



Term of Reference (TOR)  
Of the  
Bi-Metallic Circular Plates Quantity 14 Pieces

1. General Specifications

Bi-Metallic Circular Plates that purchase will be used for aluminum UHV chamber fabrication. The specification is shown in the table below.

No.	Item	Quantity	Unit	Specifications
1	Bi-Metallic Circular Plates	14	Pcs.	<p><b>Material Composition:</b> Each plate must be composed of Aluminum Alloy 6061 and Stainless Steel 316L.</p> <p><b>Manufacturing Process:</b> The joining of the two dissimilar metals must be performed using the Hot Isostatic Pressing (HIP) diffusion bonding process.</p> <p><b>Diameter:</b> The diameter of the circular plates shall be 203 mm with a dimensional tolerance of <math>\pm 0.75</math> mm.</p> <p><b>Surface Roughness:</b> The surface roughness (<math>R_a</math>) of both sides of the plates shall be not more than <math>0.8 \mu\text{m}</math>.</p> <p><b>Thickness (Pre-Bonding Verification):</b></p> <ul style="list-style-type: none"> <li>• Stainless Steel 316L section: Not less than 12 mm.</li> <li>• Aluminum Alloy 6061 section: Not less than 36 mm.</li> <li>• <i>Note: These dimensions must be recorded by the Seller prior to the HIP process.</i></li> </ul> <p><b>Total Thickness (Post-Bonding Verification):</b> The total thickness of the finished bimetal plate shall be in the range of 48.0 mm to 52.0 mm.</p> <p><b>Quality Control (QC) Documentation:</b></p> <ul style="list-style-type: none"> <li>• The Seller must submit one comprehensive QC Report per Purchase Order.</li> <li>• The report must include the recorded pre-bonding thicknesses (SUS and Al) and the final total thickness/diameter for each individual plate.</li> </ul>

Signature..... Purchaser

Dr.Thanapong Phimsen