

## TP 317L • 1.4438

Grade 1.4438 / TP317L is a stainless chromium nickel molybdenum steel. Compared to 1.4435 / TP316L, this grade has a higher corrosion resistance and is therefore suitable for the use in highly-corrosive environments with chlorides and halides.

Material grade	Norm	Chemical composition • mass in %									
		C	Si	Mn	P	S	Cr	Ni	Mo	Ti	Sonst.
		max.	max.	max.	max.	max.	min. – max.	min. – max.	min. – max.		
1.4438	DIN 10088-3	0,030	1,00	2,00	0,045	0,030	17,50 - 19,5 0	13,00 - 16,0 0	3,00 - 4,00	-	N 0,10 max .
TP317L	ASME SA / AS TM A 213	0,350	1,00	2,00	0,045	0,030	18,00 - 20,0 0	11,00 - 15,0 0	3,00 - 4,00	-	-

Material grade	Norm	Mechanical properties and heat treatment					
		Rp 0,2 [MPa]	Rp 1,0 [MPa]	Rm [MPa]	A [%]	Härte	Wärmebehandlung
		min.	min.	min. – max.	min	HRB max.	
1.4438	DIN 10088-3	200	235	500 - 730	40	-	lösungsgeglüht
TP317L	ASME SA / AS TM A 213	205	-	515	35	90	lösungsgeglüht

Tolerances				
AD - Rohr	AD	WD	special WT	ID
ab Ø4,550 mm	±0,050 mm	±0,150 mm	±0,100 mm	X
ab Ø9,530 mm	±0,050 mm	±0,100 mm	±0,080 mm	±0,050 mm
ab Ø30,001 mm***	±0,100 mm	±0,150 mm		±0,050 mm
*** to max. Ø44,500 mm				
- Tolerances acc. to DIN EN 10305-1 can be confirmed to OD 30mm				
- Tolerances acc. to DIN EN ISO 1127 / DIN EN 10216-5 can be confirmed				
- Tolerances acc. to ASTM can be confirmed generally				

Abmessungsbereich\*

Abmessungsspektrum

AD	WD	[mm]	0,89	1,00	1,20	1,24	1,65	1,82	2,00	2,11	2,30	2,35	2,50	2,60	2,64	2,77	2,87	3,00	3,20	3,25	3,60	3,85	3,91	4,00	4,40	5,50	6,35	7,00
[mm]	[inch]	[inch]	0,035			0,048	0,065	0,072		0,083		0,093			0,104	0,109	0,113		0,126	0,128			0,154				0,250	
6,00																												
6,35	0,250																											
7,00																												
7,50																												
8,00																												
9,00																												
9,53	0,375																											
10,00																												
11,00																												
12,70	0,500																											
13,00																												
15,00																												
15,88	0,625																											
16,00																												
16,80																												
17,15	0,675																											
18,00																												
19,00																												
19,05	0,750																											
20,00																												
21,34	0,840																											
22,00																												
22,23	0,875																											
23,00																												
25,00																												
25,40	1,000																											
26,00																												
26,67	1,050																											
28,00																												
30,00																												
31,75	1,250																											
32,00																												
33,40	1,315																											
36,00																												
38,10	1,500																											
42,00																												
44,50	1,750																											

