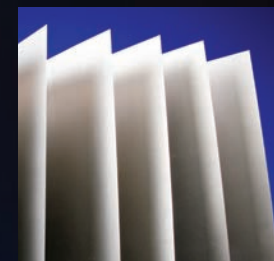
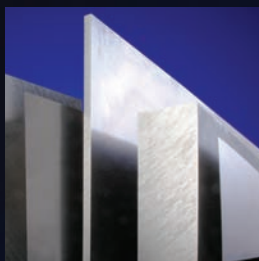




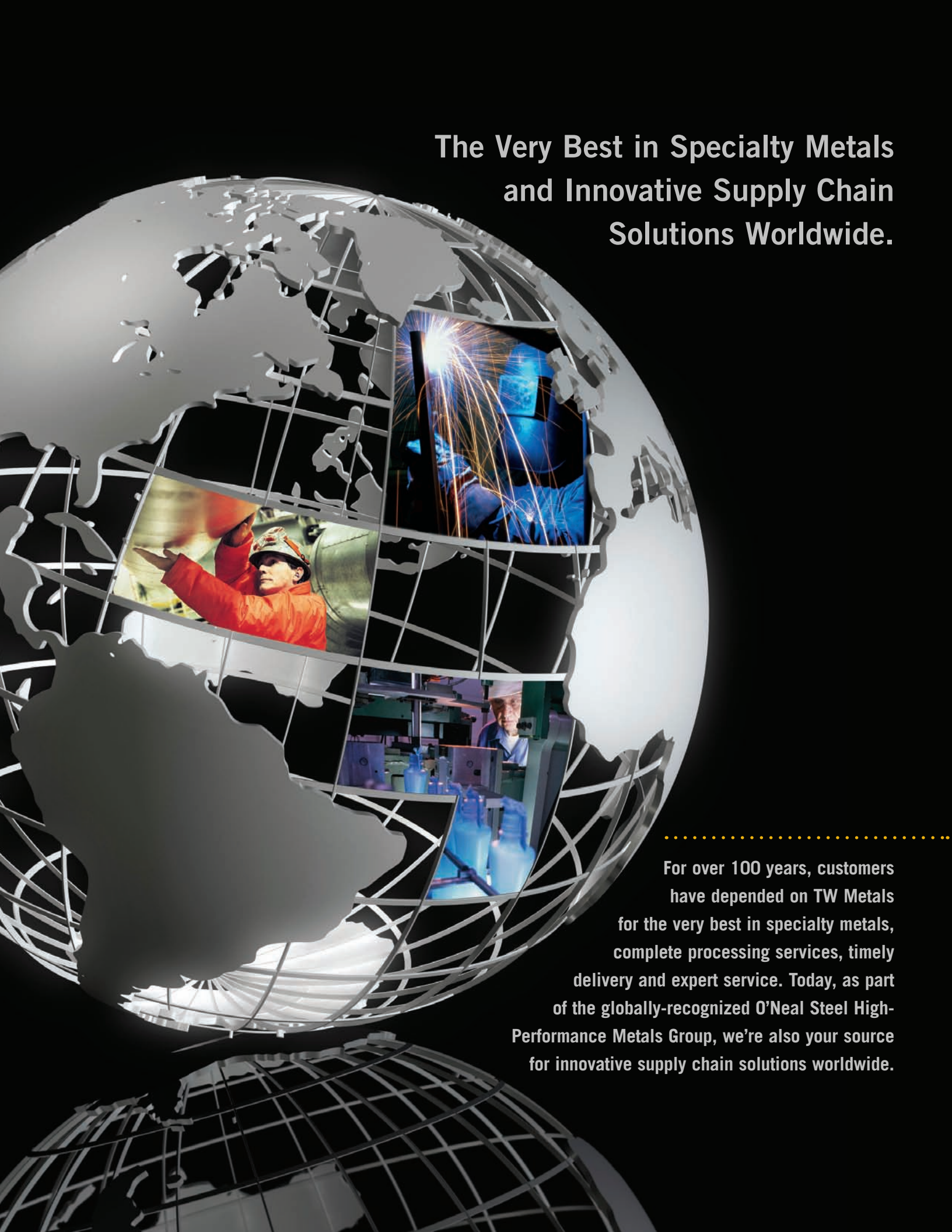
Proven Experience. Certified Quality. Dependable Service.



METALS

O'Neal High-Performance Metals Group

Specialty Metals Leadership. Supply Chain Innovation.



