Order#: 718417 PO#: 4500098935 Seq: 4 Customer Seq: 4
Comco Part#: P 2 XS S352 D BMA Part Description: Pipe 2" (60.3mm O.D.) XS SMLS A/SA3336/CSA GR 359 CAT 2 M45C DRL BEVELED END (MAHARASHTRA)
Heat#: A7678 Mill: Maharashtra Seamless Limited

MAHARASHTRA SEAMLESS LIMITED
INSPECTION CERTIFICATE
EN:10204:3.1

QCF-249E

Tc No : MSL-14/QC/1740A/2017
TC Date : 19-SEP-17
W.O. No : 6170014
Customer:
P.O. No :

Specification : CSA Z245.1-14 GR.359 CAT-II M45C SS/ ASTM/ASME A/SA 333 GR.6(2015)
Product : Carbon Steel Pipes
Process : HOT FINISH SEAMLESS
Material
Steel Designation : ....
Steel Making Process: Electric Arc Furnace
Fully killed/Rimmed/Semi Killed :Aluminium fully killed

DESCRIPTION																
Sl	Material/Item Code	S I Z E (Inch) (OD x WT)	Length Range	Heat No. Stl Maker	Heat No. MSL	No Of PCS	Length Feet	End Finish	WEIGHT (MT)	Hydro-static Test Pressure (10 Sec.)	Bend Test	Flattening	Flaring	Drift Expn.	Crushing
											(Testing is done at room temp)				
1		2.375 X 0.218	38-39	2702462	A7019	235	9124.51	BEVEL	20.891	3000 PSI	NA	OK	NA	NA	NA
2		2.375 X 0.218	38-39	3701915	A7678	29	1126.52	BEVEL	2.578	3000 PSI	NA	OK	NA	NA	NA

PHYSICAL PROPERTIES										CHEMICAL COMPOSITION (%)														
Sl No	Heat No		YST (Mpa)	UTS (Mpa)	El (%)	Hardness HBW	Impact Joule	Shear Area values(%)	LA / PA	C	Mn	Si	P	S	Cr	Mo	Ni	V	Cu	Al	Ti	Nb	B	CE ASTM
	Steel Maker	MSL	Testing is done at room temp GL=5.65 X Sq.root S0(L)				Long 10X3.33X55 at - 56 Deg.C			Testing is done at Room Temperature(20+/-2 Degree C)														
Required (Max)			530	760		217				.23	1.35	.5	.02	.01	.3	.12	.4	.08	.4		.11	.02	.001	.4
Required (Min)			359	455	30						.39	.13												
1	2702462	A7019	431.26	522.38	34.00	139-144	44,46,35 Av. 41.67	76,73,75 Av. 74.67	LA	.150	1.270	.310	.017	.007	.013	.002	.005	.002	.004	.030	.003	.001	.000	.366
									PA	.145	1.260	.290	.015	.005	.012	.003	.032	.002	.005	.028	.003	.000	.000	.361
			431.57	523.05	37.20	-	--	--	PA	.147	1.265	.302	.014	.005	.011	.003	.034	.002	.005	.029	.003	.000	.000	.364
2	3701915	A7678	443.63	560.45	30.00	139-144	48,46,50 Av. 48.67	72,77,75 Av. 74.67	LA	.150	1.270	.320	.016	.005	.003	.002	.003	.002	.005	.030	.002	.001	.000	.364
									PA	.152	1.260	.321	.015	.005	.004	.002	.035	.003	.005	.028	.002	.001	.000	.367
			447.03	564.82	32.20	-	--	--	PA	.147	1.270	.330	.014	.005	.004	.002	.034	.003	.005	.039	.002	.001	.000	.363

Dimension & Visual Examined : Outside diameter, thickness, weight, length conforms to above specification.
Coating : All Pipes are coated with rust preventive from outside surface only.
N.D.T. : All Pipes are tested by EMI method conforming to ASTM E570 for longitudinal & transverse defect & WT monitored ultrasonically.

Product Delivery Condition : Normalized
Heat Treatment : Normalized
Marking/Stencilling : MAHARASHTRA SEAMLESS ASTM/ASME A/SA 333 GR.6, CSA Z245.1 GR.359 CAT-II M45C SS BE DRL (NACE RESTRICTED TO HARDNESS MAX 22 HRC & SULPHUR CONTENT 0.01% MAX) OD 2.375 INCH X WT 0.218 INCH X LENGTH (IN FEET) SPS HEAT NO....3000 PSI+NDE+NORM+LT - 45 DEG.C+WEIGHT-5.00 PPF+MADE IN INDIA+COMCO PO.NO.#EI-8302+PIPE NO.

Remarks : Material conforms to NACE MR-0103/ISO17495, MR-0175/ISO15156-2. Hydro Pressure Formula=2ST/D. Formula CE for CSA=C+P[Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5B] & ASTM=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15. EMI carried out at ref. standard E10 notch.

CERTIFY THAT THE MATERIAL CONFORMS TO ABOVE SPECIFICATION.

FOR MAHARASHTRA SEAMLESS LIMITED

SEAL

R.K. SRIVASTAVA - Asst. ENGINEER

Warning:Modification or unauthorized use of this certification is strictly prohibited. Violation calls for criminal prosecution. For authenticity verification,contact us at :mslic@mahaseam.com
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