Exceptional Quality | Precision Manufacturing | Coatings | Value

CENTRAL WIRE INDUSTRIES

COLD HEADING WIRE / BAR STOCK

Fasten your business

A Leader In Wire Technology

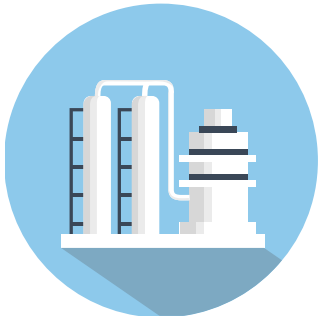
APPLICATIONS & MARKETS SERVED

Central Wire Industries is one of North America's foremost manufacturers of wire in specialty alloys tailored to their customers specific requirements. Our product range includes stainless steel, nickel, copper, brass, bronze, and zinc wires, in diameters ranging from 0.003 inches to 1.000 inches.

CWI's cold heading wire is used extensively in the manufacturing of security fasteners, blind rivets, bolts, screws and aerospace fastening systems. Your critical fastener applications require that our wire material meets exact dimensional, temper, and ductility specifications. Metallic and non-metallic coatings are available to meet varying conditions of heat and pressure use.

Aerospace

Automotive



Oil & Gas

Industrial

Security fasteners, blind rivets, bolts, screws and aerospace fastening systems

PRECISION FASTENERS FROM PRECISE CHEMISTRIES

Nominal Chemical Composition (%)*

		6 C Carbon	24 Cr Chromium	28 Ni Nickel	26 Fe Iron	29 Cu Copper	Otr Other	UNS
Austenitics	**302HQ**	.01	17	19	Bal.	3.5		S30430
	304	.04	18	9	Bal.			S30400
	304L	.02	18	10	Bal.			S30403
	305	.02	18	12	Bal.			S30500
	316	.04	17	11	Bal.		2 Mo	S31600
	316L	.02	17	12	Bal.		2 Mo	S31603
	316HQ	.01	17	10	Bal.	3.0	2 Mo	
	321	.04	18	10	Bal.		Ti-(5xC) min.	S32100
	347	.04	18	11	Bal.		.6 NB	S34700
Ferritics	**409Cb**	.02	11		Bal.		3-(Cb+Ta)	S40940
	430L	.02	16		Bal.			S43000
Martensitics	**410**	.12	12		Bal.			S41000
	420	.30	13		Bal.			S42000
	431	.18	16	2	Bal.			S43100
	440C	1.0	17		Bal.	.5Mo		S43100
Super Stainless	**A-286/660**	.04	14	25	Bal.		1.5 Mo-2 Ti	S66286
	13-8	.03	13	8	Bal.		2 Mo-1 A1	S13800
	17-4	.04	17	4	Bal.	4		S17400
	15-7	.07	15	7	Bal.			S15700
Nickel Alloys	**400**	.03		66	1	32		N04400
	K-500	.15		65	1	30	3 Al-1/2 Ti	N05500
	600	.01	16	72	9			N06600
	718	.03	18	52	18		3 Mo-1 Ti-5(Cb+Ta)	N07718
	X750	.07	15	71	8		1 NB - 2.5 Ti - .7A1	N07750

*Not for specification purposes. The grades shown above are manufactured to the latest AMS, ASTM and U.S Government specifications. Values listed reflect approximate nominal alloy content. The processing of the wire allows complete compliance with the RoHS directive.

COATINGS FOR EVERY APPLICATION

CWI's team of specialists sets industry standards for the production of high-performance cold heading wire and bar stock. The broad range of coatings and lubricants, coupled with superior metallurgical consistency, ensure peak performance under demanding conditions of heat and pressure.

Central Wire's molybdenum disulfide coating decreases the coefficient of friction as heading and extrusion forces increase. In effect, the harder you work, the harder it works for you. The copper-moly coating has a shiny black appearance, is securely bonded to the wire surface, and formulated specifically for the most difficult cold and warm-formed parts. For less complex applications, CWI's Techcote™ wire is unsurpassed for consistency.

Precoat Only:
Annealed.
Ready for heading
or skinpass.

Simple parts

Copper Moly:
Skinpassed
Ready for heading directly

Highest performance coating available for the most difficult engineered fasteners.

Moly Supercoat:
Annealed.
Ready for heading
or skinpass.

Molybdenum acts as lubricant

Copper Techcote™:
Skinpassed
Ready for heading directly

More difficult parts requiring high performance lubrication but with light residual for anti-packing, low dusting.

Techcote™ -Soap:
Skinpassed
Ready for heading directly

Light-duty forming for relatively simple parts.

Copper Precoat:
Annealed.
Ready for heading
or skinpass.

Copper acts as lubricant for moderately severe forming.

Moly Techcote™:
Skinpassed
Ready for heading directly
Available light or heavy moly

Soap coating enriched with molybdenum disulfide for extra protection during forming.

Copper Grease:
Annealed.
Ready for heading
or skinpass.