**The Very Best in Specialty Metals
and Innovative Supply Chain
Solutions Worldwide.**

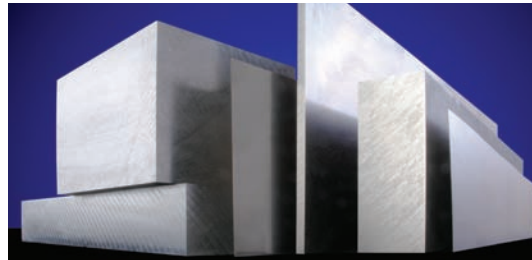
.....

For over 100 years, customers have depended on TW Metals for the very best in specialty metals, complete processing services, timely delivery and expert service. Today, as part of the globally-recognized O'Neal Steel High-Performance Metals Group, we're also your source for innovative supply chain solutions worldwide.

Make Us Your Source for Quality Products and Service.

As true experts in specialty metals, TW Metals is the source you can count on for a unique depth of expertise, superior information management systems and proactive solutions.

And because our warehouses worldwide are streamlined to handle specialty metals, you are assured of the products you need, precisely when you need them; including pipe, tube, bar, rod, sheet and plate in stainless, aluminum, nickel, titanium and other higher value alloys.



A Trusted Partner

But TW Metals is more than a distributor. We are a partner you can trust for sound advice and responsive service. We will get to know your company, your applications and your specialty metals needs. Then, we will develop a customized supply chain program that satisfies those needs – while giving you the convenience of working with a single source. As a result, we can help your company achieve its production and profitability goals like never before.

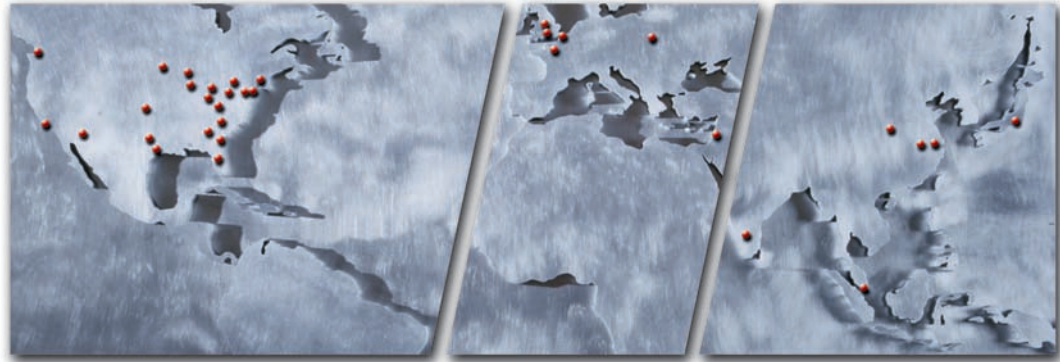
Why Settle for Less

In today's competitive market, you can't afford to compromise on quality, value and dependable delivery. So join the satisfied customers worldwide who rely on today's TW Metals.

No one is better at specialty metals and supply chain innovation.

Standard and Specialty Products for Every Customer Worldwide.

With an extensive inventory of standard and specialty items strategically inventoried around the world, TW Metals offers unparalleled service and delivery.



WORLDWIDE LOCATIONS

Agawam, MA
Atlanta, GA
Bangalore, India
Brussels, Belgium
Charleston, WV
Charlotte, NC
Chicago, IL
Cincinnati, OH
Cranbury, NJ
Dallas, TX
Haifa, Israel
Houston, TX
Los Angeles, CA
Milwaukee, WI
Minneapolis, MN
Orlando, FL
Philadelphia, PA
Phoenix, AZ
Pittsburgh, PA
Redditch, UK
Rochester, NY
Rzeszow, Poland
Saint Ay, France
Savannah, GA
Seattle, WA
Shanghai, China
Singapore
Southampton, UK
Suzhou, China
Toledo, OH
Tokyo, Japan
Wichita, KS
Xian, China

Complete Processing Capabilities.

TW Metals offers specialized processing facilities for all types of materials. These facilities produce accurate, straight and distortion-free components to the tolerances you require. Our processing capabilities include:

- ▶ Precision Sawing
- ▶ Automated Deburring
- ▶ Customized Packaging
- ▶ Fabricated Parts
- ▶ In-House Inspection
- ▶ Laser Cutting
- ▶ Lathe Tube Cutting
- ▶ Polishing
- ▶ Tube Assemblies
- ▶ Tube Shearing
- ▶ Vibratory Finishing
- ▶ Water Jet Cutting

...And many other services available.

Certified Quality System.

TW Metals is your assurance of finished products that satisfy your most demanding performance standards. Our fully trained certified inspectors perform incoming and outgoing inspection using state-of-the-art equipment. TW Metals insists that our suppliers meet the highest quality standards in their industries and conducts regular inspections to ensure compliance. We also maintain test certificates to allow full material traceability, along with a library of all current international standards and customer specifications.



