



MILL TEST CERTIFICATES

CERTIFICATE No. : S1-221031-03
P.O No. : BWS22SWS010
DATE OF ISSUED : 2022-10-31
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X42 PSL1/A53B/SA53B
API 5L 46th/ASTM 2018/ASME 2015

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Country of Melt & Pour : Republic of Korea

EN10204 TYPE 3.1 : 2004

NO.	TYPE OF PIPE END ①	DIMENSION (Inch X Inch X Feet) (O.D x Thick. x Length)	QUANTITY (PCS)	TOTAL WEIGHT (NT)	HEAT NO.	TENSILE TEST (Gauge length 2")		CHEMICAL COMPOSITION(%)											HYDRO-STATIC TEST		IMPACT TEST		REMARK								
						YIELD STRENGTH Psi	TENSILE STRENGTH Psi	YIELD RATIO (%)	EL (%)	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Ti	B	Nb		CEQ.	⑤ (H.T.:5sec)	⑥ R.S	HRC	Base	Weld	Base	Weld
2	BBE	3-1/2" x 0.300" x 21'	449	48,268	SF59543	67,733	74,840	31	H	1339	150	885	149	42	21	13	30	5	2	27	2	100	2.970	G							
2	BBE	3-1/2" x 0.300" x 42'	115	24,783	SF59543	67,733	74,840	31	H	1339	150	885	149	42	21	13	30	5	2	27	2	100	2.970	G							
		** SUB TOTAL **	564	73,051																											
		** GRAND TOTAL **	2,370	218,563																											

HEAT TREATMENT (WELD SEAM)	VISUAL & DIMENSION	FLATTENING	RESIDUAL MAGNETISM TEST	NONDESTRUCTIVE TEST(NDE) (UT : ultrasonic test)	VARNISH COATING
G	G	G	G	G	G

① TYPE OF PIPE END : BBE(BLACK BEVEL ENDS), BPE(BLACK PLAIN ENDS), BTE(BLACK THREADED END)
② NPS : NOMINAL PIPE SIZE, OD : OUTSIDE DIAMETER
③ H : HEAT(LADLE) ANALYSIS, P : PRODUCT ANALYSIS
④ Carbon Equivalent : 1. C ≤ 0.12%, CE(Pcm) = C(SI)/30Mn/20Cu/20Ni/60Cr/20Mo/15W/10+5B
2. C > 0.12%, CE(IIW) = C(Mn)/6H(Ni+Cu)/15(Cr+Mo+V)/5
⑤ H.T. : HOLDING TIME
⑥ R.S. : RESULT
⑦ CWI IMPACT TEST SPECIMEN SIZE : a:FULL SIZE, b:7.5x10, c:6.7x10, d:5.0x10, e:3.3x10, f:2.5x10
⑧ Orientation : L:Longitudinal, T:Transversal
* G : Good * Tr : It is within the standard range and include trace element

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED SPECIFICATION HEREIN HAS BEEN ACCEPTED IN ACCORDANCE WITH THE
PERSCRIBED SPECIFICATION AND ORDER.
SURVEYOR
K.S.Kim
MANAGER OF QUALITY ASSURANCE TEAM

FM-508-04(0) SUNG WON STEEL CO.,LTD A4(297X210)