

Material Test and Inspection Certificate EN 10204 3.1

[A03] Zeugnis-Nr. / Certificate No.

Muster

[Z02] Ausstellungsdatum / Issuing date

Unna, 17.03.2026

[A01] Nirotec GmbH & Co. KG

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[A06] Kunde / Customer

[B04] Lieferzustand / Condition of delivery

1060°C / Luft / Air - 780° / Luft / Air

[A04] Herstellerzeichen / Manufacturer Stamp

[Z03] **NT** **QS**

[A08] Auftrags-Nr. / Works-No.

Halbzeug-Hersteller / Steel producer

[A07] Bestellung-Nr. / Order No.

[B02] Werkstoff, Werkstoff-Nr. / Material, Material No.

319 / A/SA 234 WP91

Pos. / Item	[B08] Stückzahl / Quantity	[B01] Ident No. / Gegenstand / Object	Schmelzen-Nr. / Heat No.	Probe-Nr. / Test No.	Gestempelt mit / Marking with
1	10	[B09] ELL319003300XS090SML 2760545 ELBOW 90° LR ASME B 16.9 s A/SA 234 WP91 1" XS	203120		

[C70]	[C71]	[C72]	[C73]	[C74]	[C75]	[C76]	[C77]	[C78]	[C79]	[C80]	[C81]	[C82]	[C83]	[C84]	[C85]	[C86]	[C87]	[C88]	[C89]	[C90]
Analyse Werte / chemical analysis	C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Cu %	V %	Nb %	Al %	Ti %	N %	Co %	B %	Sn %	W %		
Schmelzanalyse / heat analysis	0,091	0,330	0,440	0,0150	0,0040	8,320	0,880	0,140	0,040	0,220	0,067	0,006	0,002	0,050	0,000	0,0003	0,000	0,010		
Stückanalyse / product analysis	0,000	0,000	0,000	0,0000	0,0000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,0000	0,000	0,000		

[C10]	[C02]	[C03]	[C11]	[C12]	[C13]	[C14]	[C40]	[C02]	[C03]	[C41]	[C42]	[C30]
Zugversuch / Tensile Test	Probe-Lage / Pos. of sample	Temp. / Temp. °C	Dehngrenze / yield strength Rp 0,2% N/mm²	Dehngrenze / yield strength Rp 1% N/mm²	Zugfestigkeit / Tensile Strength N/mm²	Dehnung / Elongation 2" %	Kerbschlagbiegeversuch / Impact Test	Probe-Lage / Pos. of sample	Temp. / Temp. °C	Querschnitt / Cross section cm²	Kerbschlagarbeit / Impact values Joule	Härteprüfung / Hardness test
Sollwerte / Requirements	L	20	> 415		> 620	> 20						[C33 - C34]
Grundwerkstoff / Base material	L	20,00	465,00		645,00	34,00						100 % HB 213-221

[D02] Spektralanalyse Verwechslungsprüfung: Ohne Beanstandung. Positive material identification: Without objection.
X

[B03] Anforderungen / Requirements:

[D03] Besichtigung, Maßkontrolle und Kennzeichnungsprüfung: Ohne Beanstandung. Die gestellten Anforderungen sind erfüllt. | Visual inspection, dimension and marking control: Without objection. The requirements are fulfilled.
X

[D53] ASTM A/SA 335, ASTM A/SA 234, ASME SEC. II Part A, NACE MR 0175/0103, seamless, mechanical testing acc. to SA 370, hot formed, normalized and tempered, 100 % MT-Test acc. to ASTM E709: w.o., 100 % US-Test acc. to ASTM E213: w.o.

[D51] Interkristalline Korrosion EN ISO 3651-2 A-T1 / ASTM A 262 Pr. E: Ohne Beanstandung | Intergranular corrosion test acc. to EN ISO 3651-2 / ASTM A 262 Pr. E : Without objection.

Approvals: Bursting Test acc. to ANSI B 16.9; ISO 9001-2015; PED 2014/68/EU; AD2000-W0; KTA 1401, 3201.1, 3201.3, 3211.1, 3211.3; Canada Registration: Fittings, Elbows, Flanges and GOST TP TC_032/2013

[D52] ASME Code Sect. II, Part A, latest edition, SA-370/SA-370M, SA-960/SA-960M. The material was sampled, tested and inspected in acc. to this specification. The requirements are fulfilled.
X

Abnahmebeauftragter / Inspection Representative: