



INTERNATIONAL CAVITATION EROSION TEST

Test Rig Identification Card

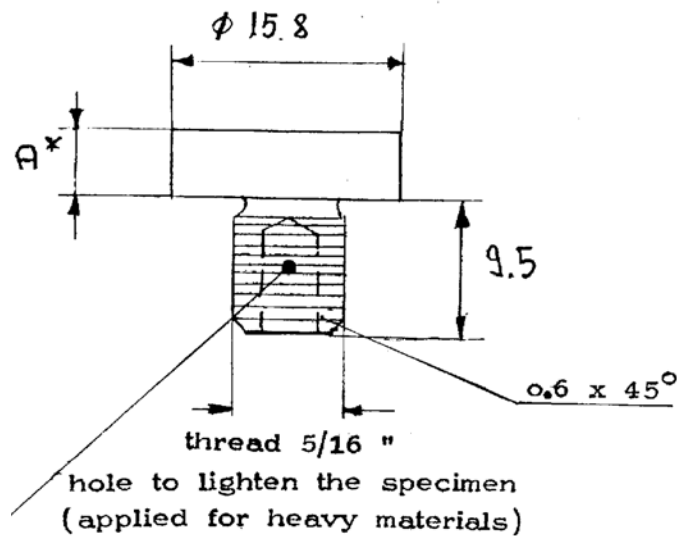
Facility: vibratory rig

Principle of vibration generation:

magnetostriction /~~piezoelectricity~~/

Laboratory: **CISE S.p.A.**, Tribology and Erosion

1. Sketch of the sample (counter-sample)
with dimensions and showing mounting method



2. Basic operational data

input power:	1000	W
oscillation frequency:	20	kHz
oscillation amplitude (p-p):	25÷140	μm
standard temperature:	22	°C
open/ pressurised vessel		
sample submergence depth (open vessel):	~10÷15	mm
vessel diameter: mm	height:	mm
sample area subjected to damage:	63	mm ²
other data:		
.....		

designer/manufacturer: *Branson*



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Laboratory Results Summarisation

Laboratory: **CISE S.p.A.**
Advanced Materials and Coatings Section
MILAN, Italy

Facility: **VIBRATORY RIG**

oscillation frequency: 20.0 kHz *tip/sample distance:* 10 mm
amplitude: 50.8 μm *impinged area:* $< 174.3 \text{ mm}^2$
working liquid: distilled water, pH 7, 22°C

material	<i>Test</i>	<i>Volume</i>	<i>Eroded</i>	<i>Mean&Max Depth</i>		<i>Incubation period</i>		<i>MDPR</i>	
	<i>duration</i>	<i>loss</i>	<i>area</i>	<i>of Penetration</i>		$\tau_{0.2}$	τ_{inc}	<i>max</i>	<i>ultimate</i>
	min	mm ³	mm ²	μm	μm	min	min	$\mu\text{m}/\text{min}$	
PA2	360	128.96	174.27	740.0	–	1.4	10	6.2	1.96
M63	360	71.04	174.27	407.6	–	2.6	8	1.42	0.90
E04	360	81.83	174.27	469.5	–	7.9	22	1.83	0.89
45	360	21.56	174.27	123.9	–	18.0	67	0.385	–
1H18N9T	360	25.68	174.27	147.3	–	16.0	33	0.48	0.35
M63	600	107.18	174.27	615.0	–	2.6	8	1.42	0.90
E04	600	123.73	174.27	712.4	–	7.9	22	1.83	0.89
45	600	37.06	174.27	212.6	–	18.0	67	0.385	–
1H18N9T	600	43.28	174.27	248.4	–	16.0	33	0.48	0.35
45	900	50.97	174.27	292.5	–	18.0	67	0.385	–
1H18N9T	900	61.77	174.27	354.5	–	16.0	33	0.48	0.35
45	1200	61.97	174.27	355.6	–	18.0	67	0.385	–
1H18N9T	1200	79.55	174.27	456.5	–	16.0	33	0.48	0.35

