

MILL'S TEST CERTIFICATE

订货单位 CUSTOMER			质量记录编号 Mass minute numbering			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(%)								合同号 CONTRACT NO.					SG20250910			
炉号 Boiler No.	牌号 Grade										力学性能 II. MECHANIC PROPERTIES(%)								
		Specification	C	Si	Mn	P ≤	S ≤	Cr ≤	Ni ≤	Cu ≤									抗拉强度 Rm (MPa)
			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				
SG250808-2A -08	ASTM 1045	Dia 250 x L6M	0.45	0.24	0.66	0.019	0.014	0.17	0.13	0.15	630	350	17	40	28	187	Acceptable	None	
SG250808-2A -02	ASTM 1045	Dia 250 x L6M	0.47	0.26	0.69	0.021	0.016	0.19	0.15	0.17	645	365	16	38	26	195	Acceptable	None	
SG250808-2A -10	ASTM 1045	Dia 250 x L6M	0.44	0.23	0.65	0.018	0.015	0.16	0.14	0.16	618	342	18	42	30	182	Acceptable	None	
SG250808-2A -15	ASTM 1045	Dia 250 x L6M	0.46	0.25	0.7	0.022	0.013	0.2	0.16	0.18	655	370	15	37	25	198	Acceptable	None	
SG250808-2A -17	ASTM 1045	Dia 250 x L6M	0.48	0.27	0.71	0.02	0.017	0.18	0.12	0.14	662	375	14	36	24	202	⚠ Light scale	None	
SG250808-2A -03	ASTM 1045	Dia 250 x L6M	0.45	0.22	0.67	0.017	0.014	0.15	0.11	0.13	625	348	19	43	31	185	Acceptable	None	
SG250808-2A -20	ASTM 1045	Dia 250 x L6M	0.43	0.24	0.64	0.016	0.018	0.14	0.1	0.12	610	340	20	45	33	178	Acceptable	None	
SG250808-2A -05	ASTM 1045	Dia 250 x L6M	0.46	0.26	0.68	0.019	0.015	0.21	0.17	0.19	648	362	16	39	27	193	⚠ Light scale	None	
SG250808-2A -11	ASTM 1045	Dia 250 x L6M	0.44	0.25	0.66	0.018	0.016	0.17	0.13	0.15	635	355	17	41	29	188	Acceptable	None	
SG250808-2A -14	ASTM 1045	Dia 250 x L6M	0.47	0.23	0.69	0.02	0.014	0.19	0.15	0.17	640	358	17	40	28	190	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)