Copper acts as a lubricant.

Grease:
Skinpassed
Ready for heading directly

Light duty forming

Techcote™ is a registered trademark of Central Wire Industries Ltd.

EXCEPTIONAL QUALITY

ASSURANCE OF PRODUCT CONSISTENCY

Product testing at every step of manufacturing

- Mechanical testing measures tensile strength, yield strength, and elongation
- High energy impact testing for cold forging simulation
- Analysis verifies coating consistency and performance under pressure
- Microscopy evaluation for grain structure and surface quality
- Onsite positive material identification
- DFARS (Defense Federal Acquisition Regulation Supplement) compliance
- Special high quality protective paper and plastic shrink wrap available
- Heavy duty bar stock packaging
- Fast, reliable shipping, customized inventory and delivery programs
- Customer service: in person, on-line or over the phone

302HQ Grain Structure Detail

Grade verification via an x-ray fluorescence analyzer. (PMI)

Special high quality protective paper and plastic shrink wrap.

Material Sampling and polishing: product sample preparation for grain structure analysis and surface quality verification.

PRECISION MANUFACTURING

Meeting exact customer product dimensional, ductility, coating, and temper specifications requires specialized manufacturing and a broad array of precise production and processing equipment capabilities.

PRECISION COLD HEADING WIRE

Central Wire draws material for cold heading applications from 0.040 inches to 1.000 inches (1.02 mm to 25.4 mm). Sturdy double wrap packaging ensures that your wire arrives in excellent condition, ready for inline drawing or cold forming. CWI cold heading wire provides excellent formability and consistency during part forming.

PRODUCT OPTIONS

CWI maintains a complete array of production equipment for:

- Drawing to size
- Strand bright annealing
- Batch annealing furnace
- Acid pickling for oxide removal
- Inline or batch copper coating
- Rotary shaving or reverse scalping available

Batch annealing furnance

Moly and copper coating facilities provide a highly consistent coating thickness as well as large, heavyweight packages. The wire can be provided as bare copper, pre-coated, or skin pass drawn through grease, soap, or molybdenum disulfide for maximum lubricity.

Batch Anneal Furnaces heat austenitic stainless and nickel alloy wire at temperatures as high as 2,100 °F (1,149 C). The wire is then immersed in a cooling bath to complete the annealing process. Low temperature annealing furnaces are available for the 400 series of stainless and nickel alloys.

Drawing wire with any coating up to 1 inch diameter

Acid pickling for oxide removal

BAR STOCK

PRODUCTION CAPABILITIES

Central Wire manufactures bars up to 0.750 inches (19.05 mm) to your specifications for parameters such as tensile strength, Rockwell hardness, diameter tolerance, and length. Material is usually supplied to 12 foot (3.65 m) random lengths. When required, bars are supplied centerless ground to meet high custom tolerances.

The through-feed centerless grinding process ensures high productivity. The workpiece is fed through the grinding wheels completely, entering on one side and exiting on the opposite side. Material is bundled by individual lot to ensure full traceability back to the mill source.

PACKAGING

CWI offers various types of bar stock shipping packages to meet individual customer requirements. Heat treated wooden boxes are available upon request.

SHIPPING

CWI has multiple production and distribution facilities throughout North America. Customer specific programs available to fit your inventory needs and delivery requirements. CWI also offers customized stocking programs to meet specific production schedules.

Fast and reliable shipping


Through-feed centerless grinding for bar stock


Vendor custom inventory management programs



Various types of heavy duty packaging options for bar stock

Exceptional Quality **Precision Manufacturing** **Coatings** **Value**

A Leader in stainless steel & nickel alloy wires

CWI CENTRAL WIRE INDUSTRIES

Satisfaction Guaranteed!

VALUE FOR OUR CUSTOMERS

CWI has programs tailored to you, to ensure that your requirements are met with flexibility, innovation and experience.

Common stock sizes are:

A286 size range from .078" to .551"
302HQ size range from .054" to .525"

Additional sizes are available upon request.

CWI has the materials and resources to meet your custom requirements whether it is DFARS, RoHS, or Conflict mineral complaint.

MADE IN THE USA.

Supplying industry specialty wire including: Stainless Steel, Nickel, Copper, Brass, Bronze and Zinc

Help us create a ***Customer Specific Program*** to fit your inventory needs and delivery requirements!

If you have any additional questions about our products, check out the ***Live Chat Option*** on our website.

www.centralwire.com

CONTACT US TODAY!

CWI West Coast / 951-657-2105 **CWI Gulf Coast** / 800-325-5861 **CWI Midwest** / 800-435-8317 **CWI East** / 866-698-7811

AS 9100:2016 CERTIFIED SMITHERS QUALITY ASSESSMENTS CWI, PERRIS

DFARS Compliant

bsi. ISO 9001:2015 Quality Management

CENTRAL WIRE - Perth, Erin, Union, Fond du Lac, Lancaster & Dumas