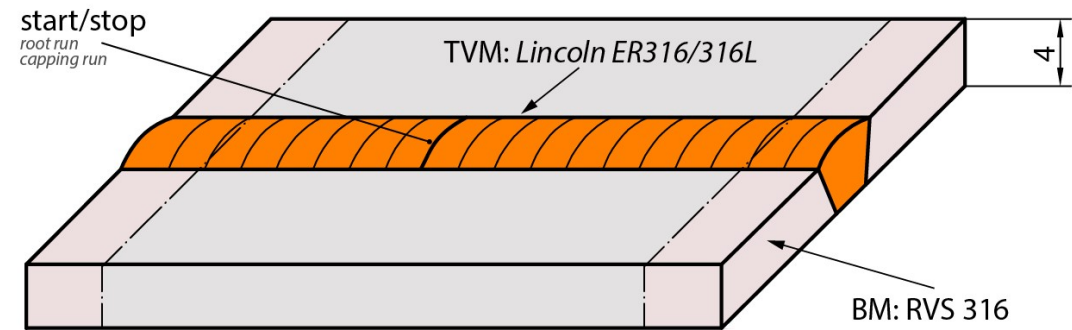


Voorbeeld oefening



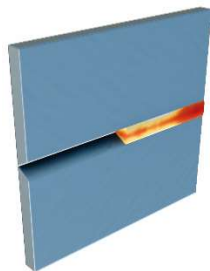
Algemene informatie

- ▶ Fabrikant: Boiler construct N.V.
- ▶ pWPS nummer: pWPS 141-4-PA-8.1
- ▶ WPQR-nummer: PQR 141-4-PA-8.1



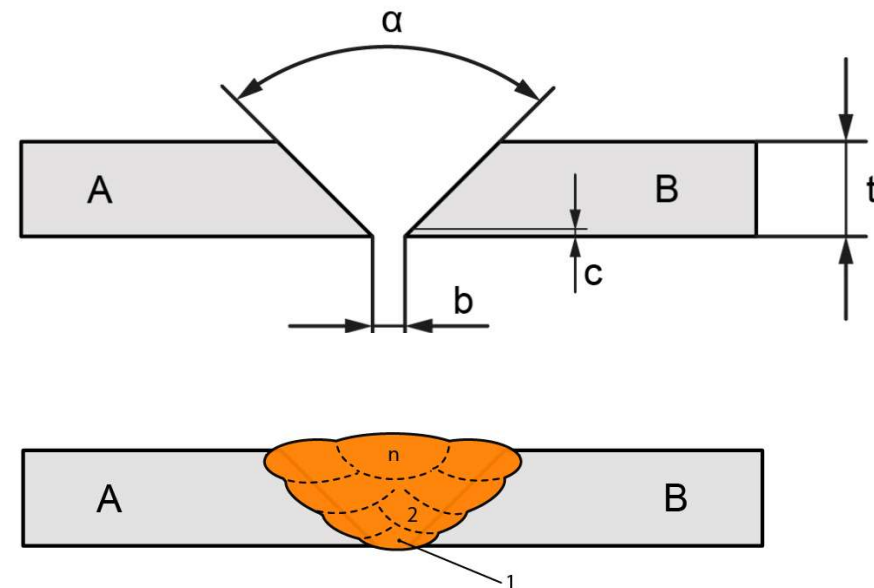
Lasgegevens:

- ▶ Lasproces: TIG-lassen (DC-)
- ▶ Basismateriaal: RVS 316, $t = 4$ mm
- ▶ Toevoegmateriaal: ER316/316L
- ▶ Diameter toevoegmateriaal: 2,4 mm
- ▶ Laspositie:



- ▶ Handeling: handmatig
- ▶ (lasser: Billy Lassers)

Lasnaadvoorbereiding: (meerdere lagen)



▶ Overige lasproefgegevens:

- ▶ Beschermgas: 100% Argon (15l/min)
- ▶ Backinggas: 100% Argon
- ▶ 1^{ste} laspas:
 - ▶ Spanning: 20 V
 - ▶ Stroom: 100 A
 - ▶ Voortloopsnelheid: 150 mm/min
- ▶ 2^{de} laspas:
 - ▶ Spanning: 20 V
 - ▶ Stroom: 180 A
 - ▶ Voortloopsnelheid: 175 mm/min

▶ Warmtebehandeling:

- ▶ Voorwarmen: nee
- ▶ Kamertemperatuur: 22°C
- ▶ Tussenlaagtemperatuur: 250°C
- ▶ Waterstofarm gloeien: n.v.t.
- ▶ Warmtebehandeling na het lassen: n.v.t.

LNM 316LSi

CLASSIFICATION

AWS A5.9	ER316LSi	A-Nr	8	Mat-Nr	1.4430
ISO 14343-A	G 19 12 3 LSi	F-Nr	6		
		9606 FM	5		

GENERAL DESCRIPTION

Solid wire with extra low carbon for welding stainless CrNiMo-steels
See also LNM 316L, high silicon for improved wettability

WELDING POSITIONS (ISO/ASME)



PA/1G

PB/2F

PC/2G

PD/4F

PE/4G

PF/3Gu

SHIELDING GASES (ACC. ISO 14175)

M11	Mixed gas Ar+ 0.5-5% CO ₂ + 0,5-5%H ₂
M12	Mixed gas Ar+ 0.5-5% CO ₂
M13	Mixed gas Ar+ 0.5-3% O ₂

APPROVALS

ABS	BV	DNV	GL	LR	TÜV
+	+	+	+	+	+

CHEMICAL COMPOSITION (W%) TYPICAL WIRE

C	Mn	Si	Cr	Ni	Mo
0.01	1.8	0.8	18.5	12.2	2.5

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Shielding gas	Condition	0.2% proof strength	Tensile strength	Elongation	Impact ISO-V(U)		
			[N/mm ²]	[N/mm ²]	[%]	+20°C	-120°C	-196°C
Typical values	M12	AW	452	580	30	150	70	44

EXAMPLES OF MATERIALS TO BE WELDED

Steel grades	EN 10088 -1/-2	EN 10213-4	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Extra low carbon [C < 0.03%]					
	X2CrNiMo17-12-2		1.4404	(TP)316L CF-3M	S31603 J92800
	X2CrNiMo18-14-3		1.4435	(TP)316L	S31600
	X2CrNiMoN17-11-2		1.4406	(TP)316LN	S31653
	X2CrNiMoN17-13-3		1.4429		
Medium carbon [C > 0.03%]					
	X4CrNiMo17-12-2		1.4401	(TP)316	S31600
	X4CrNiMo17-13-3		1.4436		
	GX5CrNiMo19-11		1.4408	CF 8M	J92900
Ti-,Nb stabilized					
	X6CrNiMoTi17-12-2		1.4571	316 Ti	S31635
	X6CrNiMoNb17-12-2		1.4580	316 Cb	S31640
	X6CrNiNb18-10		1.4550	(TP)347	S34700
		GX5 CrNiNb 19-10	1.4552	CF-8C	J92710

PACKAGING AND AVAILABLE SIZES

Diameter [mm]	0.8	1.0	1.2	Other sizes and packaging on request
5 kg plastic spool S200	X	X		
15 kg spool B5300	X	X	X	

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