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증명서번호
CERTIFICATE NO.: E201106-0153-001436(5006703)

제 품 명
COMMODITY : E.R.W STEEL PIPE

제 품 규 격
SPECIFICATION : API 5L X42/B(PSL1)/A53B

INSPECTION CERTIFICATE

SeAH Steel Corp.
(주)세 아 제 강

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

발 급 일 자
DATE OF ISSUE : 2011.05.31

계 약 서 번 호
L/C No. (P/O No.) : P01103087345

수 요 가
CUSTOMER : FORZA

주 문 자
SHIPPER : DUFERCO SA

NO.	HEAT NO. (BATCH NO.)	관 단 TYPE *1	주 문 치 수 ORDER SIZE	수 량 QUANTITY 본 수 PCS	총 길 이 TOTAL LENGTH	중량(M/T) WEIGHT	비 고 REMARK
1	KC6124 (SHL5241090)	BBE	14 " X 0.250 " X 12.000 M	50	600.000 M	33.066	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
2	M14953 (SIL4011080)	BBE	18 " X 0.375 " X 12.000 M	14	168.000 M	17.613	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
3	SB01554 (SIL4191120)	BBE	18 " X 0.375 " X 12.000 M	5	60.000 M	6.290	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
4	1-4722 (SIL4191130)	BBE	18 " X 0.375 " X 12.000 M	7	84.000 M	8.807	

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	규일성 C.S *4	알칼리 ALK *5
기준 SPEC									30									
1	KC6124 (SHL5241090)	1280	G	G	G	G			G									
2	M14953 (SIL4011080)	1500	G	G	G	G			G									
3	SB01554 (SIL4191120)	1500	G	G	G	G			G									
4	1-4722 (SIL4191130)	1500	G	G	G	G			G									

NO.	HEAT NO (BATCH NO.)	CHEMICAL COMPOSITION(%) DESIG *6	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	CEQ *8	TENSILE TEST (Gage Length : 50mm) DIR *9	TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (°C) ENERGY Joule	IMPACT TEST (°C) SHEAR AREA %	HARDNESS TEST	HEAT TREATMENT SN *11
			2			3		2	2	2	2	3	3	3									
기준 SPEC		MAX	26		120	30	30	40	40	40	15	80											
		MIN															60200	42100					
1	KC6124 (SHL5241090)	H	14	2	79	19	7																
		P	13	1	79	18	6	1	TR	2	TR	TR	TR	TR		T	76580	60910	29				G
		P	13	2	78	19	5	1	TR	2	TR	TR	TR	TR		W	76720						
2	M14953 (SIL4011080)	H	5	1	73	13	5																
		P	5	TR	73	13	4	1	1	1	TR	1	1	1		T	71640	60330	37				G
		P	4	TR	72	15	4	1	1	1	TR	1	1	1		W	74250						
3	SB01554 (SIL4191120)	H	17	1	71	14	5																
		P	16	2	71	12	4	1	2	2	TR	1	1	1		T	71210	48000	35				G
		P	18	1	70	13	7	1	2	2	TR	1	1	1		W	75710						
4	1-4722 (SIL4191130)	H	16	18	45	18	4																
		P	15	19	44	20	3	1	TR	1	TR	1	TR	TR		T	71930	50760	37				G
		P	17	19	46	17	5	1	TR	1	TR	1	1	1		W	76580						

NOTE *1 ~ *11: Refer To Others

OTHERS
*1-BBE:Black Beveled End(30°)
*2-U:Weld Seam 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