

HEBEI LINGBAI IMPORT AND EXPORT CO.,LTD

CHEMICAL ANALYSIS AND MECHANICAL MILL TEST CERTIFICATE (EN 10204-3.1)

Item No.		HEAT NO.	QTY	Description & Size	Material	Chemical Analyses										Mechanical Properties			
						C%	Mn%	P%	S%	Si%	Cu%	Ni%	Cr%	Mo%	Yield strength R _{0.2} ^{eff} N/mm ²	Tensile Strength R _m N/mm ²	Elongation A ₅ %	Reduction of area Z ₅ %	Hardness HB
Client : Unimech Engineering (M)Sdn.Bhd						Certificate Ref. No :20210720										A370-2007			
Invoice No: LB-ML001						Date of report : 2021-7-20													
Goods Description: FITTINGS						Mark of Manufacturer:LB													
Material :A234 WPB						Test Temperature : 20°C/RT													
1	150	1152	CS SCH 40 END CAP	1/2"	A234 WPB	0.19	0.41	0.013	0.007	0.11	0.11	0.01	0.012	0	246	420	24	51	153
2	100	1156	CS SCH 40 END CAP	1.1/2"	A234 WPB	0.17	0.42	0.009	0.013	0.13	0.13	0.01	0.013	0	255	425	24	53	152
3	500	1245	CS SCH 40 ELBOW 90 DEG	1"	A234 WPB	0.18	0.43	0.012	0.014	0.14	0.14	0.01	0.011	0	254	432	25	56	154
4	2000	1256	CS SCH 40 ELBOW 90 DEG	1.1/2"	A234 WPB	0.19	0.44	0.013	0.015	0.15	0.12	0.01	0.015	0	256	425	26	56	156
5	350	1285	CS SCH 40 ELBOW 90 DEG	4"	A234 WPB	0.20	0.45	0.012	0.016	0.16	0.13	0.01	0.016	0.01	253	426	27	58	155
6	600	1296	CS SCH 40 ELBOW 90 DEG	6"	A234 WPB	0.19	0.46	0.011	0.012	0.17	0.12	0.02	0.011	0.01	258	428	28	57	152
7	200	1297	CS SCH 40 ELBOW 90 DEG	8"	A234 WPB	0.18	0.48	0.014	0.011	0.18	0.13	0.02	0.012	0.01	259	429	29	59	154
8	80	1299	CS SCH 40 ELBOW 90 DEG	10"	A234 WPB	0.22	0.42	0.015	0.011	0.14	0.15	0.01	0.014	0.01	252	480	31	51	159
9	60	1266	CS SCH 40 ELBOW 90 DEG	12"	A234 WPB	0.23	0.43	0.016	0.015	0.15	0.13	0.01	0.015	0.01	254	455	32	54	160
10	6	1233	CS SCH 40 ELBOW 90 DEG	16"	A234 WPB	0.21	0.44	0.017	0.016	0.16	0.14	0.02	0.012	0.01	256	465	33	53	161
11	30	7200	CS SCH 40 S/R ELBOW 90 DEG	2"	A234 WPB	0.18	0.45	0.011	0.011	0.12	0.12	0.01	0.011	0.01	255	460	34	52	162
12	10	7256	CS SCH 40 S/R ELBOW 90 DEG	6"	A234 WPB	0.17	0.46	0.012	0.012	0.14	0.14	0.02	0.012	0	255	475	35	58	163
13	100	7589	CS SCH 40 CON REDUCER	1" x 1/2"	A234 WPB	0.16	0.46	0.013	0.014	0.13	0.13	0.02	0.013	0.01	253	470	36	54	164
14	60	7580	CS SCH 40 CON REDUCER	1.1/4" X 1/2"	A234 WPB	0.21	0.52	0.013	0.013	0.14	0.11	0.01	0.009	0.01	254	456	27	53	156
15	50	7581	CS SCH 40 CON REDUCER	2" X 1.1/2"	A234 WPB	0.16	0.51	0.014	0.012	0.13	0.13	0.01	0.013	0.01	253	452	26	52	158
16	30	7590	CS SCH 40 CON REDUCER	3" X 1.1/4"	A234 WPB	0.18	0.46	0.012	0.014	0.15	0.14	0.01	0.012	0.01	252	454	28	51	154
17	40	7560	CS SCH 40 CON REDUCER	6" X 4"	A234 WPB	0.19	0.49	0.013	0.012	0.12	0.11	0.01	0.013	0.01	251	455	29	52	155
18	100	7561	CS SCH 40 CON REDUCER	8" X 6"	A234 WPB	0.18	0.53	0.007	0.011	0.12	0.15	0.01	0.016	0	272	459	32	67	162
19	40	7550	CS SCH 40 CON REDUCER	10" X 4"	A234 WPB	0.22	0.52	0.011	0.014	0.15	0.18	0.01	0.019	0.01	291	456	29	52	165
20	60	7550	CS SCH 40 CON REDUCER	10" X 8"	A234 WPB	0.22	0.52	0.011	0.014	0.15	0.18	0.01	0.019	0.01	291	456	29	52	165
21	2	7551	CS SCH 40 CON REDUCER	16" X 12"	A234 WPB	0.19	0.51	0.009	0.015	0.11	0.14	0.01	0.015	0	260	453	30	66	159
22	1	7551	CS SCH 40 CON REDUCER	16" X 14"	A234 WPB	0.19	0.51	0.009	0.015	0.11	0.14	0.01	0.015	0	260	453	30	66	159
23	60	5633	CS SCH 40 ECC REDUCER	2" X 3/4"	A234 WPB	0.19	0.44	0.015	0.013	0.19	0.15	0.01	0.012	0	271	456	31	56	160
24	10	5660	CS SCH 40 ECC REDUCER	5" X 3"	A234 WPB	0.19	0.44	0.015	0.013	0.19	0.15	0.01	0.012	0	271	456	31	56	160
25	10	5660	CS SCH 40 ECC REDUCER	5" X 4"	A234 WPB	0.19	0.44	0.015	0.013	0.19	0.15	0.01	0.012	0	271	456	31	56	160
26	10	5661	CS SCH 40 ECC REDUCER	8" X 4"	A234 WPB	0.23	0.46	0.017	0.015	0.23	0.12	0.02	0.013	0	256	457	33	58	163
27	20	5661	CS SCH 40 ECC REDUCER	8" X 6"	A234 WPB	0.23	0.46	0.017	0.015	0.23	0.12	0.02	0.013	0	256	457	33	58	163

