

**PCC ROLLMET.
STANDING BEHIND
YOUR MISSION.**



PCC Rollmet's unique Cold Roll Extrusion techniques provide aerospace assemblies an advantage over conventional manufacturing methods.

Since the inception of the Space Shuttle Program, PCC Rollmet has been involved in the development and manufacture of Man-Rated Space Products. In addition to this successful NASA experience, PCC Rollmet has entered the Satellite Launch Industry producing space flight hardware for emerging cost competitive launch applications.

UNITED LAUNCH ALLIANCE DELTA IV

- External fuel duct assemblies

SPACE SHUTTLE

- Orbiter main thrust and bipod attachment struts
- LO2 and GH2 feed lines
- LO2 and GH2 diffuser assemblies

Mission critical components are produced utilizing years of experience and advanced state-of-the-art capabilities. Our unique Cold Roll Extrusion manufacturing techniques afford the customer advantages over conventional manufacturing methods.

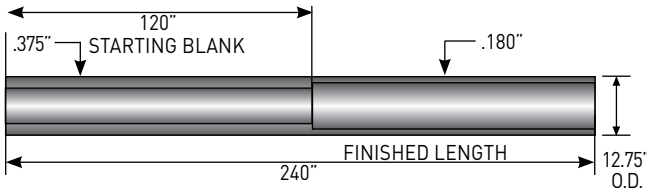
PCC ROLLMET BENEFITS

- Single source supplier for precision cylindrical welded assemblies
- Precision GTAW welding to 34 feet.
- Close tolerance, thin-walled cylinders unattainable by machining are routinely Cold Roll Extruded in materials such as:
 - Aluminum alloys, stainless steels, high strength steels, nickel-based alloys, and other high weight-to-strength ratio materials
- Ability to vary wall thicknesses resulting in:
 - Localized thickened areas for attachment points and weld joints
 - Thinner areas to maximize structural weight efficiency



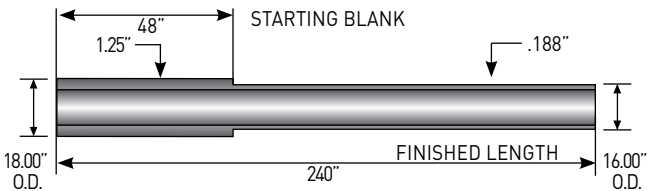
PCC Rollmet, Inc. manufactures seamless pipe using two methods of Cold Roll Extrusion.

INTERNAL COLD ROLL EXTRUSION. The starting hollow is placed inside a one piece, cylindrical die ring. The rollers inside the starting hollow are displaced radially outward until they bite into the inside diameter of the hollow surface a controlled amount. The hollow outside diameter remains constant while the rollers produce a thinner wall with a corresponding increase in I.D. and hollow length in a single pass.



Internal Cold Roll Extruded cylinder typical starting blank, demonstrating material economy and axial growth in length while keeping the O.D. constant during Internal Cold Roll Extrusion.

EXTERNAL COLD ROLL EXTRUSION. External Cold Roll Extrusion utilizes a mandrel over which the hollow is placed. Two (2) annular die rings are brought into position on the hollow. The mandrel and hollow are rotated while the die rings progress axially through a series of passes. This simultaneously reduces wall thickness and O.D. while the hollow grows in length. The I.D. remains constant.



External Cold Roll Extruded cylinder typical starting blank, demonstrating material economy and axial growth in length while keeping the I.D. constant during External Cold Roll Extrusion.



CURRENT AND RECENT CUSTOMERS INCLUDE:

- Aerojet Rocketdyne
- United Launch Alliance
- The Boeing Company
- AAR Corporation
- Alliant Tech Systems

QUALITY CERTIFICATIONS

- AS9100/ISO9001
- PED approved to Directive 97/23/EC
- ISO 9001 approved
- AD2000-Merkblatt W0 approved

PCC ROLLMET for over 50 years, has delivered high quality, precision seamless tubular assemblies to the military and aerospace industries. Backed by the global support of the PCC Energy group of companies, we provide on time delivery and material that meets all critical specification requirements.

FOR MORE INFORMATION CONTACT:

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