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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

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계약서번호 L/C No. (P/O No.) : 1103073882
수요가 CUSTOMER : PLESA
주문자 SHIPPER : DUFERCO SA

증명서번호 CERTIFICATE NO.: E200910-0033-001218(5004627)
제품명 COMMODITY : E.R.W STEEL PIPE
제품규격 SPECIFICATION : API 5LB PSL1/ASTM A53B(2007)

NO.	HEAT NO. (BATCH NO.)	관단 TYPE *1	주문치수 ORDER SIZE	수량 QUANTITY 본수 PCS	총길이 TOTAL LENGTH	중량(M/T) WEIGHT	비고 REMARK
9	SB51913 (SHJ9241130)	BBE	14 " X 0.312 " X 6.120 M	47	287.640 M	19.486	CONFIRM TO NACE NORM MR0175(LAST EDITION) *ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
10	9-3422 (SHJ9241140)	BBE	14 " X 0.312 " X 6.120 M	43	263.160 M	17.826	
11	SQ79293 (SHJ9251070)	BBE	14 " X SCH40 X 6.120 M	40	244.800 M	23.085	
12	SQ79293 (SHJ9252010)	BBE	14 " X SCH40 X 6.120 M	20	122.400 M	11.542	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 5 Sec. psi	RESULT	N·D·T U *2	VISUAL & DIMENSION	FLATTENING	SHOCK	COMPRESSION	RESIDUAL MAGNETISM GAUSS	BENDING *3	DRIFT	CRUSH	FLARING	FLANGE	REVERSE FLATTENING	ZINC COATING TEST WEIGHT OF ZINC COAT-ING	균일성 C.S *4	알칼리 ALK *5	DESIG	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	NB	TI		CEQ	DIR	TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENE-RGY Joule	SHEAR AREA %	HARD-NESS TEST HRC	HEAT TREAT MENT SN *11
																				CHEMICAL COMPOSITION(%)																		TENSILE TEST (Gage Length : 50mm)							
																				2			3		2	2	2	2	3	3	3			*8	*9							
기준 SPEC									30										MAX.	26		120	30	30	40	100	40	15	80								60200	35500				22	
																			MIN.																						
9	SB51913 (SHJ9241130)	950	G	G	G	G			G										H	17	1	81	18	4																		
																			P	16	TR	82	16	2	TR	TR	1	TR	TR	1	1			T	66130	45680	35			8	G
																			P	17	1	81	17	6	TR	TR	1	TR	TR	TR	2			W	73960						
10	9-3422 (SHJ9241140)	950	G	G	G	G			G										H	16	18	62	15	4																		
																			P	15	17	62	14	4	2	1	1	TR	TR	1	1			T	71930	51340	36			8	G
																			P	17	19	62	16	4	2	1	1	TR	TR	1	2			W	76140						
11	SQ79293 (SHJ9251070)	1340	G	G	G	G			G										H	19	2	78	11	2																		
																			P	18	1	77	10	3	2	1	1	TR	2	1	1			T	78610	51480	34			8	G
																			P	20	3	77	12	4	2	1	1	TR	2	1	1			W	82090						
12	SQ79293 (SHJ9252010)	1340	G	G	G	G			G										H	19	2	78	11	2																		
																			P	18	2	78	10	1	TR	2	2	TR	1	1	2			T	71210	50320	36			9	G
																			P	19	3	77	13	2	TR	2	2	TR	1	1	3			W	77300						

PLESA ANAHUAC Y CIAS. S.A. DE C.V.
CONTROL DE CALIDAD
FECHA 16/Dic/2009
CE00003
Enrique Ruiz
FIRMA

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