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CHEMICAL ANALYSIS AND MECHANICAL MILL TEST CERTIFICATE (EN 10204-3.1)

Client : Unimech Engineering (M)Sdn.Bhd		Certificate Ref. No :20210720		Mechanical Properties		A370-2007												
Invoice No: LB-MI.001		Date of report : 2021-7-20		Yield strength		Reduction of area												
Goods Description: FITTINGS		Mark of Manufacturer:LB		Tensile Strength		Elongation												
Material :A234 WPB		Test Temperature : 20°C/RT		R _m		A%												
Item No.	QTY	HEAT NO.	Description & Size	Material	Chemical Analyses							Mo%	R _{0.02}	R _m	Z%	HB		
					C%	Mn%	P%	S%	Si%	Cu%	Ni%						Cr%	
28	4	5662	CS SCH 40 ECC REDUCER 10" X 5"	A234 WPB	0.22	0.49	0.012	0.011	0.12	0.13	0.01	0.015	0.01	254	546	32	52	158
29	6	5662	CS SCH 40 ECC REDUCER 10" X 6"	A234 WPB	0.22	0.49	0.012	0.011	0.12	0.13	0.01	0.015	0.01	254	546	32	52	158
30	100	4599	CS SCH 40 EQUAL TEE 3"	A234 WPB	0.21	0.48	0.013	0.015	0.13	0.14	0.01	0.014	0	253	543	33	51	157
31	16	4591	CS SCH 40 EQUAL TEE 12"	A234 WPB	0.19	0.45	0.012	0.012	0.12	0.13	0.01	0.013	0.01	254	542	34	53	158
32	40	5855	CS SCH 40 REDUCING TEE 1.1/4" X 1"	A234 WPB	0.23	0.47	0.014	0.014	0.14	0.12	0.01	0.009	0	255	543	32	52	156
33	60	5856	CS SCH 40 REDUCING TEE 1.1/2" X 1/2"	A234 WPB	0.19	0.48	0.012	0.007	0.11	0.15	0.01	0.011	0	252	524	32	52	155
34	30	5856	CS SCH 40 REDUCING TEE 1.1/2" X 1.1/4"	A234 WPB	0.19	0.48	0.012	0.007	0.11	0.15	0.01	0.011	0	252	524	32	52	155
35	20	5890	CS SCH 40 REDUCING TEE 2.1/2" X 1/2"	A234 WPB	0.21	0.51	0.009	0.014	0.14	0.14	0.01	0.013	0	254	524	34	53	154
36	30	5890	CS SCH 40 REDUCING TEE 2.1/2" X 1.1/2"	A234 WPB	0.21	0.51	0.009	0.014	0.14	0.14	0.01	0.013	0	254	524	34	53	154
37	40	5890	CS SCH 40 REDUCING TEE 2.1/2" X 2"	A234 WPB	0.21	0.51	0.009	0.014	0.14	0.14	0.01	0.013	0	254	524	34	53	154
38	60	5420	CS SCH 40 REDUCING TEE 3" X 1.1/4"	A234 WPB	0.22	0.53	0.011	0.011	0.13	0.11	0.01	0.017	0	253	521	32	52	152
