



# ZIBO YUANFENG METAL PRODUCTS LTD

NO.113 LUSHAN ROAD LINZI ZIBO CHINA 255418

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(CERTIFICATE TO EN 10204/DIN 50049 3.1.B.)

# ORIGINAL



## QUALITY CERTIFICATE

DATE: APR 18, 2002

NO: YMP02026

Customer: TUBOS MONTERREY.S.A.DE C.V.

Order No.: B-078

Raw Material Specification	Commodity Specification	Specification for Inspection			Raw Material Manufacturer	
ASTM A108 GR.B SEAMLESS STEEL PIPE	ASTM A234-97 WPB ASME SA234-97 WPB	ASME B16.9-1993 ASME B16.28-1994			BAOSTEEL GROUP, SHANGHAI	
Product Description	Heat No.	Quantity (pcs)	Visual Inspection	Dimensional Inspection	Hardness Max. 197Hb	Heat Treatment (Note 1)
LR 90D ELBOW SCH40	1/2" 701	200	GOOD	GOOD	<197	HF
LR 90D ELBOW SCH40	3/4" 702	900	GOOD	GOOD	<197	HF
LR 90D ELBOW SCH40	1" 703	1200	GOOD	GOOD	<197	HF
LR 90D ELBOW SCH40	1.1/4" 704	1200	GOOD	GOOD	<197	HF
LR 90D ELBOW SCH40	1.1/2" 705	500	GOOD	GOOD	<197	HF
LR 90D ELBOW SCH40	2" 706	500	GOOD	GOOD	<197	HF
LR 90D ELBOW SCH40	3" 708	400	GOOD	GOOD	<197	HF
LR 90D ELBOW SCH40	6" 711	600	GOOD	GOOD	<197	HF
LR ELBOW 90 STD	16" 718	5	GOOD	GOOD	<197	HF
LR ELBOW 90 STD	18" 718	10	GOOD	GOOD	<197	HF
LR ELBOW 90 STD	20" 720	2	GOOD	GOOD	<197	HF
LR 45D ELBOW SCH40	1" 703	100	GOOD	GOOD	<197	HF
LR 45D ELBOW SCH40	1.1/2" 705	100	GOOD	GOOD	<197	HF
LR 45D ELBOW SCH40	3" 705	200	GOOD	GOOD	<197	HF
LR 45D ELBOW SCH40	4" 609	135	GOOD	GOOD	<197	HF
LR 45D ELBOW SCH40	4" 709	85	GOOD	GOOD	<197	HF
LR 45D ELBOW SCH40	6" 711	200	GOOD	GOOD	<197	HF
LR 45D ELBOW SCH40	8" 712	150	GOOD	GOOD	<197	HF
LR 45D ELBOW SCH40	10" 713	40	GOOD	GOOD	<197	HF
TEE SCH40	1" 703E	150	GOOD	GOOD	<197	N

Heat No.	Tension Test (Note 2)			Chemical Composition %										
	YS-Psi	TS-Psi	E-%	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Nb
Min.	35000	60000	30											
Max.		85000		0.30	0.10	1.06	0.050	0.058	0.40	0.15	0.40	0.40	0.08	0.02
701	50025	73225	38	0.20	0.28	0.54	0.017	0.011	0.07	-	0.03	0.13	-	-
702	53650	75400	38	0.18	0.25	0.40	0.011	0.008	0.11	-	0.11	0.17	-	-
703	47125	74675	33	0.18	0.28	0.59	0.008	0.012	0.030	-	0.020	0.080	-	-
704	52925	73225	34	0.19	0.23	0.52	0.021	0.018	0.060	-	0.060	0.180	-	-
705	52200	71775	30	0.21	0.24	0.51	0.019	0.013	0.050	-	0.060	0.180	-	-
706	51475	75400	34	0.20	0.25	0.56	0.007	0.003	0.040	-	0.030	0.080	-	-
708	50750	70325	34	0.18	0.24	0.56	0.013	0.010	0.002	-	0.030	0.020	-	-
711	52925	68150	34	0.18	0.22	0.54	0.008	0.007	0.030	-	0.030	0.090	-	-
716	40600	63900	30	0.20	0.28	0.56	0.027	0.014	0.017	-	0.010	0.013	-	-
718	44225	70325	30	0.21	0.25	0.55	0.022	0.013	0.029	-	0.009	0.022	-	-
720	44225	70325	30	0.21	0.25	0.55	0.022	0.013	0.029	-	0.009	0.022	-	-
609	52200	70325	36	0.19	0.21	0.53	0.010	0.008	0.03	-	0.04	0.05	-	-
709	49300	71775	35	0.18	0.25	0.56	0.013	0.004	0.050	-	0.040	0.070	-	-
712	49300	67425	36	0.18	0.24	0.56	0.005	0.005	0.040	-	0.030	0.080	-	-
713	42775	68150	30	0.21	0.27	0.52	0.016	0.01	-	-	-	-	-	-
703E	47850	72500	37	0.18	0.26	0.56	0.010	0.012	0.02	-	0.01	0.02	-	-

Note 1. HF: Hot formed (760/980 °C) and cooled in still air. N: Normalized (860/920 °C)

Note 2. 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.

博博源豐金屬製品有限公司  
ZIBO YUANFENG METAL PRODUCTS CO., LTD

QUALITY ASSURANCE MANAGER