	■						
HAYNES® HR-120® alloy	N08120	SB 407/B 407 SB 163/B 163	SB 514/B 514 SB 515/B 515	SB 366/B 366	■	■	■	■	●					
HAYNES® HR-160® alloy	N12160	SB 622/B 622	SB 619/B 619 SB 626/B 626	SB 366/B 366	■	■	■	■	●					
HAYNES® HR-235® alloy	N06235	ASTM B167	ASTM B619 ASTM B626	ASTM B366	●	●	●	●						
HASTELLOY® X alloy	N06002	SB 622/B 622	AMS 5588 SB 619/B 619 SB 626/B 626	SB 366/B 366	■	●	■		●					
HASTELLOY® X-750 alloy	N07750	AMS 5582 AMS 5583				■		■						

Titanium Alloys					Specifications					Available Forms				
Alloy	UNS	Seamless Pipe & Tubing	Welded Pipe & Tubing	Fittings	Tubing		Pipe		Fittings					
					Welded	Seamless	Welded	Seamless						
HAYNES® Ti-3Al-2.5V	R56320	AMS 4943 AMS 4944 AMS 4945 AMS 4946 AS5620 SB 338/B 338Gr9				■								

■ Available from stock in select sizes

● Available with approval and minimum quantities

★ Oil country tubulars

Your single source for alloys, tubular products, and fittings.

Haynes International is not only a leading supplier of a complete line of welded and seamless tubular products, but also is a leading producer of nickel, cobalt, titanium, and high-performance alloys. This unique combination provides a single source responsibility for the quality of both tubular products and alloys.

Our 200,000 square tubular facility houses a complete range of pilgering, welding and drawing equipment designed especially for the manufacture of diverse sizes of seamless and welded products in **HAYNES®**, **HASTELLOY®**, and titanium Ti-3AL-2.5V alloys.



Wash Tank

Our Manufacturing Equipment

- 9 Pilger mills
- 1 Draw bench
- 2 Continuous weld mills
- 1 Pipe mill
- 3 Vacuum furnaces
- 1 Continuous roller hearth furnace
- 5 UT testers for inspection



Weld Mill

Quality

Our products exceed the most rigorous specifications and are trusted worldwide to provide exacting service requirements. We use state-of-the-art inspection equipment and methods to provide process control and ensure product integrity. Samples are tested for conformance to the chemical composition requirements of the applicable specification.

Inspection and Nondestructive Testing

- Ultrasonic
- Eddy current
- Hydrostatic
- Pneumatic
- Liquid penetrant
- Visual (white glove test)
- Dimensional



Visual Inspection (White Glove Test)

Destructive Lab Testing

- Tensile
- Hydrostatic
- Flare
- Flange
- Flattening
- Metallographic analysis
- Corrosion
- Gas analysis
- CSR testing
- Bends

ISO 9001
ISO 14001
ISO 45001
AS9100
AD 2000-Merkblatt WO

PED:
Accredited Welding Processes
Accredited Welding Operators
Accredited Eddy Current Inspectors

Nadcap:
Nondestructive Testing
Heat Treating
Fluid Distribution Systems

Our highly-trained staff and technicians are dedicated to providing solutions that exceed your expectations. Whether you need on-demand delivery of finished goods, end-use technical support or a partner with a global presence, Haynes International provides value far beyond the alloys themselves. Our large inventory of alloys, product forms and sizes is available through our global service centers and sales offices.

Visit us at www.haynesintl.com for more information.