



VALVE TEST CERTIFICATE / CERTIFICATE OF CONFORMANCE

EF

Certificate No. : 120195-3

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VALVE INFORMATION

S.O.#/P.O.#	12853 / P388895	S.O. ITEM #	7
VALVE TYPE	TRUNNION BALL VALVE	MODEL NUMBER	EB10F063TA01E3VG40
SIZE	10"	SERIAL NUMBER	E 12019503-1
CLASS	600	QUANTITY	1

VALVE DETAIL

BODY/ADAPTER	ASTM A105N	BALL	ASTM A105N+ENP
STEM	ASTM A105N+ENP	SUPPORT PLATE	ASTM A105N+ENP
SEAT INSERT	MOLON	SEAT	ASTM A105N+ENP
SEALS	GRAPHITE	O-RINGS	VITON B
BOLTS	A193 B7M	NUTS	A194 2HM

VALVE DESIGN CODE

DESIGN CODE:	<u>ASME B16.34</u>	YES	DESIGN CODE:	<u>ASME B16.5</u>	YES
	<u>API 6D / ISO 14313</u>	YES		<u>API 607 Rev 5</u>	YES
	<u>ASME B16.10</u>	YES		<u>CSA Z662 Region 3</u>	YES
	<u>API 608</u>	YES			
	<u>CSA Z245.15</u>	YES		<u>NACE MR0175/ISO 15156</u>	YES

VALVE TEST RESULTS

TEST PERFORMED	CODE	HYDRO SHELL	HYDRO SEAT	AIR SEAT	BACK SEAT	
PRESSURE- PSI/ MPA /BAR		MPA/PSI	MPA/PSI	MPA/PSI	MPA/PSI	-
TEST PRESSURE	API 6D	15.6/2250	11.4/1650	0.55/80	-	-
DURATION (MINUTES MIN.)	API 6D	5	5	5	-	-
TEST RESULTS		PASS	PASS	PASS	-	-
DIMENSIONAL CHECK	B16.10	PASS	-	-	-	-
VISUAL	MSS-SP-55	PASS	-	-	-	-

We certify all valves indicated in this certificate are manufactured, inspected and tested in accordance with standards noted.



DATE: July 24, 2015

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TRACEABILITY SHEET

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SERIAL NO.	BODY HEAT #	ADAPTER HEAT #	BALL HEAT #	STEM HEAT #	Support Plate HEAT#	BOLTING HEAT#	NUT HEAT#	
1	E12019503-01	K1732	K1732	K0410	K0952	K3317	J21307082	F2040575
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MATERIAL TEST REPORT - EN10204 3.1

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CHEMICAL ANALYSIS

Component	Material	Heat-No.	C (%)	Mn (%)	Si (%)	Cr (%)	Ni (%)	Mo (%)	P (%)	S (%)	Cu (%)	V (%)	Nb (%)	Residual Elements	Carbon Equivalent
	A105N REV 11	Requirements	≤0.35	0.60-1.05	0.10-0.35	≤0.30	≤0.40	≤0.12	≤0.035	≤0.040	≤0.40	≤0.08	—	≤1.00	≤0.48
BODY	A105N	K1732	0.180	0.900	0.260	0.020	0.010	<0.01	0.008	0.006	0.010	<0.01	—	0.04	0.34
ADAPTER	A105N	K1732	0.180	0.900	0.260	0.020	0.010	<0.01	0.008	0.006	0.010	<0.01	—	0.04	0.34
BALL	A105N	K0410	0.210	0.960	0.220	0.070	0.080	<0.01	0.012	0.011	0.009	<0.01	—	0.16	0.39
STEM	A105N	K0952	0.210	0.990	0.270	0.013	0.011	0.005	0.013	0.007	0.008	0.008	—	0.07	0.38
SUPPORT PLATE	A105N	K3317	0.200	0.870	0.230	0.040	0.050	<0.01	0.022	0.016	0.130	<0.01	—	0.22	0.37
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Component	Material	Heat-No.	C (%)	Mn (%)	Si (%)	Cr (%)	Ni (%)	Mo (%)	P (%)	S (%)	Cu (%)	V (%)	Nb (%)	Residual Elements	Carbon Equivalent
STUDS	A193 B7M REV 11	Requirements	.37-.49	.65-1.10	0.15-.035	0.75-1.20	—	0.15-0.25	≤0.035	≤0.040	—	—	—	—	—
NUTS	A194 2HM REV 10a	Requirements	>0.4	≤1.00	≤0.40	—	—	—	≤0.040	≤0.050	—	—	—	—	—
STUDS	B7M	J21307082	0.400	0.780	0.210	0.925	—	0.156	0.013	0.006	—	—	—	—	—
NUTS	2HM	F2040575	0.440	0.570	0.220	—	—	—	0.021	0.012	—	—	—	—	—

We certify all materials are manufactured inspected and tested in accordance with material specification.



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MECHANICAL PROPERTIES

Component	Material	Heat-No.	Yield strength ksf (MPA)	Tensile strength ksf (MPA)	Elongation (%)	Reduction of area (%)	Impact Value (J) @ -46 deg C	Hardness BHN
	A105N REV 11	Requirements	≥36 (≥250)	≥70 (≥485)	≥22	≥30	—	≤187
BODY	A105N	K1732	368	531	34	77	—	152
ADAPTER	A105N	K1732	368	531	34	77	—	152
BALL	A105N	K0410	331	525	28	62	—	165
STEM	A105N	K0952	335	518	30	62	—	152
SUPPORT PLATE	A105N	K3317	385	535	33	77	—	149
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—	—	—	—	—	—	—	—	—
Component	Material	Heat-No.	Yield strength ksf (MPA)	Tensile strength ksf (MPA)	Elongation (%)	Reduction of area (%)	Impact Value (J) @ -46 deg C	Hardness BHN
STUDS	A193 B7M REV 11	Requirements	≥80 (≥550)	≥100 (≥690)	≥18	≥50	—	≤235
NUTS	A194 2HM REV 10a	Requirements	—	—	—	—	—	159-235
STUDS	B7M	J21307082	634	744	26	63	—	223
NUTS	2HM	F2040575	—	—	—	—	—	220

HEAT TREATMENT STATUS (IF APPLICABLE)

A105N: Normalized to 920°C, 2 hours minimum, cooling in air.

(NACE MR 01-75 / ISO 15156)

#N/A

B7M: Quenched to 870°C, 1 hours minimum, cooling in oil, tempered to 680°C, 1.5 hours minimum, cooling in air.

2HM: Quenched to 830°C, 1 hours minimum, cooling in oil, tempered to 680°C, 1.5 hours minimum, cooling in air.

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