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MILL'S QUALITY CERTIFICATES

SeAH Steel Corp.
(주)세아제강

HEAD OFFICE : BONGNAE-DONG 1GA, JUNG-GU, SEOUL, KOREA
POHANG PLANT : 14-1, JANGHEUNG-DONG, NAM-GU, POHANG

발급일자
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증명서번호
CERTIFICATE NO. : E200911-0079-001398(5004627)

제약서번호
L/C No. (P/O No.) : 1103073882

제품명
COMMODITY : E.R.W STEEL PIPE

수요가
CUSTOMER : PLESA

제품규격
SPECIFICATION : API 5LB PSL1/ASTM A53B(2007)

주문자
SHIPPER : DUFERCO SA

NO.	HEAT NO. (BATCH NO.)	관단 TYPE *1	주문치수 ORDER SIZE	수량 QUANTITY 본수 PCS	총길이 TOTAL LENGTH	중량(M/T) WEIGHT	비고 REMARK
1	9-3420 (SHJX061050)	BBE	10 " X 0.250 " X 6.120 M	176	1,077.120 M	45.336	CONFIRM TO NACE NORM MR0175(LAST EDITION)
2	SB55475 (SHJX281070)	BBE	14 " X 0.312 " X 6.120 M	22	134.640 M	9.121	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
3	SQ80507 (SIJX121060)	BBE	24 " X 0.250 " X 6.120 M	93	569.160 M	54.218	*DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 5 Sec. psi	RESULT	N·D·T U *2	VISUAL & DIMENSION	FLATTENING	SHOCK	COMPRESSION	MAGNETISM RESIDUAL GAUSS	BENDING *3	DRIFT	CRUSH	FLARING	FLANGE	REVERSE FLATTENING	ZINC COATING TEST WEIGHT OF ZINC COAT-ING	규산염 C.S *4	알칼리 ALK *5	DESIG *6	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	CEQ *8	DIR *9	TENSILE TEST (Gage Length : 50mm) TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENERGY Joule	SHEAR AREA %	HARDNESS TEST HRC	HEAT TREATMENT SN *11
																				2			3		2	2	2	2	3	3	3									
기준 SPEC									30										MAX	26		120	30	30	40	100	40	15	80								22	
																			MIN													60200	35500					
1	9-3420 (SHJX061050)	1000	G	G	G	G			G										H	16	17	61	13	3														
																			P	15	17	62	13	5	1	TR	TR	TR	TR	TR	1		T	70400	51060	36			11	G
																			P	16	18	62	13	1	1	TR	TR	TR	TR	TR	1		W	73990						
2	SB55475 (SHJX281070)	950	G	G	G	G			G										H	19	1	79	10	7														
																			P	18	2	79	12	6	1	TR	2	TR	TR	2	TR		T	71250	50200	35			10	G
																			P	18	TR	80	10	5	1	TR	2	TR	TR	2	TR		W	75260						
3	SQ80507 (SIJX121060)	450	G	G	G	G			G										H	14	1	65	9	3														
																			P	13	TR	64	8	2	TR	1	TR	TR	TR	TR	2		T	69410	49920	35			9	G
																			P	14	TR	65	8	3	TR	1	TR	TR	TR	TR	2		W	73120						

NOTE *1 ~ *11: Refer To Others

OTHERS
*1-BBE:Black Beveled End(30°)
*2-U:Ultrasonic Test
*6-H:Heat(Ladle) Analysis, P:Product Analysis *7-2:X100, 3:X1000
*9-T:Base Metal Transverse, W:Weld Part Transverse *10-E.L:Elongation *11-S.N:Seam Normalizing *G:GOOD *Tr:Trace

Surveyor :

- WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE AND TESTED IN ACCORDANCE WITH ABOVE SPECIFICATION AND THE RESULTS OF ALL TEST ARE ACCEPTABLE.
- THE USE OF THE MATERIAL OUTSIDE THE SPECIFICATIONS INDICATED ON THIS CERTIFICATE MAY CAUSE SAFETY AND/OR MONETARY PROBLEMS. FURTHERMORE, ANY ORGANIZATION OR PERSON(S) WHO DELIBERATELY MODIFIES THE CERTIFICATE WILL BE PROSECUTED FOR FORGING AN OFFICIAL DOCUMENT (ACCORDING TO THE PROVISIONS OF THE CRIMINAL CODE 231)

Manager of Q.M Dept.
N. J. Baek

LA FARMACIA Y CIAS. S.A. DE C.V.
CONTROL DE CALIDAD
FECHA 11 DIC 2009
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FIRMA Enrique Ruiz