

ABSTRACT OF THE DISCLOSURE

ROTARY FRICTION WELDED BLANK FOR PECVD HEATED SHOWERHEAD

A deposition apparatus for processing substrates includes a vacuum chamber including a processing zone in which a substrate may be processed. A showerhead assembly includes a stem, face plate and back plate wherein the stem is rotary friction welded to the back plate. A substrate pedestal assembly is configured to support a substrate on an upper surface thereof when a substrate is processed in the deposition apparatus.

FIG. 1