

## SHANGHAI HAILIANG COPPER CO., LTD

## CERTIFICATE OF PRODUCT QUALITY

(Product Name) \_\_\_\_\_

(Customer Name) Etapol Ltd (Alloy No) C12200 (Temper) O60(Dimension) Φ9.53\*0.81 (Specification) ASTM B280 (Order No.) 15HLHK03D112

(Test Items)	(Normal Value)	(Test Value)		Result
		Sample 1		
(Surface)	As per standard	Pass		Pass
(size)	(OD) mm	9.53±0.05	9.50	Pass
	(wall thickness)mm	0.81±0.08	0.74-0.83	Pass
(Clearness)	mg/m <sup>2</sup>	≤38	21.22	Pass
(Grain Size)	mm	≥0.04	0.040	Pass
(Mechanical Property)	(Tensile Strength) MPa	≥205	236	Pass
	(Elongation) %	≥40	54	Pass
(Expansion Test) α = 60 ° D <sub>1</sub> = 1.4D	No crack when vision	Pass		Pass
(Surface)	Conform To			
(Packing Requirement)	Conform To			
(Marking)	Conform To			
% Chemical Compositio n	Cu	≥99.90	99.96	Pass
	P	0.015-0.040	0.0269	Pass
RESULT	<b>PASS</b>			

*This Product is Certified to be in accordance with the specification.*

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Award/date: Si Xiao Juan 2016/01/29

Review/date: Xu jian qiang 2016/01/29