Specialized Expertise for Specialized Markets.

▶ **Aerospace**

In the high-precision world of aerospace, TW Metals has earned a global reputation for providing top quality products, complete processing services and timely delivery. We offer a unique depth of industry expertise, proactive solutions, and superior information management systems.



▶ **Nuclear Materials Solutions**

The world’s leading nuclear energy providers and contractors count on TW Metals for a comprehensive product line, certified quality, an experienced sales and quality staff, with fast delivery from over 80 raw material stocking locations worldwide.



▶ **Government Business Unit**

Through integrated suppliers, our GBU offers vendor delivery to more than 500 Department of Defense customers and their allied partners, nationally and internationally. Our staff members, many of whom have military experience, have been specially trained to handle the exacting regulatory requirements and quality standards required by government customers.



▶ **Machined and Fabricated Components Group**

TW Metals selects “best-in-class” suppliers for all levels of fabrication, choosing among dozens of vendors in multiple countries. And for mission-critical components, we partner with qualified vendors to ensure a reliable supply.



▶ **Motorsports Alloys**

At top speed, you want your dreams riding the very best metals you can buy. That is why motorsport customers worldwide depend on TW Metals for full processing capabilities, certified quality, nationwide inventory and competitive prices.



The Best in Metals, Worldwide.

TW Metals carefully selects superior quality metals products from leading manufacturers. We also enjoy supply relationships with leading worldwide sources. Regardless of the manufacturer, TW Metals manages supplier qualification, order placement and delivery schedules. In addition, we coordinate with manufacturers to ensure on-time delivery.

TUBING



MATERIALS	GRADES/ALLOYS	SIZE RANGES
Aluminum Alloys	2024, 3003, 5052, 6061, 6063, 7075, Aircraft, Commercial, Construction, Structural, Mechanical, Drawn, Extruded, Ornamental, Rounds, Rectangles, Squares	Outside Diameters – 1/8" to 16" Wall Thickness' from .020" to 2.000"
Stainless Steel	303, 304, 304L, 316, 316L, 321, 347, 17-4, 15-5, Aircraft, Commercial, Heat Exchanger, Hollow Bar, Hypodermic, Instrumentation, Mechanical, Sanitary, Seamless, Welded and Drawn, As Welded, Ornamental, Round, Rectangular, Square (Mill and Polished Finish)	Outside Diameters – .031" to 12" Wall Thickness' from .004" to 2.000"
Nickel & High Performance Alloys	200, 400, 600, 601, 625, 800, 800H, 825, C276, 21-6-9, Alloy 20, Aircraft, Commercial, Seamless, Welded	Outside Diameters – .031" to 7" Wall Thickness' from .007" to 1-1/2"
Titanium	CP, 3AL-2.5V, 15-3-3-3, GR 2, 6AL-4V, Ducting	Outside Diameters – 1/4" to 8" Wall Thickness' from .016" to .260"
Carbon & Alloy Steel	Low Carbon, 1020, 1026, 4130, 4135, 4140, 4340, 8620, 52100, Aircraft, Mechanical, Hydraulic, ERW, DOM, Seamless, Welded, As Welded, Round, Rectangular, Square, Streamline, Structural Shapes	Outside Diameters – .125" to 12" Wall Thickness' from .020" to 3.000"

- Standard lengths Aluminum 12' • Standard lengths other than Aluminum 17/24' rls
- Purchased to Applicable industry specifications • Custom dimensional requirements available upon request

PIPE



MATERIALS	GRADES/ALLOYS	SIZE RANGES
Aluminum Alloys	5083, 5086, 6061, 6063, Construction Grades, Handrail, Drawn, Extruded, Port Hole Die, Seamless, Structural	Pipe Sizes – 1/8" NPS to 12" NPS Schedules from: 10 to 80
Stainless Steel	304, 304L, 316, 316L, 2205, 321, 347, 446, Seamless, Welded, As Welded, Brewery Quality	Pipe Sizes – 1/8" NPS to 30" NPS Schedules from 5 to XXH
Nickel & High Performance Alloys	200, 400, 600, 601, 625, 800, 800H, 800HT, C276, Alloy 20, Seamless, Welded	Pipe Sizes – 1/8" NPS to 8" NPS Schedules from 10 to XXH
Carbon & Alloy Steel	Black, Line, Seamless, Structural, ERW	Pipe Sizes – 1/8" NPS to 12" NPS Schedules from: 10 to 80

- Standard lengths Aluminum 24' rls • Standard lengths other than aluminum 17/24' rls
- Purchased to Applicable industry specifications

SHEET & PLATE



MATERIALS	GRADES/ALLOYS	SIZE RANGES
Aluminum Alloys	2014, 2024, 2024 Alclad, 6061, 7050, 7075, 7075 Alclad	From .016" thick to 8" thick
Nickel Alloys	625, HX, 718	From .016" thick to .093" thick
Titanium	CP, 5AL-2.5SN, 6AL-4V, 6AL-6V-2SN	Available in standard thickness x width x length dimensions

- Industry standard widths and lengths • PVC Coatings available upon request • Applicable industry specifications



Additional Products & Services Provided on a Customer Specific Basis.



