

[illegible]

MILL TEST CERTIFICATE

Purchaser		NING BAO STEEL CO., LTD			Material Specification			ASTM A403/A403M-15 WP304/304L			Date			2022-10-09						
Order No		WF-2022-153-C			Specification for Inspection			ASME B16.9-12			API ISO 9001-2008			No-1122						
Invoice No		WP30N9523			Visual and Dimensional			OK			Certificate No			EN10204-2004 3.1						
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test (6)			Chemical Composition %								Heat Treat- ment (2)	Raw Material			
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Mo	Cr	Ni		HB	CE(I)	Type (3)	Manu- facturer (4)
1	RED TEE SCH40S 316/316L -W	4**2 1/2"	V6402910	21	-	-	-	0.030	1.00	2.00	0.045	0.030	-	-	-	-	SA	2	TS	
2	RED TEE SCH40S 316/316L -W	6**3"	V6401312	28	384	647	57	0.03	0.43	1.32	0.03	0.005	16.06	2.06	10.05	144	4.541	SA	2	TS
3	RED TEE SCH40S 316/316L -W	10**4"	V6401914	2	385	650	56	0.03	0.46	1.29	0.03	0.002	16.09	2.06	10.07	138	4.542	SA	2	TS
4	RED TEE SCH40S 316/316L -W	10**6"	V6401914	11	389	660	56	0.03	0.51	1.32	0.03	0.002	16.11	2.06	10.06	146	4.554	SA	2	TS
5	TEE STRAIGHT SCH10S 316/316L -W	3"	V6103008	10	389	660	56	0.03	0.51	1.32	0.03	0.002	16.11	2.06	10.06	147	4.554	SA	2	TS
6	TEE STRAIGHT SCH10S 316/316L -W	6"	V6104112	5	365	595	57	0.02	0.43	1.36	0.03	0.004	16.08	2.03	10.09	146	4.544	SA	2	TS
7	TEE STRAIGHT SCH10S 316/316L -W	12"	V6105315	4	389	660	56	0.02	0.55	1.31	0.03	0.003	16.09	2.06	10.09	141	4.542	SA	2	TS
8	TEE STRAIGHT SCH40S 316/316L -W	2 1/2"	V6105315	4	365	595	57	0.02	0.46	1.36	0.03	0.006	16.04	2.06	10.07	152	4.537	SA	2	TS
9	TEE STRAIGHT SCH40S 316/316L -W	3"	V6401207	189	300	570	59.3	0.02	0.44	1.18	0.04	0.003	16.48	2.08	10.07	155	4.598	SA	2	TS
10	TEE STRAIGHT SCH40S 316/316L -W	4"	V6402708	22	295	560	56.2	0.02	0.45	1.06	0.04	0.003	16.33	2.06	10.05	146	4.544	SA	2	TS
11	TEE STRAIGHT SCH40S 316/316L -S	4"	V6402910	9	384	647	57	0.03	0.43	1.32	0.03	0.005	16.06	2.06	10.05	140	4.541	SA	2	TS
12	TEE STRAIGHT SCH40S 316/316L -W	5"	VS640110	10	334	566	59	0.02	0.46	0.88	0.04	0.001	16.92	2.06	10.28	139	4.649	SA	1	TN
13	TEE STRAIGHT SCH40S 316/316L -W	6"	V6402911	134	389	660	56	0.03	0.51	1.25	0.03	0.004	16.07	2.07	10.11	156	4.539	SA	2	TS
14	TEE STRAIGHT SCH40S 316/316L -W	12"	V6401312	9	385	650	56	0.03	0.46	1.29	0.03	0.002	16.09	2.06	10.07	152	4.542	SA	2	TS
15	TEE STRAIGHT SCH40S 316/316L -W	12"	V6401515	2	384	657	57	0.03	0.48	1.35	0.03	0.005	16.08	2.05	10.08	147	4.551	SA	2	TS
16																				
17																				
18																				
Note:																				

Note:

- (1) E=Elongation Standard round specimen, or small proportional specimen, min% in 4D; longitudinal; 22
- (2) HF=Hot formed (620-980 oC) and cooled in still air; S=Cold formed and normalized (900 oC to 518R); cooled in still air
- (3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.
- (4) TN = TENARIS , TS = TISCO
- (5) All Material is According To NACE MR 0175 / ISO 15156
- (6) YS=Yield Strength TS=Tensile Strength E=Elongation

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct. This material was manufactured, tested, and inspected without mercurial and radiation contamination.



MILL TEST CERTIFICATE

Purchaser		NING BAO STEEL CO., LTD		Material Specification		ASTM A403/A403M-15 WP304/304L		Date		2022-10-09											
Order No		WF-2022-153-C		Specification for Inspection		ASME B16.9-12		API ISO 9001-2008		No-1122											
Invoice No		WP30N9523		Visual and Dimensional		OK		Certificate No		EN10204-2004 3.1											
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test (6)			Chemical Composition %							Heat Treat-ment (2)	Raw Material					
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Mo	Cr		Ni	HB	CE(1)	Type (3)	Manu- facturer (4)	
1	RED TEE SCH10S 316/316L -W	4"x1 1/2"	V6105510	16	384	627	57	0.030	1.00	2.00	0.045	0.030	-	-	18.0	8.0	-	-	SA	2	TS
2	RED TEE SCH10S 316/316L -W	4"x2"	V6105510	24	384	627	57	0.02	0.47	1.38	0.03	0.005	16.13	2.05	10.11	142	4.559	SA	2	TS	
3	RED TEE SCH10S 316/316L -W	4"x2 1/2"	V6105510	85	384	627	57	0.02	0.47	1.38	0.03	0.005	16.13	2.05	10.11	152	4.559	SA	2	TS	
4	RED TEE SCH10S 316/316L -W	6"x2"	V6104112	7	389	660	56	0.02	0.47	1.38	0.03	0.005	16.13	2.05	10.11	147	4.559	SA	2	TS	
5	RED TEE SCH10S 316/316L -W	6"x2 1/2"	V6104112	4	389	660	56	0.02	0.55	1.31	0.03	0.003	16.09	2.06	10.09	139	4.542	SA	2	TS	
6	RED TEE SCH10S 316/316L -W	6"x3"	V6104112	22	389	660	56	0.02	0.55	1.31	0.03	0.003	16.09	2.06	10.09	142	4.542	SA	2	TS	
7	RED TEE SCH10S 316/316L -W	10"x4"	V6101314	9	370	610	56	0.02	0.52	1.34	0.03	0.005	16.05	2.09	10.11	138	4.546	SA	2	TS	
8	RED TEE SCH10S 316/316L -W	12"x6"	V6105315	13	365	595	57	0.02	0.46	1.36	0.03	0.006	16.04	2.06	10.07	144	4.537	SA	2	TS	
9	RED TEE SCH10S 316/316L -W	12"x8"	V6105315	4	365	595	57	0.02	0.46	1.36	0.03	0.006	16.04	2.06	10.07	136	4.537	SA	2	TS	
10	RED TEE SCH10S 316/316L -W	12"x10"	V6105315	7	365	595	57	0.02	0.46	1.36	0.03	0.006	16.04	2.06	10.07	146	4.537	SA	2	TS	
11	RED TEE SCH40S 316/316L -W	2"x1 1/2	V6403206	210	290	565	56.3	0.02	0.47	1.17	0.04	0.004	16.32	2.05	10.06	151	4.557	SA	2	TS	
12	RED TEE SCH40S 316/316L -W	2 1/2"x1 1/2	V6401207	60	300	570	59.3	0.02	0.44	1.18	0.04	0.003	16.48	2.08	10.07	138	4.598	SA	2	TS	
13	RED TEE SCH40S 316/316L -W	2 1/2"x1 1/2	V6401207	55	300	570	59.3	0.02	0.44	1.18	0.04	0.003	16.48	2.08	10.07	144	4.598	SA	2	TS	
14	RED TEE SCH40S 316/316L -W	2 1/2"x2"	V6401207	48	300	570	59.3	0.02	0.44	1.18	0.04	0.003	16.48	2.08	10.07	140	4.598	SA	2	TS	
15	RED TEE SCH40S 316/316L -W	3"x1 1/2	V6402708	20	295	560	56.2	0.02	0.45	1.06	0.04	0.003	16.33	2.06	10.05	138	4.544	SA	2	TS	
16	RED TEE SCH40S 316/316L -W	3"x1 1/4	V6402708	172	295	560	56.2	0.02	0.45	1.06	0.04	0.003	16.33	2.06	10.05	153	4.544	SA	2	TS	
17	RED TEE SCH40S 316/316L -W	3"x1 1/2	V6402708	80	295	560	56.2	0.02	0.45	1.06	0.04	0.003	16.33	2.06	10.05	144	4.544	SA	2	TS	
18	RED TEE SCH40S 316/316L -W	3"x2 1/2	V6402708	60	295	560	56.2	0.02	0.45	1.06	0.04	0.003	16.33	2.06	10.05	157	4.544	SA	2	TS	

