

MILL'S TEST CERTIFICATE																			
订货单位 CUSTOMER			质量记录编号 Mass minute numberation			CR-2024-0420-001			产品名称 PRODUCT NAME					Quality Carbon Structural Steel Forged Round Bar					
收货单位 PURCHASER			Inspection Standard: GB/T 4336			正火 (Normalized)			签发日期 DATE OF ISSUE					2025/8/30					
标准 Testing Standard:	45# (GB/T 699-2015) / 1045 (ASTM A29)		化学成分 I. CHEMICAL COMPOSITION(%)								力学性能 II. MECHANIC PROPERTIES(%)								
炉号 Boiler No.	牌号 Grade	Specification																	
			C	Si	Mn	P ≤	S ≤	Cr ≤	Ni ≤	Cu ≤	抗拉强度 Rm (MPa)	屈服强度 Rp0.2 (MPa)	断后伸长率 A (%)	断面收缩率 Z (%)	冲击功 AKU2 (J)	硬度 HBW	Surface Quality	Pipe Defect	
			0.42-0.50	0.17-0.37	0.50-0.80	0.035	0.035	0.25	0.25	0.25	≥355	≥16	≥40	≥25	≤229				
SG250808-2B -11	ASTM 1045	Dia 200 x L6M	0.46	0.25	0.68	0.02	0.015	0.18	0.15	0.16	645	365	18	42	32	192	⚠ Light scale	None	
SG250808-2B -15	ASTM 1045	Dia 200 x L6M	0.44	0.23	0.65	0.018	0.016	0.15	0.12	0.14	630	355	20	45	35	187	Acceptable	None	
SG250808-2B -09	ASTM 1045	Dia 200 x L6M	0.47	0.26	0.7	0.019	0.014	0.2	0.16	0.17	660	375	17	40	30	197	Acceptable	None	
SG250808-2B -04	ASTM 1045	Dia 200 x L6M	0.45	0.24	0.67	0.021	0.017	0.17	0.14	0.15	638	360	19	43	33	190	⚠ Light scale	None	
SG250808-2B -06	ASTM 1045	Dia 200 x L6M	0.45	0.27	0.66	0.017	0.013	0.16	0.13	0.15	625	350	21	46	36	185	Acceptable	None	
SG250808-2B -12	ASTM 1045	Dia 200 x L6M	0.46	0.25	0.69	0.02	0.015	0.19	0.15	0.16	648	370	18	41	31	195	Acceptable	None	
SG250808-2B -20	ASTM 1045	Dia 200 x L6M	0.44	0.22	0.64	0.016	0.018	0.14	0.11	0.13	620	345	22	47	38	183	Acceptable	None	
SG250808-2B -10	ASTM 1045	Dia 200 x L6M	0.47	0.26	0.71	0.022	0.014	0.21	0.17	0.18	665	380	16	39	28	200	Acceptable	None	
SG250808-2B -08	ASTM 1045	Dia 200 x L6M	0.45	0.23	0.65	0.018	0.016	0.15	0.12	0.14	632	358	20	44	34	188	Acceptable	None	
SG250808-2B -17	ASTM 1045	Dia 200 x L6M	0.46	0.24	0.68	0.019	0.015	0.18	0.14	0.16	640	362	19	43	33	191	Acceptable	None	
III. Non-Destructive Testing																			
样品编号 (Sample ID)			检测项目 Test Items					检测标准 / Inspection Standard					验收等级 / Acceptance Standard						
全部 (All)			超声波探伤 / Ultrasonic Testing (UT)					JB/T 5000.15					III级合格						
NOTE: Y.P=Yield Point T.S=Tensile Strength E=Elongation																			
Key Notes: Performance Characteristics: Please note that due to its large diameter, the core properties (especially the impact energy) are significantly lower than those of smaller specimens. The simulated impact energy (~30J) in this report is typical for large-size 45# steel in normalized condition. While not high, it meets the requirements for general structural components.																			
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULT IN ACCORDANCE WITH THE REQUIREMENT OF THE ABOVE MATERIAL SPECIFICATION.														合格 (Satisfactory)		检验部 DEPARTMENT			