

Ti-CP-70 is a kind of commercial pure titanium, which are very similar to Gr.4 and has same microstructure and mechanical properties with Gr.4 material, usually only requiring tensile strength, microstructure and macrostructure at the room temperature according to AMS 4921L and MIL-T-9047G. At present, WST can supply Ti-CP-70 bars in size of dia.30-70mm, with tensile strength between 650Mpa to 720Mpa and elongation of 20-30%, which has the very good match of tensile strength and plasticity.

Table 1

Chemical Composition							
Ti	Fe	C	N	O	H	Other	
						each	total
Balance	≤0.50	≤0.08	≤0.05	≤ 0.40	≤0.0125	≤0.1	≤0.30

Table 2

Mechanical Properties						
Specification	Diameter (mm)	Direction	$\sigma_b$ (MPa)	$\sigma_{0.2}$ (MPa)	$\delta_5$ (%)	$\Psi$ (%)
AMS4921L	≤101.6	L	≥552	≥483	≥15	≥30
MIL-T-9047G	≤101.6	L	≥551	≥482	≥15	≥30

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%

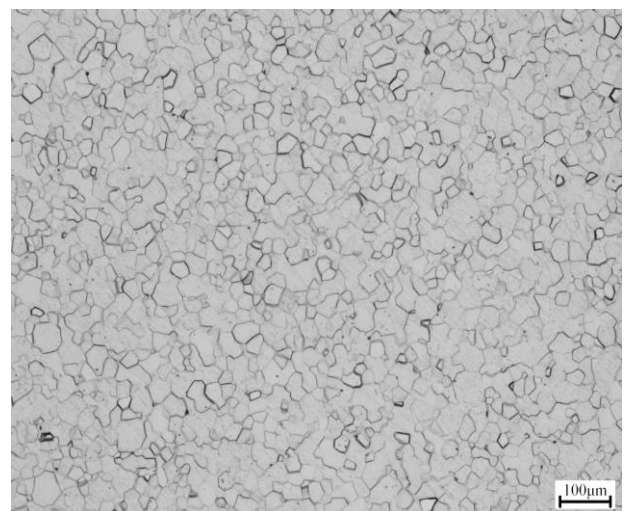


Fig.1 Micrograph (100X)