39	20	5420	CS SCH 40 REDUCING TEE 3" X 1.1/2"	A234 WPB	0.22	0.53	0.011	0.011	0.13	0.11	0.01	0.017	0	253	521	32	52	152
40	80	5420	CS SCH 40 REDUCING TEE 3" X 2"	A234 WPB	0.22	0.53	0.011	0.011	0.13	0.11	0.01	0.017	0	253	521	32	52	152
41	12	5421	CS SCH 40 REDUCING TEE 8" X 6"	A234 WPB	0.19	0.49	0.012	0.013	0.14	0.12	0.01	0.014	0	253	524	34	51	152
42	50	1758	CS SCH 80 CAP 1/2"	A234 WPB	0.22	0.51	0.013	0.021	0.13	0.11	0.01	0.016	0	254	523	32	52	154
43	10	1756	CS SCH 80 CAP 4"	A234 WPB	0.21	0.52	0.012	0.014	0.12	0.19	0.01	0.015	0	256	528	32	54	153
44	100	5770	CS SCH 80 ELBOW 90 DEG 3/4"	A234 WPB	0.23	0.48	0.011	0.016	0.14	0.17	0.01	0.015	0	254	526	31	53	155
45	120	5771	CS SCH 80 ELBOW 90 DEG 3"	A234 WPB	0.24	0.47	0.014	0.015	0.13	0.23	0.01	0.016	0.01	255	521	34	52	152
46	10	5589	CS SCH 80 ELBOW 90 DEG 10"	A234 WPB	0.23	0.46	0.012	0.015	0.12	0.11	0.01	0.017	0	251	522	32	51	154
47	60	5296	CS SCH 80 CON REDUCER 1" X 1/2"	A234 WPB	0.21	0.51	0.015	0.016	0.14	0.13	0	0.013	0	254	524	32	52	155
48	50	5296	CS SCH 80 CON REDUCER 1" X 3/4"	A234 WPB	0.21	0.51	0.015	0.016	0.14	0.13	0	0.013	0	254	524	32	52	155
49	70	5469	CS SCH 80 CON REDUCER 1.1/2" X 1"	A234 WPB	0.23	0.53	0.009	0.011	0.13	0.12	0.01	0.012	0.01	253	456	32	55	154
50	100	5470	CS SCH 80 CON REDUCER 2" X 1"	A234 WPB	0.21	0.51	0.012	0.012	0.11	0.11	0.01	0.011	0	254	458	32	53	156
51	40	5471	CS SCH 80 CON REDUCER 3" X 1.1/2"	A234 WPB	0.23	0.52	0.013	0.013	0.14	0.13	0.01	0.013	0	256	457	33	52	154
52	80	5471	CS SCH 80 CON REDUCER 3" X 2"	A234 WPB	0.23	0.52	0.013	0.013	0.14	0.13	0.01	0.013	0	256	457	33	52	154
53	40	5988	CS SCH 80 CON REDUCER 4" X 2"	A234 WPB	0.20	0.42	0.013	0.012	0.12	0.12	0.01	0.012	0	251	456	31	51	154
54	40	5988	CS SCH 80 CON REDUCER 4" X 3"	A234 WPB	0.20	0.42	0.013	0.012	0.12	0.12	0.01	0.012	0	251	456	31	51	154
55	30	5400	CS SCH 80 CON REDUCER 5" X 4"	A234 WPB	0.22	0.49	0.011	0.013	0.11	0.11	0.01	0.013	0	254	459	35	53	152