Note:

(1) E=Elongation, Standard round specimen, or small proportional specimen, min% in 4D-Longitudinal-22 (2)H=Hot formed (620-980 oc) and cooled in still air;S=Cold formed and normalized (900 oc@.5HR),cooled in still air S=Cold formed and solution annealed at 1050 oc@100C, water quenched QT=Quenched+Tempered, NT=Normalized+Tempered.

(3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.

(4) TN = TENARIS , TS = TISCO

(5) All Material is According To MACE MR 0175 / ISO 15156

(6) YS=Yield Strength TS=Tensile Strength E=Elongation

certifications

Note:

- (1) E-Elongation: Standard round specimen, or small proportional specimen, min% in 4D longitudinal-22
- (2) Hot formed (620-980 oC) and cooled in still air; Cold formed and normalized (900 oC) 5HR, cooled in still air
- (3) Cold formed and solution annealed at 1050 oC 100C, water quenched QT=Quenched+Tempered, NT=Normalized+Tempered.
- (4) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.
- (5) All Material is According To NACE MR 0175 / ISO 15156
- (6) YS=Yield Strength TS=Tensile Strength E=Elongation

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Order No		WF-2022-153-C		Specification for Inspection		ASME B16.9-12		API ISO 9001-2008		No-1122											
Invoice No		WP30N9523		Visual and Dimensional		OK		Certificate No		EN10204-2004 3.1											
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test (6)			Chemical Composition %							Heat Treat- ment (2)	Raw Material					
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Mo	Cr		Ni	HB	CE(1)	Type (3)	Manu- facturer (4)	
1	ECC REDUCER SCH40S 316/316L -W	6**4"	V6402312	4	385	650	56	0.030	1.00	2.00	0.045	0.030	-	-	18.0	8.0	-	-	SA	2	TS
2	ECC REDUCER SCH40S 316/316L -W	6**5"	V6402312	15	385	650	56	0.03	0.46	1.29	0.03	0.002	16.09	2.06	10.07	140	4.542	SA	2	TS	
3	ECC REDUCER SCH40S 316/316L -S	6**5"	VS640812	20	388	616	59	0.01	0.46	1.29	0.03	0.002	16.09	2.06	10.07	146	4.542	SA	2	TS	
4	ECC REDUCER SCH40S 316/316L -W	8**4"	V6403613	8	365	595	57	0.02	0.43	0.81	0.04	0.001	17.37	2.17	10.45	138	4.75	SA	1	TN	
5	ECC REDUCER SCH40S 316/316L -W	8**5"	V6403613	50	365	595	57	0.02	0.43	1.33	0.03	0.003	16.08	2.05	10.06	144	4.541	SA	2	TS	
6	ECC REDUCER SCH40S 316/316L -W	10**5"	V6401914	9	389	660	56	0.03	0.51	1.32	0.03	0.002	16.11	2.06	10.06	136	4.554	SA	2	TS	
7	ECC REDUCER SCH40S 316/316L -W	10**6"	V6401914	9	389	660	56	0.03	0.51	1.32	0.03	0.002	16.11	2.06	10.06	142	4.554	SA	2	TS	
8	ECC REDUCER SCH40S 316/316L -W	10**8"	V6401914	8	389	660	56	0.03	0.51	1.32	0.03	0.002	16.11	2.06	10.06	140	4.554	SA	2	TS	
9	ECC REDUCER SCH40S 316/316L -W	12**4"	V6401515	3	384	657	57	0.03	0.48	1.35	0.03	0.005	16.08	2.05	10.08	137	4.551	SA	2	TS	
10	ECC REDUCER SCH40S 316/316L -W	12**5"	V6401515	1	384	657	57	0.03	0.48	1.35	0.03	0.005	16.08	2.05	10.08	144	4.551	SA	2	TS	
11	ECC REDUCER SCH40S 316/316L -W	12**6"	V6401515	28	384	657	57	0.03	0.48	1.35	0.03	0.005	16.08	2.05	10.08	149	4.551	SA	2	TS	
12	ECC REDUCER SCH40S 316/316L -W	12**8"	V6401515	5	384	657	57	0.03	0.48	1.35	0.03	0.005	16.08	2.05	10.08	141	4.551	SA	2	TS	
13	ECC REDUCER SCH40S 316/316L -W	12**10"	V6401515	5	384	657	57	0.03	0.48	1.35	0.03	0.005	16.08	2.05	10.08	138	4.551	SA	2	TS	
14	RED TEE SCH10S 316/316L -W	2 ½**2"	V6105307	90	370	610	56	0.02	0.44	1.31	0.03	0.005	16.12	2.06	10.11	152	4.552	SA	2	TS	
15	RED TEE SCH10S 316/316L -W	3**1"	V6103008	46	365	595	57	0.02	0.43	1.36	0.03	0.004	16.08	2.03	10.09	143	4.544	SA	2	TS	
16	RED TEE SCH10S 316/316L -W	3**2"	V6103008	89	365	595	57	0.02	0.43	1.36	0.03	0.004	16.08	2.03	10.09	152	4.544	SA	2	TS	
17	RED TEE SCH10S 316/316L -W	3**2 ½"	V6103008	28	365	595	57	0.02	0.43	1.36	0.03	0.004	16.08	2.03	10.09	142	4.544	SA	2	TS	
18	RED TEE SCH10S 316/316L -W	4**1 ½"	V6105510	71	384	627	57	0.02	0.47	1.38	0.03	0.005	16.13	2.05	10.11	152	4.559	SA	2	TS	
Note:																		<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div>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					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Mo	Cr		Ni	HB	CE(2)	Type (4)	Manu- facturer (1)	
