

**SPECIFY THE COLD ROLL EXTRUSION
ADVANTAGES OF PCC ROLLMET.**

Rollmet seamless pipe and tube sets the standard for large diameter high nickel alloy pipe and tube for the power, petrochemical and nuclear industries.

COLD ROLL EXTRUSION METHODS

- Strengths of Cold Roll Extruded solid-solution alloy pipes are usually greater than those of conventional manufactured pipe/tube because of the fine grain size achieved through cold working and recrystallization
- Cold Roll Extrusion, as a net process, achieves final pipe dimensions through metal displacement
- Cold Roll Extrusion is performed at ambient room temperature
- Cold Roll Extrusion utilizes precision nickel alloy starting blanks or extruded preforms as starting material for all nickel alloy production
- Isotropic properties achieved either as a cold worked tubular or in a finished annealed tubular
- Enhanced corrosion resistance achieved through ASTM 5 or finer grain size

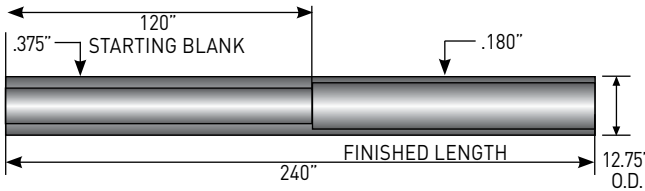
PRODUCTION DETAILS

- Seamless Nickel Alloy pipe to ASTM/ASME B/SB 161, 163, 165, 167, 407, 423, 444, 622 & 729 specifications
- Seamless Nickel Alloy pipe meets ASTM/ASME B/SB829 dimensional requirements for cold worked pipe and tube
- Seamless Nickel Alloy pipe furnished in cold worked and or cold worked annealed condition
- 15 ft to 24 ft single random lengths – some sizes in 10 to 15 ft lengths
- Up to 40 ft lengths in CRA Casing and Line Pipe
- Minimum 35% cold work
- 50 years of manufacturing experience



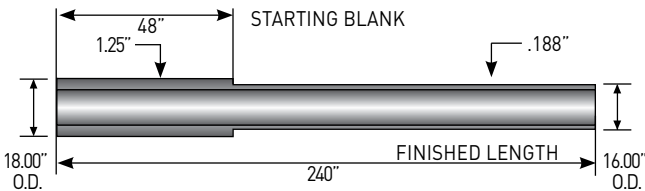
PCC Rollmet, Inc. manufactures nickel seamless pipe using two methods of Cold Roll Extrusion.

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.



MANUFACTURING RANGE

PIPE SIZES	OUTSIDE DIAMETERS	ASA PIPE SCHEDULE*						
		5S	10S	10	20	30	40S/STD	80S/XH
6"	6.625	.109	.134	.134			.280	.432
8"	8.625	.109	.148	.148	.250	.277	.322	.500
10"	10.750	.134	.165	.165	.250	.307	.365	.500
12"	12.750	.156	.180	.250	.250	.330	.375	.500
14"	14.000	.156	.188	.250	.312	.375	.375	.500
16"	16.000	.165	.188	.250	.312	.375	.375	.500
18"	18.000	.165	.188	.250	.312	.438	.375	.500
20"	20.000	.188	.218	.250	.312	.500	.375	.500
22"	22.000	.188	.218	.250	.375	.500	.375	.500
24"	24.000	.218	.250	.250	.375	.562	.375	.500
26"	26.000	--	.250	.312	.500	.625	.375	.500

* Wall sizes available up to 1.5" on certain pipe sizes



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 pipe in nickel, stainless steel, duplex stainless, and ferritic alloys. 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, coupled with practical solutions for all your seamless piping needs.

FOR MORE INFORMATION CONTACT:

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