



MATERIAL TEST REPORT

Steel & O'Brien Manufacturing

Certificate Date:
3/8/2018

Part Size & Description:

31-14MP - CLAMP CONCENTRIC REDUCER - 4" X 3"

SOB Part Number: 31-14MP-4X3-316

Order Number: PO189808

Part Number:

HEAT #	Material	Material Standards
150329T04	DUAL 316/316L	ASME SA479, ASTM A182, EN 10204 3.1
154579	DUAL 316/316L	ASTM A269, ASTM A270, EN 10204 3.1

Chemical Properties

HEAT #	Carbon	Manganese	Phosphorus	Sulfur	Silicon	Chromium	Nickel	Nitrogen	Molybdenum
150329T04	0.026%	1.05%	0.035%	0.003%	0.38%	16.21%	10.05%	0.038%	2.1%
154579	0.023%	1.37%	0.038%	0.003%	0.53%	16.15%	10.06%	NA	2.05%

Physical Test Results

HEAT #	Yield 0.2		Tensile		Hardness	Elongation %	Reduction %
	N/(mm sq)	PSI	N/(mm sq)	PSI			
150329T04	280	40611	580	84122	86 HB	51%	65%
154579	260	37710	510	73969	82 HB	45%	N/A

Finish Code	ID Finish (microinch)	OD Finish (microinch)	ASME BPE SF Code
FC	20 Ra Max Mechanical Polish	Unpolished	SF1
PL	20 Ra Max Mechanical Polish	32 Ra	SF1
PD	15 Ra Max Electropolish	Unpolished	SF4
PM	15 Ra Max Electropolish	32 Ra	SF4



Steel & O'Brien certifies that the information is a true representation of the data that has been furnished by our suppliers. We have no knowledge of mercury or radioactive material used in the melting or processing of steel used in products sold by Steel & O'Brien. This certificate was made by use of a computer system and is valid without signature.

Approved by:
Victoria Potts