1	CON REDUCER SCH40S 316/316L -W	10"×8"	V6401914	11	389	660	56	0.030	1.00	2.00	0.045	0.030	-	-	18.0	8.0	-	-	SA	2	TS
2	CON REDUCER SCH40S 316/316L -W	12"×6"	V6401515	2	384	657	57	0.03	0.48	1.35	0.03	0.005	16.08	2.05	10.08	146	4.551	SA	2	TS	
3	CON REDUCER SCH40S 316/316L -W	12"×10"	V6401515	2	384	657	57	0.03	0.48	1.35	0.03	0.005	16.08	2.05	10.08	141	4.551	SA	2	TS	
4	ECC REDUCER SCH10S 316/316L -W	5"×2"	V6101311	19	277	569	55	0.02	0.66	0.85	0.03	0.003	16.21	2.06	10.02	143	4.481	SA	2	TS	
5	ECC REDUCER SCH10S 316/316L -W	5"×2 1/2"	V6101311	11	277	569	55	0.02	0.66	0.85	0.03	0.003	16.21	2.06	10.02	138	4.481	SA	2	TS	
6	ECC REDUCER SCH10S 316/316L -W	5"×3"	V6101311	10	277	569	55	0.02	0.66	0.85	0.03	0.003	16.21	2.06	10.02	141	4.481	SA	2	TS	
7	ECC REDUCER SCH10S 316/316L -W	6"×5"	V6104112	14	389	660	56	0.02	0.66	0.85	0.03	0.003	16.21	2.06	10.02	141	4.481	SA	2	TS	
8	ECC REDUCER SCH10S 316/316L -W	8"×5"	V6104112	14	389	660	56	0.02	0.66	0.85	0.03	0.003	16.21	2.06	10.02	141	4.481	SA	2	TS	
9	ECC REDUCER SCH10S 316/316L -W	8"×3"	V6103113	5	299	583	56.2	0.02	0.55	1.31	0.03	0.003	16.09	2.06	10.09	146	4.542	SA	2	TS	
10	ECC REDUCER SCH10S 316/316L -W	8"×4"	V6103113	19	299	583	56.2	0.02	0.37	1.05	0.04	0.001	16.71	2.02	10.03	151	4.608	SA	2	TS	
11	ECC REDUCER SCH10S 316/316L -W	8"×5"	V6103113	9	299	583	56.2	0.02	0.37	1.05	0.04	0.001	16.71	2.02	10.03	147	4.608	SA	2	TS	
12	ECC REDUCER SCH10S 316/316L -W	8"×6"	V6103113	69	299	583	56.2	0.02	0.37	1.05	0.04	0.001	16.71	2.02	10.03	143	4.608	SA	2	TS	
13	ECC REDUCER SCH10S 316/316L -W	10"×6"	V6101314	4	370	610	56	0.02	0.52	1.34	0.03	0.005	16.05	2.09	10.11	138	4.546	SA	2	TS	
14	ECC REDUCER SCH10S 316/316L -W	12"×6"	V6105315	2	365	595	57	0.02	0.46	1.36	0.03	0.006	16.04	2.06	10.07	143	4.537	SA	2	TS	
15	ECC REDUCER SCH10S 316/316L -W	12"×8"	V6105315	6	365	595	57	0.02	0.46	1.36	0.03	0.006	16.04	2.06	10.07	139	4.537	SA	2	TS	
16	ECC REDUCER SCH40S 316/316L -W	12"×10"	V6105315	31	365	595	57	0.02	0.46	1.36	0.03	0.006	16.04	2.06	10.07	144	4.537	SA	2	TS	
17	ECC REDUCER SCH40S 316/316L -W	5"×2 1/2"	V6402911	69	389	660	56	0.03	0.51	1.25	0.03	0.004	16.07	2.07	10.11	141	4.539	SA	2	TS	
18	ECC REDUCER SCH40S 316/316L -W	5"×3"	V6402911	6	389	660	56	0.03	0.51	1.25	0.03	0.004	16.07	2.07	10.11	146	4.539	SA	2	TS	
18	ECC REDUCER SCH40S 316/316L -W	6"×2"	V6402312	21	385	650	56	0.03	0.46	1.29	0.03	0.002	16.09	2.06	10.07	150	4.542	SA	2	TS	
Note:																		We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct. This material was manufactured, tested, and inspected without mechanical and radiation contamination.			
(1) E=Elongation, S=Standard round specimen, or small proportional specimen, min% in 4D;Longitudinal;22 (2)HF=Hot formed (620°-980 °C) and cooled in still air;S=Cold formed and normalized (900 °C&O.5HR);cooled in still air S&Cold formed and solution annealed at 1050 °C&100°C, water quenched QT=Quenched+Tempered, NT=Normalized+Tempered. (3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Pipe. (4) TN = TENARS, TS = TISCO (5) All Materials According To NACE MR 0175 / ISO 15156 (6) YS=Yield Strength TS=Tensile Strength E=Elongation																					

Note:
 (1) E=Elongation, Standard round specimen, or small proportional specimen, min in 4D; Longitudinal
 (2) H=Hot formed (620°-980 °C) and cooled in still air; Cold formed and normalized (900 °C to 516 °C) cooled in still air
 SA: Cold formed and solution annealed at 1050 °C to 1100 °C, water quenched QT=Quenched+Tempered, NT=Normalized+Tempered.
 (3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.
 (4) TN = TENANS, TS = TISCO
 (5) All Material is According To NACE MR 0175 / ISO 15156
 (6) YS=Yield Strength TS=Tensile Strength E=Elongation

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.
 This material was manufactured, tested, and inspected without mercurial and radiation contamination.



