

PRODEC® 316/316L Reduces Production Time by 50%



Specifications

UNS: S31600, S3103 **W. Nr./EN:** 1.4401, 1.4404 **AMS:** 5648, 5653 **ASTM:** A276, A479

Chemical Composition, %

	Ni	Cr	C	Mn	P	S	Si	Mo	N	Fe
MIN	10.0	16.0	-	-	-	0.015	-	2.0	-	-
MAX	14.0	18.0	0.03	2.0	0.04	0.03	0.75	3.0	0.1	balance

Case History

For over 25 years, AAA Machine Shop in Fletcher, North Carolina, has provided machining and fabrication services to various customers. Their diverse capabilities include CNC milling and turning, O.D. grinding, gear cutting, and precision welding.

AAA Machine Shop switched from standard 316/316L to PRODEC 316/316L due to its enhanced machining characteristics. The PRODEC material is supplied by Rolled Alloys and processed by turning, grooving, drilling, and tapping to manufacture fluid regulators. While processing the PRODEC bars, AAA Machine Shop achieved higher cutting speeds and material feeds, resulting in a 50% reduction in production time and extended tool life.

"The PRODEC bar could run at even faster speeds"

Dean Preston
Owner, AAA Machine Shop

When AAA Machine Shop received their first PRODEC 316/316L bar, they initially processed it with standard 316/316L tooling specifications. At lower speeds, they experienced less than optimal long stringy chips. The machinist progressively increased feeds and speeds and noted improved chip breaking. AAA Machine Shop reported the following increase in productivity while processing PRODEC 316/316L:

	Standard 316/316L	PRODEC 316/316L
Cutting Speed, sfpm	550	700
Feed, IPR	0.007	0.010
Cut Depth, in	0.020	0.040

Dean Preston (Owner) states, "The PRODEC bars could run at even faster speeds. Due to our part dimensions, we have a relatively small area to hold in our chucks. This limits how aggressive we can be." By choosing PRODEC 316/316L, part production time has been reduced by 50%, and tool life has increased.

Rolled Alloys inventories PRODEC 316/316L from 1/4" to 14" in diameter at locations throughout the United States, Canada, Europe, and Asia. PRODEC quality round bars are also available from Rolled Alloys in 303 and 304/304L stainless steels.