NEXTEEL CO., LTD.

MILL TEST REPORT

EN10204 TYPE 3.1:2004

CERTIFICATE No. 240325-03-03-R1
CONTACT(P/O) NO. 3965/370927-08
ISSUED DATE. 2024-03-25
COMMODITY. H.F.W. STEEL PIPE
SPECIFICATION. API 5L B / X42 PSL1 (46th)
ASTM A53 B (2022) / ASME SA53 B (2021)

●MANUFACTURER : NEXTEEL CO., LTD

●LOCATION OF FACILITIES USED FOR PIPE MANUFACTURING
:195, SONGDEOK-RO 212 BEON-GIL, DAESONG-MYEON, NAM-GU, POHANG-SI, GYEONGSANGBUK-DO, KOREA
:51, SEOMAN-RO, NAM-GU, POHANG-SI, GYEONGSANGBUK-DO, KOREA

●COIL ROLLING AND STEELMAKING.
:POSCO POHANG WORKS, 6262, DONGHAEAN-RO, NAM-GU, POHANG-SI,GYEONGSANGBUK-DO,37877, KOREA
:POSCO GWANGYANG WORKS, 20-26, POKPOSARANG-GIL, GWANGYANG-SI, JEOLLANAM-DO, 57807, KOREA

* THE PIPE AND COATINGS ARE FREE OF BOTH MERCURY AND LEAD * THE PIPE HAS BEEN TESTED PER RELEVANT SPECIFICATIONS AND MEET THE REQUIREMENTS * NACE MR0103 / MR0175 / ISO15156 (Chemical Composition, Heat Treatment & Hardness only)

ITEM NO.	TYPE OF PIPE END	NOM-INAL SIZE	Dimension (O.D x W.T. x L)	QUANTITY (PCS)	TOTAL WEIGHT (KG)	HEAT NO	TENSILE TEST (Gauge Length: 2 INCH)					CHEMICAL COMPOSITION(%)																HYDRO-STATIC TEST		IMPACT TEST ABSORBED ENERGY(J)					HARDNESS TEST					Corro-sion TEST		RE MARK
							YIELD STRENGTH (psi)	TENSILE STRENGTH (psi)		YIELD RATIO(%)	EL (%)	④	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Sol-Al	Ti	B	Nb	N	Ceq. ⑥	H-TIME:(5)Sec		Orientation ⑨			(T)		Unit							
								B	W																				T.P (PSI)	RE-SULT	Specimen Size ⑩				(a)	Spec					HIC	SSCC	
													-4	-3	-4			-2	-3	-2		-3		-4				(0.25)% ↓			(0)°C (27)J ↑					(Max.99)							
	①		②					③					⑤																⑦	⑧	⑪	1	2	3	AVE.	⑫	1	2	3	AVE.			
2	BBE	3	3.5" x 0.216"x 21	190	13,718	SB93433						H	1394	11	671	110	34	3	2	24		1		11		10			2970	G									85			
							67630	75990			28	P	1593	16	649	114	44	3	2	27	Tr	Tr	27	Tr	2	34	34															
												P	1540	16	651	109	42	3	2	27	Tr	1	28	Tr	2	36	34															
3	BBE	3	3.5" x 0.216"x 42	95	13,718	SB93427						H	1363	13	642	106	38	3	2	16		1		10		10			2970	G									87			
							69750	79350			27	P	1477	12	648	105	44	3	2	26	Tr	Tr	27	Tr	2	21	32															
												P	1461	12	645	100	40	3	2	26	Tr	Tr	27	Tr	1	28	32															
			SUB TOTAL	285	27,436																																					

HEAT TREATMENT⑭ (WELD SEAM)	VISUAL & DIMENSION	FLATTENING TEST or BEND TEST	GUIDED BEND TEST	REVERSE FLATTENING TEST	WELD DUCTILITY TEST	METALLOGRAPHIC TEST	FLARING TEST	RESIDUAL MAGNETISM TEST	CRUSH TEST	STRAIGHTNESS	NONDESTRUCTIVE TEST(NDT)⑬ PIPE BODY(U.T) SEAM	PIPE BODY(U.T) FULL BODY	PIPE END U.T	PIPE END M.T
G	G	G				G		G		G		G	G	

NOTE

①BPE: BLACK PLAIN END,
BBE: BPE BEVELLED END,
BTE: BLACK THREADED END,
BTC: BLACK THREADED & COUPLED,
GPE: GALVANIZED PLAIN END,
② O.D:OUTSIDE DIAMETER (Unit : Inch)
Thick: WALL THICKNESS(Unit : Inch)
Length: (Unit : Feet)
③ B: BASE METAL, W: WELD SEAM
④ H: HEAT(LADLE) ANALYSIS, P: PRODUCT ANALYSIS
⑤ Chemical Composition Unit:-4:×1/10000,-3:×1/1000,-2:×1/100
(The test value less than each unit is regarded as Tr)
⑥ Carbon Equivalent:
1.C≤0.12%, CE(Pcm)=C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B
2.C>0.12%,CE(||W)= C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
⑦ T.P: TEST PRESSURE ⑧ G: Good
⑨ Orientation : T = Transverse , L = Longitudinal
⑩ CVN IMPACT TEST SPECIMEN SIZE : a:FULL SIZE, b:10x7.5, c:10x6.7,d:10x5.0, e:10x3.3, f:10x2.5
⑪ B= Body, W = Weld, H = Heat Affected Zone, S.A = Shear Fracture Area of Body(%)
⑫ O: Outside of Wall, C: Center of Wall, I: Inside of Wall
⑬ U.T:ULTRASONIC TEST , E.T:EDDYCURRENT TEST, M.T:MAGNETIC PARTICLE TEST
⑭ Q: Quenched and Tempered, N & T : Noramlized and Tempered, W: Weld Seam Nomalized

* Tensile Test(Strip Type Specimen:Width)
: O.D ≤3-1/2"→19mm, 4"<O.D≤7-5/8"->25mm, 8-5/8"≤O.D→38mm
* Tensile Test(Location & orientation for Specimen)
1) O.D < 8-5/8" : L90 (Pipe Body)
2) 8-5/8" ≤ O.D : T180(Pipe Body), T (Weld Seam)
* Reference Indicator for NDE : N10 3.2mm(0.125")
* Min.temperature for Heat Treatment : 900 ℃
* This material has been fully killed and made by basic oxygen process.
* This material is fine grained steel.
* Country of Melt and Pour : Korea.

SIGNATURE

SURVEYOR TO :

WE HEREBY CERTIFY THAT THE PRODUCTS HERE IN HAVE BEEN MADE AND TESTED IN ACCORDANCE WITH ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR THE ORDER.

SIGNATURE

C. K. An

MANAGER OF QUALITY ASSURANCE TEAM