MILL TEST CERTIFICATE



Purchaser		NING BAO STEEL CO., LTD		Material Specification		ASTM A403/A403M-15 WP304/304L		Date		2022-10-09											
Order No		WF-2022-153-C		Specification for Inspection		ASME B16.9-12		API ISO 9001-2008		No-1122											
Invoice No		WP30N9523		Visual and Dimensional		OK		Certificate No		EN10204-2004 3.1											
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test (6)			Chemical Composition %							Heat Treat-ment (2)	Raw Material					
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Mo	Cr		Ni	HB	CE(1)	Type (3)	Manu- facturer (4)	
1	CON REDUCER SCH10S 316/316L -W	5"×2 1/2"	V6101311	89	277	569	55	0.02	0.030	1.00	2.00	0.045	0.030	-	18.0	8.0	-	-	SA	2	TS
2	CON REDUCER SCH10S 316/316L -W	5"×4"	V6101311	29	277	569	55	0.02	0.66	0.85	0.85	0.03	0.003	16.21	2.06	10.02	141	4.481	SA	2	TS
3	ECC REDUCER SCH10S 316/316L -W	6"×3"	V6104112	4	389	660	56	0.02	0.66	0.85	0.85	0.03	0.003	16.21	2.06	10.02	141	4.481	SA	2	TS
4	CON REDUCER SCH10S 316/316L -W	6"×5"	V6104112	127	389	660	56	0.02	0.55	1.31	1.31	0.03	0.003	16.09	2.06	10.09	136	4.542	SA	2	TS
5	CON REDUCER SCH10S 316/316L -W	8"×4"	V6103213	22	375	620	61	0.02	0.52	1.27	1.27	0.03	0.004	16.08	2.06	10.09	151	4.542	SA	2	TS
6	CON REDUCER SCH10S 316/316L -W	8"×5"	V6103213	61	375	620	61	0.02	0.52	1.27	1.27	0.03	0.004	16.08	2.06	10.09	147	4.533	SA	2	TS
7	CON REDUCER SCH10S 316/316L -W	8"×6"	V6103213	8	375	620	61	0.02	0.52	1.27	1.27	0.03	0.004	16.08	2.06	10.09	139	4.533	SA	2	TS
8	CON REDUCER SCH10S 316/316L -W	10"×4"	V6101314	9	370	610	56	0.02	0.52	1.34	1.34	0.03	0.005	16.05	2.09	10.11	140	4.546	SA	2	TS
9	CON REDUCER SCH10S 316/316L -W	10"×6"	V6101314	7	370	610	56	0.02	0.52	1.34	1.34	0.03	0.005	16.05	2.09	10.11	146	4.546	SA	2	TS
10	CON REDUCER SCH10S 316/316L -W	10"×8"	V6101314	4	370	610	56	0.02	0.52	1.34	1.34	0.03	0.005	16.05	2.09	10.11	147	4.546	SA	2	TS
11	CON REDUCER SCH10S 316/316L -W	12"×4"	V6105315	4	365	595	57	0.02	0.46	1.36	1.36	0.03	0.006	16.04	2.06	10.07	138	4.537	SA	2	TS
12	CON REDUCER SCH10S 316/316L -W	12"×5"	V6105315	3	365	595	57	0.02	0.46	1.36	1.36	0.03	0.006	16.04	2.06	10.07	150	4.537	SA	2	TS
13	CON REDUCER SCH10S 316/316L -W	12"×6"	V6105315	3	365	595	57	0.02	0.46	1.36	1.36	0.03	0.006	16.04	2.06	10.07	146	4.537	SA	2	TS
14	CON REDUCER SCH10S 316/316L -W	12"×8"	V6105315	13	365	595	57	0.02	0.46	1.36	1.36	0.03	0.006	16.04	2.06	10.07	143	4.537	SA	2	TS
15	CON REDUCER SCH10S 316/316L -W	12"×10"	V6105315	37	365	595	57	0.02	0.46	1.36	1.36	0.03	0.006	16.04	2.06	10.07	137	4.537	SA	2	TS
16	CON REDUCER SCH40S 316/316L -W	5"×2"	V6402911	104	389	660	56	0.03	0.51	1.25	1.25	0.03	0.004	16.07	2.07	10.11	150	4.539	SA	2	TS
17	CON REDUCER SCH40S 316/316L -W	8"×5"	V6403613	40	365	595	57	0.02	0.43	1.33	1.33	0.03	0.003	16.08	2.05	10.06	141	4.541	SA	2	TS
18	CON REDUCER SCH40S 316/316L -W	10"×5"	V6401914	10	389	660	56	0.03	0.51	1.32	1.32	0.03	0.002	16.11	2.06	10.06	140	4.554	SA	2	TS
Note:																					
(1) E=Elongation ;Standard round specimen, or small proportional specimen, min(k in 4D:longitudinal)-22																					
(2) HF=Hot formed (620~980 °C) and cooled in still air;S:Cold formed and normalized (900 °C×0.5HR),cooled in still air																					
SA=Cold formed and solution annealed at 1050 °C±10°C, water quenched QT=Quenched+Tempered, NT=Normalized+Tempered.																					
(3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.																					
(4) TS = TISCO																					
(5) All Material Is According To NACE MR 0175 / ISO 15156																					
(6) YS=Yield Strength TS=Tensile Strength E=Elongation																					
We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct. This material was manufactured, tested, and inspected without chemical and radiation contamination.																					

Note: (1) E=Elongation, Standard round specimen, or small proportional specimen, min% in 4D; Longitudinal; (2) HF=Hot formed (620~980 °C) and cooled in still air; S=Cold formed and normalized (900 °C/0.5HR), cooled in still air; SA=Cold formed and solution annealed at 1050 °C/1.0hr, water quenched, QT=Quenched+Tempered, NT=Normalized+Tempered; (3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate; (4) TS = TISCO

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct. This material was manufactured, tested, and inspected without material and radiation contamination.



MILL TEST CERTIFICATE

Purchaser		NING BAO STEEL CO., LTD		Material Specification		ASTM A403/A403M-15 WP304/304L		Date		2022-10-09										
Order No		WF-2022-153-C		Specification for Inspection		ASME B16.9-12		API ISO 9001-2008		No-1122										
Invoice No		WP30N9523		Visual and Dimensional		OK		Certificate No		EN10204-2004 3.1										
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test (6)						Chemical Composition %						Heat Treat-ment (3)	Raw Material		
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Mo	Cr	Ni	HB		CE(2)	Type (4)	Manu- facturer (1)
					205	515	22	-	-	-	-	-	-	18.0	8.0	-		-		
1	RED TEE SCH40S 316/316L-S	3"*2 1/2"	VS640108	7	401	630	59	0.03	0.52	0.88	0.05	0.002	16.82	2.06	10.08	136	4.622	SA	1	TN
2	RED TEE SCH40S 316/316L-S	4"*3"	VS640110	11	334	566	59	0.02	0.46	0.88	0.04	0.001	16.92	2.06	10.28	133	4.649	SA	1	TN
3	RED TEE SCH40S 316/316L-W	6"*4"	V6402312	2	385	650	56	0.03	0.46	1.29	0.03	0.002	16.09	2.06	10.07	143	4.542	SA	2	TS
4	RED TEE SCH80S 316/316L-S	2"*1 1/2"	VS682106	163	245	555	51	0.02	0.39	0.84	0.03	0.002	16.35	2.05	10.09	153	4.512	SA	1	TN
5	RED TEE SCH80S 316/316L-S	3"*2"	VS680138	9	245	555	51	0.02	0.36	0.86	0.03	0.002	16.35	2.05	11.08	141	4.581	SA	1	TN
6	RED TEE SCH80S 316/316L-S	4"*1 1/2"	VS681110	1	410	645	58	0.02	0.46	0.87	0.04	0.003	16.66	2.05	10.05	137	4.578	SA	1	TN
7	RED TEE SCH80S 316/316L-S	4"*2"	VS681110	16	410	645	58	0.02	0.46	0.87	0.04	0.003	16.66	2.05	10.05	144	4.578	SA	1	TN
8	RED TEE SCH80S 316/316L-S	4"*3"	VS681110	49	410	645	58	0.02	0.46	0.87	0.04	0.003	16.66	2.05	10.05	137	4.578	SA	1	TN
9	TEE STRAIGHT SCH10S 316/316L-W	5"	V6101311	58	277	569	55	0.02	0.66	0.85	0.03	0.003	16.21	2.06	10.02	141	4.481	SA	2	TS
10	TEE STRAIGHT SCH40S 316/316L-S	5"	VS640111	9	395	525	59	0.03	0.52	0.88	0.05	0.002	16.82	2.06	10.08	146	4.622	SA	1	TN
11	TEE STRAIGHT SCH40S 316/316L-W	8"	V6403613	6	365	595	57	0.02	0.43	1.33	0.03	0.003	16.08	2.05	10.06	136	4.541	SA	2	TS
12	TEE STRAIGHT SCH40S 316/316L-S	12"	VS640515	2	285	575	53	0.02	0.41	0.89	0.03	0.004	16.31	2.06	10.09	146	4.514	SA	1	TN
														</						

Note:

- (1) E=elongation, Standard round specimen, or small proportional specimen, min/6 in 4D Longitudinal-22
- (2) H=Hot formed (620-980 oC) and cooled in still air; S=Cold formed and normalized (900 oC/0.5HR), cooled in still air
- (3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.
- (4) TN = TENANS , TS = TISCO
- (5) All Material is According To NACE MR 0175 / ISO 15156
- (6) YS=Yield Strength TS=Tensile Strength E=Elongation

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.
This material was manufactured, tested, and inspected without mercurial and radiation contamination.



