

CP-Ti is a kind of commercial pure titanium including Gr1, Gr.2 and Gr.3, usually only requiring tensile strength, microstructure and macrostructure at the room temperature according to ISO 5832-2, TIS381P, AMS 4921L and MIL-T-9047G. At present, WST can supply CP-Ti bars in size of dia.1.2-250mm, with tensile strength between 200Mpa to 700Mpa and elongation of 20-25%, which has the very good match of tensile strength and plasticity.

Table 1

Chemical Composition								
Grade	Ti	Fe	C	N	O	H	Other	
							each	total
Gr1	Balance	≤0.20	≤0.10	≤0.03	≤ 0.18	≤0.0125	≤0.1	≤0.30
Gr2	Balance	≤0.30	≤0.10	≤0.03	≤ 0.25	≤0.0125	≤0.1	≤0.30
Gr3	Balance	≤0.30	≤0.10	≤0.05	≤ 0.35	≤0.0125	≤0.1	≤0.30

Table 2

Mechanical Properties				
Grade	Direction	σb (MPa)	σ0.2 (MPa)	δ5 (%)
Gr1	L	≥240	≥170	≥24
Gr2	L	≥345	≥275	≥20
Gr3	L	≥450	≥380	≥20

Table 3

Ultrasonic Test			
Class	FBH (mm)	Noise Signal (dB)	Loss of Back Echo
AA	≤3.2	-6	≤50%
A1	≤2.0	-6	≤50%
A	≤1.2	-6	≤50%
B	≤0.8	-6	≤50%

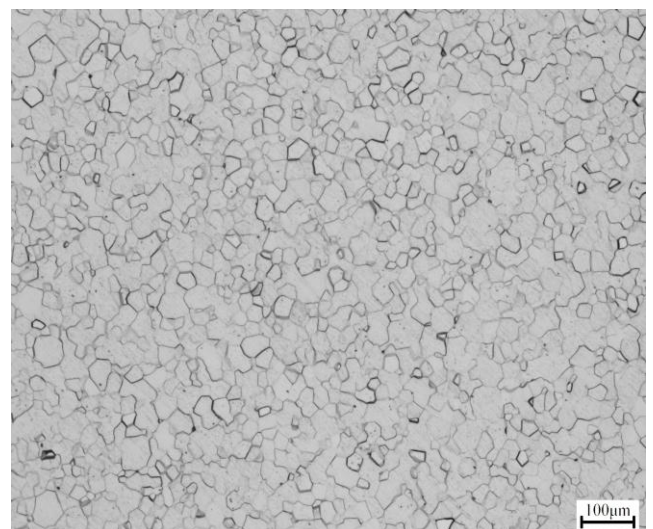


Fig.1 Micrograph (100X)