

# Material Compatibility with Hg

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Work of George Greene

BNL

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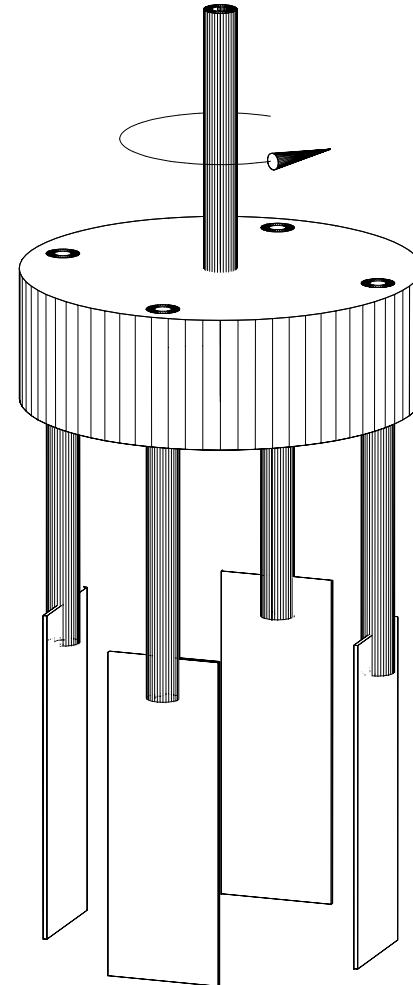
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# Experimental Setup

- Samples were circulated in a Hg bath
- Circulation rate was 120 rpm  
(1" offset → 0.3m/s)
- Circulation duration was 24 to 50 Hrs

## Materials Studied

- Inconel 718
- Inconel 600
- 316L Stainless Steel
- Havar (Co 42 Cr 20 Fe 19 Ni 13 W 2 Mo 2)
- Ti90Al6V4
- Al
- Cu



# Erosion Rate Results

Material	Surface Erosion $\mu\text{g}/\text{cm}^2/\text{h}$	Surface Erosion $\mu\text{m}/\text{h}$
Inconel 718	--	--
Inconel 600	--	--
316L SS	--	--
Havar	6	0.007
TiAlV	--	--
Al	1500	5.5
Cu	1200	1.4