MILL TEST CERTIFICATE

Purchaser		NING BAO STEEL CO., LTD			Material Specification		ASTM A403/A403M-15 WP304/304L		Date		2022-10-09										
Order No		WF-2022-153-C			Specification for Inspection		ASME B16.9-12		API ISO 9001-2008		No-1122										
Invoice No		WP30N9523			Visual and Dimensional		OK		Certificate No		EN10204-2004 3.1										
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test (6)				Chemical Composition %							Heat Treat-ment (2)	Raw Material				
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Mo	Cr	Ni		HB	CE(1)	Type (3)	Manu- facturer (4)	
1	ECC REDUCER SCH40S 316/316L -S	12"*8"	VS640505	2	-	-	-	0.030	1.00	2.00	0.045	0.030	-	-	18.0	8.0	-	-	SA	1	TN
2	ECC REDUCER SCH40S 316/316L -S	12"*10"	VS640505	1	235	555	53	0.02	0.47	0.99	0.04	0.002	17.02	2.32	10.52	138	4.749	SA	1	TN	
3	ECC REDUCER SCH80S 316/316L -S	6"*4"	VS680512	6	235	555	53	0.02	0.47	0.99	0.04	0.002	17.02	2.32	10.52	141	4.749	SA	1	TN	
4	ECC REDUCER SCH80S 316/316L -S	6"*5"	VS680512	10	360	580	67	0.01	0.33	1.62	0.04	0.004	16.39	2.01	10.14	146	4.637	SA	1	TN	
5	ECC REDUCER SCH80S 316/316L -S	8"*4"	VS680512	2	360	580	67	0.01	0.33	1.62	0.04	0.004	16.39	2.01	10.14	146	4.637	SA	1	TN	
6	ECC REDUCER SCH80S 316/316L -S	8"*6"	VS680512	4	360	580	67	0.01	0.33	1.62	0.04	0.004	16.39	2.01	10.14	146	4.637	SA	1	TN	
7	ECC REDUCER SCH80S 316/316L -S	10"*6"	VS680714	1	415	638	59	0.01	0.6	1.06	0.03	0.004	17.11	2.06	11.46	139	4.783	SA	1	TN	
8	ECC REDUCER SCH80S 316/316L -S	10"*8"	VS680714	3	415	638	59	0.01	0.6	1.06	0.03	0.004	17.11	2.06	11.46	140	4.783	SA	1	TN	
9	ECC REDUCER SCH80S 316/316L -S	12"*6"	VS610815	1	240	550	47	0.02	0.43	0.74	0.03	0.002	16.33	2.77	10.8	152	4.683	SA	1	TN	
10	ECC REDUCER SCH80S 316/316L -S	12"*8"	VS610815	1	240	550	47	0.02	0.43	0.74	0.03	0.002	16.33	2.77	10.8	147	4.683	SA	1	TN	
11	ECC REDUCER SCH80S 316/316L -S	12"*10"	VS610815	4	240	550	47	0.02	0.43	0.74	0.03	0.002	16.33	2.77	10.8	136	4.683	SA	1	TN	
12	RED TEE SCH10S 316/316L -S	3"*2"	VS610408	34	245	560	49	0.02	0.46	0.69	0.04	0.002	16.4	2.06	10.15	147	4.499	SA	1	TN	
13	RED TEE SCH10S 316/316L -W	6"*3"	V6104112	4	389	660	56	0.02	0.55	1.31	0.03	0.003	16.09	2.06	10.09	143	4.542	SA	2	TS	
14	RED TEE SCH10S 316/316L -W	12"*4"	V6105315	2	365	595	57	0.02	0.46	1.36	0.03	0.006	16.04	2.06	10.07	140	4.537	SA	2	TS	
15	RED TEE SCH10S 316/316L -S	12"*6"	VS610615	36	240	550	47	0.02	0.43	0.74	0.03	0.002	16.33	2.77	10.8	150	4.683	SA	1	TN	
16	RED TEE SCH10S 316/316L -S	12"*8"	VS610615	1	240	550	47	0.02	0.43	0.74	0.03	0.002	16.33	2.77	10.8	145	4.683	SA	1	TN	
17	RED TEE SCH40S 316/316L -S	3"*1"	VS640108	16	401	630	59	0.03	0.52	0.88	0.05	0.002	16.82	2.06	10.08	136	4.622	SA	1	TN	
18	RED TEE SCH40S 316/316L -S	3"*1 1/2"	VS640108	33	401	630	59	0.03	0.52	0.88	0.05	0.002	16.82	2.06	10.08	136	4.622	SA	1	TN	

(1) E=Elongation ;Standard round specimen, or small proportional specimen, min% in 4D,Longitudinal ;22

(2) H= Hot formed (620~980 oc) and cooled in still air ;S= Cold formed and normalized (900 oc,0.5HR) ;cooled in still air

SA= Cold formed and solution annealed at 1050 oc,±100C, water quenched QT=Quenched+Tempered, NT=Normalized+Tempered.

(3) 1-Seamless Pipe 2-Welded Pipe 3-Steel Plate.

(4) TN = TENARIS , TS = TISCO

(5) All Materials is According To NACE MR 0175 / ISO 15156

(6) YS=Yield Strength TS=Tensile Strength E=Elongation

Guaranteed

Note:

(1) Elongation: Standard round specimen, or small proportional specimen, min% in 4D: longitudinal-22

(2) HF: Hot formed (620°-980 °C) and cooled in still air; SC: Cold formed and normalized (900 °C±50R); cooled in still air

SA: Cold formed and solution annealed at 1050 °C±100C, water quenched QT=Quenched+Tempered, N=Normalized+Tempered.

(3) 1-Seamless Pipe 2-Welded Pipe 3-Steel Plate.

(4) TN = TENARIS, TS = TISCO

(5) All Materials According To NACE MR 0175 / ISO 15156

(6) YS=Yield Strength TS=Tensile Strength E=Elongation

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

This material was manufactured, tested, and inspected without mercurial and radiation contamination.