A Comprehensive Resource Guide

The TW Metals Resource Guide provides comprehensive information on our products and services, tailored to your industry and requirements. In this guide, you'll find general product descriptions, detailed technical data, and much more – all organized for quick access and easy referencing. To order your free copy, contact your salesperson.

ROD, BAR & WIRE



MATERIALS	GRADES/ALLOYS	SIZE RANGES
Aluminum Alloys	1100, 2011, 2024, 2219, 6061, 6063, 6101, 7075	Rounds – 1/8" to 16" Hex – 1/4" to 2-3/4" Squares – 1/4" to 6" Flats – 1/8" to 5"
Stainless Steel	303, 304, 304L, 309S, 316, 316L, 321, 347, 410, 416, 17-4, 15-5, 13-8, Equal & Unequal Angles	Rounds – 1/8" to 16" Hex – 1/4" to 2-1/2" Squares – 1/4" to 3" Flats – 1/8" to 3" Edge Conditioned
Nickel & High Performance Alloys	200, 330, 400, 600, 601, 625, 718, X750, 800, 800H, 800AT, 825, C276, HX, K500, Alloy 20	Rounds – 3/16" to 11" Edge Conditioned
Titanium	6AL-4V	Rounds – 3/8" to 6-1/4"
Carbon & Alloy Steel	300M, 4130, 4140, 4150, 4340, 6150, 8620, 8740, 9310, 52100	Rounds – 1/8" to 12" Hex – 1/4" to 1-1/8"

• Custom flat bar widths and lengths available upon request • Standard lengths 12' long • Applicable industry specifications

EXTRUSIONS



MATERIALS	GRADES/ALLOYS	SIZE RANGES
Aluminum Extrusions	1100, 2014, 2024, 2224, 5052, 5083, 5086, 6061, 6063, 7050, 7075, 7150, 7178	Aircraft Extrusions by Mfg Part Numbers, Angles, Architectural, A.N.D., H-Beams, I-Beams, Channels, Structural, Shapes, Wide Flange, Zee

• Titanium, stainless steel and alloy steel extrusions available upon request • Applicable Commercial and Aerospace industry specifications

SPECIALITY PRODUCTS



MATERIALS	GRADES/ALLOYS	SIZE RANGES
Fittings	Stainless Steel, Aluminum, Nickel, Titanium	CryoFit™, CryoLive™, Butt Weld & Threaded, Flanges, Heads
Hinge Pin Stock	Aluminum, Stainless Steel, Titanium	Standard Aircraft sizes applicable
Roll Formed Shapes	Aluminum	Aircraft Applications

• Applicable Commercial and Aerospace industry specifications

Specialists Who Know Your Business.

Your TW Metals representative is a professional who is backed by years of training and experience. As a result, they can provide proactive service and advice to help you succeed. We have extensive experience in a wide range of industries, including:



- ▶ Aerospace
- ▶ Agricultural Equipment
- ▶ Aircraft MRO
- ▶ Automotive
- ▶ Chemical
- ▶ Chemical Processing
- ▶ Communications Equipment
- ▶ Food/Beverage/Dairy
- ▶ Healthcare
- ▶ Instrumentation
- ▶ Lawn and Garden
- ▶ Marine
- ▶ Metal Fabricators
- ▶ Motorsports
- ▶ Nuclear
- ▶ Oil Production/Oil Tool
- ▶ Oil Refining/Petrochemical
- ▶ Original Equipment Manufacturers
- ▶ Pharmaceutical
- ▶ Pulp and Paper
- ▶ Recreation/Leisure
- ▶ Steel Making
- ▶ Utilities



This high level of industry expertise translates into cost-effective solutions that help you solve everyday production challenges.

Web-based Ordering and Account Management.

Through our online ordering system, our customers are able to place and track orders, access detailed product and inventory data, and view account history.

We continuously update our site through ongoing enhancements that provide more detailed catalog descriptions and online pricing capabilities.



Contact TW Metals, Today.

For the best in world-class materials, innovative solutions, service, and quality, make TW Metals your preferred provider. For more information or a no-obligation consultation, call today or visit our website at twmetals.com.



O'Neal High-Performance Metals Group

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Email: sales@twmetals.com ■ twmetals.com