

## HEM

ARC Coating suppresses abnormal peeling of process by-products attached to the chamber wall by forming roughness on parts such as the chamber wall in the semiconductor sputtering process. As the semiconductor circuit is integrated, the process conditions deteriorate, and improvement of roughness formation is required to extend the lifespan of parts. However, there is a limit to the roughness that can be formed with normal ARC coating. To improve this, HEMI Coating with the adhesion and roughness characteristics reinforced by the double-layer coating method is proposed.

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Mechanism	Comparison			
Dimension( $cm^2$ )	Metal Coating	Roughness	Bonding Strength	Hardness
Normal 2054.92 Normal 2054.92 More Surface Area for the Same Size	Al ARC	1200	9MPa	90~100 Hv
	HEMI 2000	2000 ~ 3000	17MPa	94.5 Hv
	HEMI 4000	4000 ~ 5000	14MPa	101 Hv
	Deviation	+330%	+56%	Same

HEMI Coating increases the coating surface area by about 30% and the bonding strength by about 56% as the roughness increases by 200-300% compared to the pre-existing ARC coating. As a result, peeling of the adhering material from sputtering on parts such as chamber walls is suppressed from the parts for a longer period, extending the lifespan of parts.





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