MILL TEST CERTIFICATE

Purchaser		NING BAO STEEL CO., LTD			Material Specification			ASTM A403/A403M-15 WP304/304L			Date			2022-10-09						
Order No		WF-2022-153-C			Specification for Inspection			ASME B16.9-12			API ISO 9001-2008			No-1122						
Invoice No		WP30N9523			Visual and Dimensional			OK			Certificate No			EN10204-2004 3.1						
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test			Chemical Composition %								Heat Treat-ment (2)	Raw Material			
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Mo	Cr	Ni		HB	CE(I)	Type (3)	Manu- facturer (4)
1	CON REDUCER SCH10S 316/316L -S	12X8	VS610615	21	-	-	22	-	-	-	-	-	-	18.0	8.0	-	-	SA	1	TN
2	CON REDUCER SCH40S 316/316L -S	10X6	VS641514	4	415	638	59	0.01	0.6	1.06	0.03	0.004	17.11	2.06	11.46	140	4.783	SA	1	TN
3	CON REDUCER SCH40S 316/316L -S	10X8	VS641514	13	415	638	59	0.01	0.6	1.06	0.03	0.004	17.11	2.06	11.46	145	4.783	SA	1	TN
4	CON REDUCER SCH40S 316/316L -S	12X10	VS641514	9	415	638	59	0.01	0.6	1.06	0.03	0.004	17.11	2.06	11.46	140	4.783	SA	1	TN
5	CON REDUCER SCH80S 316/316L -S	12X10	VS610815	2	240	550	47	0.02	0.43	0.74	0.03	0.002	16.33	2.77	10.8	138	4.683	SA	1	TN
6	ECC REDUCER SCH10S 316/316L -S	6X5	VS640812	32	388	616	59	0.01	0.44	0.81	0.04	0.001	17.37	2.17	10.45	142	4.75	SA	1	TN
7	ECC REDUCER SCH10S 316/316L -S	8X4	VS610113	5	360	580	67	0.01	0.33	1.62	0.04	0.004	16.39	2.01	10.14	146	4.637	SA	1	TN
8	ECC REDUCER SCH10S 316/316L -S	8X6	VS610113	26	360	580	67	0.01	0.33	1.62	0.04	0.004	16.39	2.01	10.14	146	4.637	SA	1	TN
9	ECC REDUCER SCH10S 316/316L -S	10X6	VS610614	21	235	555	53	0.02	0.47	0.99	0.04	0.002	17.02	2.32	10.52	152	4.749	SA	1	TN
10	ECC REDUCER SCH10S 316/316L -S	10X8	VS610614	5	235	555	53	0.02	0.47	0.99	0.04	0.002	17.02	2.32	10.52	146	4.749	SA	1	TN
11	ECC REDUCER SCH10S 316/316L -S	12X8	VS610615	14	240	550	47	0.02	0.43	0.74	0.03	0.002	16.33	2.77	10.8	144	4.683	SA	1	TN
12	ECC REDUCER SCH40S 316/316L -W	8X3	VS6403613	27	365	595	57	0.02	0.43	1.33	0.03	0.003	16.08	2.05	10.06	138	4.541	SA	2	TN
13	ECC REDUCER SCH40S 316/316L -S	8X4	VS640113	11	360	580	67	0.01	0.33	1.62	0.04	0.004	16.39	2.01	10.14	146	4.637	SA	1	TN
14	ECC REDUCER SCH40S 316/316L -S	8X6	VS640113	8	360	580	67	0.01	0.33	1.62	0.04	0.004	16.39	2.01	10.14	146	4.637	SA	1	TN
15	ECC REDUCER SCH40S 316/316L -S	10X4	VS641514	2	415	638	59	0.01	0.6	1.06	0.03	0.004	17.11	2.06	11.46	147	4.783	SA	1	TN
16	ECC REDUCER SCH40S 316/316L -S	10X6	VS641514	7	415	638	59	0.01	0.6	1.06	0.03	0.004	17.11	2.06	11.46	140	4.783	SA	1	TN
17	ECC REDUCER SCH40S 316/316L -S	10X8	VS641514	6	415	638	59	0.01	0.6	1.06	0.03	0.004	17.11	2.06	11.46	140	4.783	SA	1	TN
18	ECC REDUCER SCH40S 316/316L -S	12X6	VS640515	2	235	555	53	0.02	0.47	0.99	0.04	0.002	17.02	2.32	10.52	139	4.749	SA	1	TN

Note:

(1) E=elongation, standard round specimen, or small proportional specimen, min% in 4D; Longitudinal-ZZ (2H/F) hot formed (620°-980 °C) and cooled in still air; S=Cold formed and normalized (900 °C@0.5HR), cooled in still air

S=Cold formed and solution annealed at 1050 °C@100C, water quenched, Q=Quenched+T=Tempered, NT=Normalised+Tempered.

(3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.

(4) TN = TENARIS

(5) All Materials is According To MACE MR 0175 / ISO 15156

certifying

Note:

(1) E-elongation: Standard round specimen, or small proportional specimen, min% in 4D; Longitudinal-22

(2) Hf: Hot formed (620°-980 °C) and cooled in still air; S: Cold formed and normalized (900 °C to 518°), cooled in still air

SAC: Cold formed and solution annealed at 1050 °C to 1100°C, water quenched, QT: Quenched+Tempered, NT=Normalized+Tempered.

(3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.

(4) TN = TENARIS

(5) All Materials According To NACE MR 0175 / ISO 15156

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.
This material was manufactured, tested, and inspected without mercurial and radiation contamination.


MILL TEST CERTIFICATE



Purchaser		NING BAO STEEL CO., LTD			Material Specification			ASTM A403/A403M-15 WP304/304L			Date			2022-10-09							
Order No		WF-2022-153-C			Specification for Inspection			ASME B16-9-12			API ISO 9001-2008			No-1122							
Invoice No		WP30N9523			Visual and Dimensional			OK			Certificate No			EN10204-2004 3.1							
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test			Chemical Composition %								Heat Treat-ment		Raw Material			
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Mo	Cr	Ni	HB	CE(1)	Type	Manu- facturer (4)		
1	CAP SCH10S 316/316L -S	3	V6000464C	279	-	-	-	0.030	-	-	-	-	-	-	18.0	8.0	-	-	(2)	(3)	
2	CAP SCH10S 316/316L -S	3 1/2	V6000464C	17	315	623	55	0.02	0.42	1.33	0.02	0.001	2.03	16.5	10.21	156	4.631	SA	3	SXT	
3	CAP SCH10S 316/316L -S	4	V6000464C	207	315	623	55	0.02	0.42	1.33	0.02	0.001	2.03	16.5	10.21	143	4.631	SA	3	SXT	
4	CAP SCH10S 316/316L -S	6	V6000464C	8	315	623	55	0.02	0.42	1.33	0.02	0.001	2.03	16.5	10.21	147	4.631	SA	3	SXT	
5	CAP SCH10S 316/316L -S	8	V640206C	51	424	664	54	0.03	0.67	1.65	0.03	0.001	2.08	16.5	10.21	146	4.631	SA	3	SXT	
6	CAP SCH10S 316/316L -S	10	V640206C	519	424	664	54	0.03	0.67	1.65	0.03	0.001	2.08	16.7	10.02	144	4.728	SA	3	TYC	
7	CAP SCH10S 316/316L -S	12	V640206C	2	424	664	54	0.03	0.67	1.65	0.03	0.001	2.08	16.7	10.02	152	4.728	SA	3	TYC	
8	CAP SCH40S 316/316L -S	2 1/2	V610713C	300	279	566	56.7	0.02	0.34	1.04	0.03	0.001	2.03	16.69	10.02	141	4.728	SA	3	TYC	
9	CAP SCH40S 316/316L -S	3	V610713C	81	279	566	56.7	0.02	0.34	1.04	0.03	0.001	2.03	16.69	10.04	153	4.602	SA	3	ZSD	
10	CAP SCH40S 316/316L -S	3 1/2	V610713C	73	279	566	56.7	0.02	0.34	1.04	0.03	0.001	2.03	16.69	10.04	148	4.602	SA	3	ZSD	
11	CAP SCH40S 316/316L -S	4	V610914C	15	282	570	56.5	0.01	0.35	1.03	0.04	0.001	2.01	16.69	10.05	138	4.602	SA	3	ZSD	
12	CAP SCH40S 316/316L -S	6	V610914C	15	282	570	56.5	0.01	0.35	1.03	0.04	0.001	2.01	16.91	10.05	144	4.636	SA	3	ZSD	
13	CAP SCH40S 316/316L -S	8	V611016C	72	282	568	57.5	0.02	0.34	1.04	0.03	0.001	2.03	16.91	10.05	143	4.636	SA	3	ZSD	
14	CAP SCH40S 316/316L -S	12	V611016C	16	282	568	57.5	0.02	0.34	1.04	0.03	0.001	2.03	16.69	10.03	144	4.601	SA	3	ZSD	
15	ECC REDUCER SCH10S 316/316L -S	6X3	VS640812	11	388	616	59	0.01	0.44	0.81	0.04	0.001	2.17	17.37	10.03	147	4.601	SA	3	ZSD	
16	ECC REDUCER SCH10S 316/316L -S	6X4	VS640812	10	388	616	59	0.01	0.44	0.81	0.04	0.001	2.17	17.37	10.45	145	4.75	SA	1	HHC	
17	CON REDUCER SCH10S 316/316L -S	10X6	VS610614	44	235	555	53	0.02	0.47	0.99	0.04	0.002	2.32	17.02	10.45	140	4.75	SA	1	HHC	
18	CON REDUCER SCH10S 316/316L -S	12X6	VS610615	11	240	550	47	0.02	0.43	0.74	0.03	0.002	2.77	16.33	10.52	146	4.749	SA	1	HHC	