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CHEMICAL ANALYSIS AND MECHANICAL MILL TEST CERTIFICATE (EN 10204-3.1)

Client : Unimech Engineering (M)Sdn.Bhd		Certificate Ref. No :20210720		Mechanical Properties A370-2007															
Invoice No: LB-ML001		Date of report : 2021-7-20		Yield strength		Tensile Strength		Elongation		Reduction of area		Hardness							
Goods Description: FITTINGS		Mark of Manufacturer:LB		R _{eH}		R _m		A%		Z%		HB							
Material :A234 WPB		Test Temperature : 20°C/RT		Chemical Analyses															
Item No.	QTY	HEAT NO.	Description & Size	Material	C%	Mn%	P%	S%	Si%	Cu%	Ni%	Cr%	Mo%	R _{eH}	R _m	A%	Z%	HB	
56	15	1212	CS SCH 80 ECC REDUCER	A234 WPB	0.21	0.5	0.011	0.012	0.14	0.12	0.01	0.011	0.01	257	470	38	53	161	
57	10	1263	CS SCH 80 ECC REDUCER	A234 WPB	0.19	0.52	0.012	0.011	0.13	0.12	0	0.011	0.01	256	469	37	52	159	
58	10	1266	CS SCH 80 ECC REDUCER	A234 WPB	0.19	0.52	0.012	0.011	0.13	0.12	0	0.011	0.01	256	469	37	52	159	
59	6	1268	CS SCH 80 ECC REDUCER	A234 WPB	0.19	0.52	0.012	0.011	0.13	0.12	0	0.011	0.01	256	469	37	52	159	
60	20	1249	CS SCH 80 EQUAL TEE	A234 WPB	0.21	0.52	0.011	0.01	0.12	0.14	0	0.012	0.01	255	456	37	51	161	
61	100	1250	CS SCH 80 EQUAL TEE	A234 WPB	0.19	0.49	0.012	0.012	0.13	0.12	0	0.011	0.01	256	465	38	51	161	
62	60	1267	CS SCH 80 EQUAL TEE	A234 WPB	0.18	0.52	0.011	0.012	0.14	0.12	0.01	0.011	0.01	256	465	38	51	162	
63	60	1251	CS SCH 80 EQUAL TEE	A234 WPB	0.18	0.5	0.013	0.011	0.15	0.13	0.01	0.012	0.01	257	458	37	52	159	
64	70	1252	CS SCH 80 EQUAL TEE	A234 WPB	0.19	0.5	0.011	0.012	0.12	0.13	0	0.012	0.01	257	458	37	52	159	
65	40	1259	CS SCH 80 EQUAL TEE	A234 WPB	0.20	0.51	0.011	0.011	0.13	0.14	0.01	0.013	0.01	254	457	38	52	159	
66	10	1258	CS SCH 80 EQUAL TEE	A234 WPB	0.21	0.53	0.012	0.012	0.13	0.15	0.01	0.012	0.01	254	455	38	52	160	
67	30	4599	CS SCH 80 REDUCING TEE	A234 WPB	0.23	0.54	0.011	0.011	0.14	0.15	0.01	0.011	0.01	255	458	37	54	160	
Total																			

Visual examination : Without Complaint

Dimensional inspection : Without Complaint

Surface crack inspection: Without Complaint

We hereby certify that product described herein have been manufactured,sampled, inspected and tested in accordance with the standard and also with the purchaser's requirements and the result is acceptable.

INSPECTOR: 张中立

Manufacturer:HEBEI LINGBAI IMPORT AND EXPORT CO.,LTD