Note:
(1) E=Elongation ;Standard round specimen, or small proportional specimen, min/k in d;Longitudinal;22 (2)H/F=Hot formed (620~980 oC) and cooled in still air;S/Cold formed and normalized (900 oC@0.5Hr);cooled in still air
SA/Cold formed and solution annealed at 1050 oC±10oC, water quenched,QT=Quenched+Tempered, NT=Normalized+Tempered.
(3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.
(4) XSP = XISHAN PIPE CORP
(5) All Material is According To NACE MR 0175 / ISO 15156

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.
This material was manufactured, tested, and inspected without mercurial and radiation contamination.



NOTE:
 (1) E-Elongation: Standard round specimen, or small proportional specimen, min \times in 4D; Longitudinal: 22
 (2) HF: Hot formed (620°-980 °C) and cooled in still air; SC: Cold formed and normalized (900 °C x 5HR), cooled in still air
 SA: Cold formed and solution annealed at 1050 °C x 100C, water quenched, QT=Quenched+Tempered, NT=Normalized+Tempered.
 (3) 1-Seamless Pipe 2-Welded Pipe 3-Steel Plate.
 (4) XSP = XISHAN PIPE CORP
 (5) All Material is According To NACE MR 0175 / ISO 15156

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.
 This material was manufactured, tested, and inspected without mercurial and radiation contamination.




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 Method and also with the purchaser's requirements and that
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We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct. This material was manufactured, tested, and inspected without mercurial and radiation contamination.

MILL TEST CERTIFICATE

Purchaser		NING BAO STEEL CO., LTD		Material Specification		ASTM A403/A403M-15 WP304/304L		Date		2022-10-09										
Order No		WF-2022-153-C		Specification for Inspection		ASME B16.9-12		API ISO 9001-2008		No-1122										
Invoice No		WP30N9523		Visual and Dimensional		OK		Certificate No		EN10204-2004 3.1										
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test (6)			Chemical Composition %							Heat Treat-ment (3)	Raw Material				
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Cr	Ni		HB	CE(2)	Type (4)	Manu- facturer (1)	
1	ECC REDUCER SCH10S 304/304L -W	10**4"	B4403314	13	295	665	60	0.02	0.30	1.00	2.00	0.045	-	18.0	8.0	-	-	SA	2	TS
2	ECC REDUCER SCH40S 304/304L -W	5**3"	B4401511	100	293	637	57	0.02	0.39	1.24	0.03	0.03	0.001	18.12	8.1	141	4.393	SA	2	TS
3	ECC REDUCER SCH40S 304/304L -W	5**4"	B4401511	4	293	637	57	0.02	0.39	1.03	0.03	0.03	0.002	18.09	8.04	152	4.343	SA	2	TS
4	ECC REDUCER SCH40S 304/304L -W	6**2"	B4403912	15	294	636	56.5	0.02	0.41	1.22	0.03	0.03	0.003	18.09	8.04	147	4.343	SA	2	TS
5	ECC REDUCER SCH40S 304/304L -W	6**2 1/2"	B4403912	27	294	636	56.5	0.02	0.41	1.22	0.03	0.03	0.003	18.08	8.06	143	4.373	SA	2	TS
6	ECC REDUCER SCH40S 304/304L -W	6**5"	B4403912	19	294	636	56.5	0.02	0.41	1.22	0.03	0.03	0.003	18.08	8.06	139	4.373	SA	2	TS
7	ECC REDUCER SCH40S 304/304L -W	8**4"	B4403213	13	290	634	59	0.02	0.38	1.10	0.03	0.03	0.003	18.11	8.09	144	4.366	SA	2	TS
8	ECC REDUCER SCH40S 304/304L -W	8**5"	B4403213	40	290	634	59	0.02	0.38	1.10	0.03	0.03	0.003	18.11	8.09	143	4.366	SA	2	TS
9	ECC REDUCER SCH40S 304/304L -W	8**6"	B4403213	12	290	634	59	0.02	0.38	1.10	0.03	0.03	0.003	18.11	8.09	141	4.366	SA	2	TS
10	ECC REDUCER SCH40S 304/304L -W	10**4"	B4403314	18	295	665	60	0.02	0.36	1.24	0.03	0.03	0.001	18.12	8.1	140	4.393	SA	2	TS
11	ECC REDUCER SCH40S 304/304L -W	10**5"	B4403314	16	295	665	60	0.02	0.36	1.24	0.03	0.03	0.001	18.12	8.1	138	4.393	SA	2	TS
12	ECC REDUCER SCH40S 304/304L -W	10**6"	B4403314	5	295	665	60	0.02	0.36	1.24	0.03	0.03	0.001	18.12	8.1	147	4.393	SA	2	TS
13	ECC REDUCER SCH40S 304/304L -W	10**8"	B4403314	4	295	665	60	0.02	0.36	1.24	0.03	0.03	0.001	18.12	8.1	145	4.393	SA	2	TS
14	ECC REDUCER SCH40S 304/304L -W	12**6"	B4406115	21	395	685	53	0.02	0.44	1.29	0.03	0.03	0.002	18.08	8.06	138	4.389	SA	2	TS
15	ECC REDUCER SCH40S 304/304L -W	12**8"	B4406115	3	395	685	53	0.02	0.44	1.29	0.03	0.03	0.002	18.08	8.06	144	4.389	SA	2	TS
16	ECC REDUCER SCH40S 304/304L -W	12**10"	B4406115	11	395	685	53	0.02	0.44	1.29	0.03	0.03	0.002	18.08	8.06	143	4.389	SA	2	TS
17	LR 45 ELBOW SCH40S 304/304L -W	6"	B4403912	13	294	636	56.5	0.02	0.41	1.22	0.03	0.03	0.003	18.08	8.06	141	4.373	SA	2	TS
18	LR 90 ELBOW SCH40S 304/304L -W	6"	B4403912	11	294	636	56.5	0.02	0.41	1.22	0.03	0.03	0.003	18.08	8.06	139	4.373	SA	2	TS
Note:																				
(1) E=Elongation ;Standard round specimen, or small proportional specimen, min% in A0,Longitudinal-ZZ																				
(2) H=Hot formed (620~980 oC) and cooled in still air,S-Cold formed and normalized (900 oC@0.5Hr),cooled in still air																				
SA-Cold formed and solution annealed at 1050 oC±10oC, water quenched QT=Quenched+Tempered, NT=Normalized+Tempered,																				
(3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.																				
(4) TS = TTSC0																				
(5) All Material Is According To NACE MR 0175 / ISO 15156																				



Note:

(1) E=Elongation :Standard round specimen, or small proportional specimen, min% in 4D:longitudinal-22

(2)HF=Hot formed (620~980 °C) and cooled in still air;S=Cold formed and normalized (900 °C&0.5HR);cooled in still air

SA=Cold formed and solution annealed at 1050 °C&100C, water quenched QT=Quenched+Tempered, NT=Normalized+Tempered.

(3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.

(4) TS = TISCO

(5) All Material Is According To NACE MR 0175 / ISO 15156

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.


This material was manufactured, tested, and inspected without mercurial and radiation contamination.

ISO 9001:2008

Get it right

MILL TEST CERTIFICATE

Purchaser		NING BAO STEEL CO., LTD		Material Specification		ASTM A403/A403M-15 WP304/304L		Date		2022-08-09											
Order No		WF-2022-153-C		Specification for Inspection		ASME B16.9-12		API ISO 9001-2008		No-1122											
Invoice No		WP30N9523		Visual and Dimensional		OK		Certificate No		EN10204-2004 3.1											
Item	Product Description (5)	Size	Heat	Qty (Pcs)	Tension Test			Chemical Composition %							Heat Treat- ment (2)	Raw Material					
					YS Mpa	TS Mpa	E %	C	Si	Mn	P	S	Cr	Ni		HB	CE(1)	Type (3)	Manu- facturer (4)		
1	CAP SCH10S 304/304L -S	2 1/2"	B410410C	151	-	-	-	0.030	-	-	2.00	0.045	-	-	18.0	8.0	-	-	SA	3	TS
2	CAP SCH10S 304/304L -S	3"	B410410C	176	280	637	57.2	0.02	0.41	1.02	0.04	0.001	0.030	20.0	11.0	-	-	SA	3	TS	
3	CAP SCH10S 304/304L -S	14"	B410713C	1	279	635	56.2	0.02	0.41	1.02	0.04	0.001	0.030	18.34	8.02	143	4.389	SA	3	TS	
4	CAP SCH10S 304/304L -S	16"	B410713C	3	279	635	56.2	0.02	0.39	1.03	0.03	0.002	0.030	18.14	8.03	141	4.352	SA	3	TS	
5	CAP SCH40S 304/304L -S	14"	B410916C	2	286	644	56.5	0.04	0.34	1.37	0.03	0.002	0.002	18.14	8.03	146	4.352	SA	3	TS	
6	ECC REDUCER SCH10S 304/304L -S	12**6"	BS480115	10	245	555	49.5	0.02	0.19	0.68	0.03	0.013	0.013	18.21	8.09	138	4.314	SA	1	TN	
7	ECC REDUCER SCH40S 304/304L -S	5**2"	BS440111	10	345	670	53	0.02	0.46	0.69	0.03	0.001	0.001	18.52	8.06	144	4.376	SA	1	TN	
8	ECC REDUCER SCH40S 304/304L -S	5**4"	BS440111	7	345	670	53	0.02	0.46	0.69	0.03	0.001	0.001	18.52	8.06	136	4.376	SA	1	TN	
9	ECC REDUCER SCH40S 304/304L -S	6**2"	BS440512	5	245	555	49.5	0.02	0.19	0.65	0.03	0.013	0.013	18.19	8.09	138	4.305	SA	1	TN	
10	ECC REDUCER SCH40S 304/304L -S	6**4"	BS440512	25	245	555	49.5	0.02	0.19	0.65	0.03	0.013	0.013	18.19	8.09	146	4.305	SA	1	TN	
11	ECC REDUCER SCH40S 304/304L -S	6**5"	BS440512	19	245	555	49.5	0.02	0.19	0.65	0.03	0.013	0.013	18.19	8.09	147	4.305	SA	1	TN	
12	ECC REDUCER SCH40S 304/304L -S	8**4"	BS4401613	14	245	555	49.5	0.02	0.19	0.68	0.03	0.013	0.013	18.19	8.09	145	4.31	SA	1	TN	
13	ECC REDUCER SCH40S 304/304L -S	8**5"	BS4401613	5	245	555	49.5	0.02	0.19	0.68	0.03	0.013	0.013	18.19	8.09	136	4.31	SA	1	TN	
14	ECC REDUCER SCH40S 304/304L -S	10**4"	BS440114	3	331	583	64	0.01	0.47	1.36	0.03	0.001	0.001	18.3	8.13	144	4.439	SA	1	TN	
15	ECC REDUCER SCH40S 304/304L -S	10**6"	BS440114	12	331	583	64	0.01	0.47	1.36	0.03	0.001	0.001	18.3	8.13	141	4.439	SA	1	TN	
16	ECC REDUCER SCH40S 304/304L -S	10**8"	BS440114	9	331	583	64	0.01	0.47	1.36	0.03	0.001	0.001	18.3	8.13	138	4.439	SA	1	TN	
17	ECC REDUCER SCH40S 304/304L -S	12**6"	BS480115	2	245	555	49.5	0.02	0.19	0.68	0.03	0.013	0.013	18.21	8.09	141	4.314	SA	1	TN	
18	ECC REDUCER SCH40S 304/304L -S	12**8"	BS480115	2	245	555	49.5	0.02	0.19	0.68	0.03	0.013	0.013	18.21	8.09	138	4.314	SA	1	TN	
Note:																					
(1) E=Elongation, S=Standard round specimen, or small proportional specimen, minrk in AD;Longitudinal;22																					
(2)H=Hot formed (620°-980 oc) and cooled in still air;S=Cold formed and normalized (900 oc@5HR);cooled in still air																					
SA=Cold formed and solution annealed at 1050 oc@10oc, water quenched;QT=Quenched+Tempered, NT=Normalized+Tempered.																					
(3) 1=Seamless Pipe 2=Welded Pipe 3=Steel Plate.																					
(4) TN = TENARIS, TS = TISCO																					
(5) All Material is According To NACE MR 0175 / ISO 15156																					



SGS

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

This material was manufactured, tested, and inspected without mercurial and radiation contamination.

Note:
 (1) E-Elongation: Standard round specimen, or small proportional specimen, min in 4D; Longitudinal-22
 (2) H-Reduction: 620°-980 °C and cooled in still air; S-Cold formed and normalized (900 °C; 0.5HR), cooled in still air
 S-A Cold formed and solution annealed at 1050 °C; 1.0hr, water quenched; QT=Quenched+Tempered; NT=Normalized+Tempered.
 (3) 1-Seamless Pipe 2-Welded Pipe 3-Steel Plate.
 (4) TN = TENARIS, TS = TISCO
 (5) All Material is According To NACE MR 0175 / ISO 15156

We hereby certify that the products detailed herein have been manufactured and inspected in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.
 This material was manufactured, tested, and inspected without mercurial and radiation contamination.

Signature