INTERNATIONAL CAVITATION EROSION TEST
Test Rig Identification Card

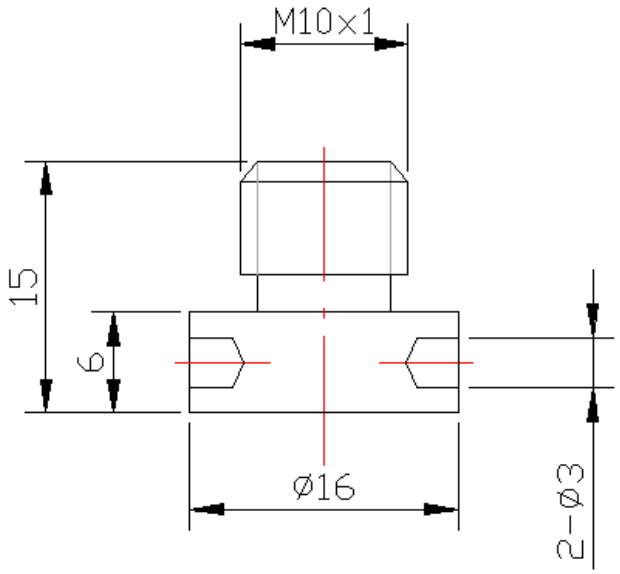
Facility: vibratory rig (stationary specimen)

Principle of vibration generation:

magnetostriction /~~piezoelectricity~~/

Laboratory: **Prof. M.MATSUMURA,** DEPARTMENT OF CHEMICAL ENGINEERING,
FACULTY OF ENGINEERING, HIROSHIMA UNIVERSITY, JAPAN

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



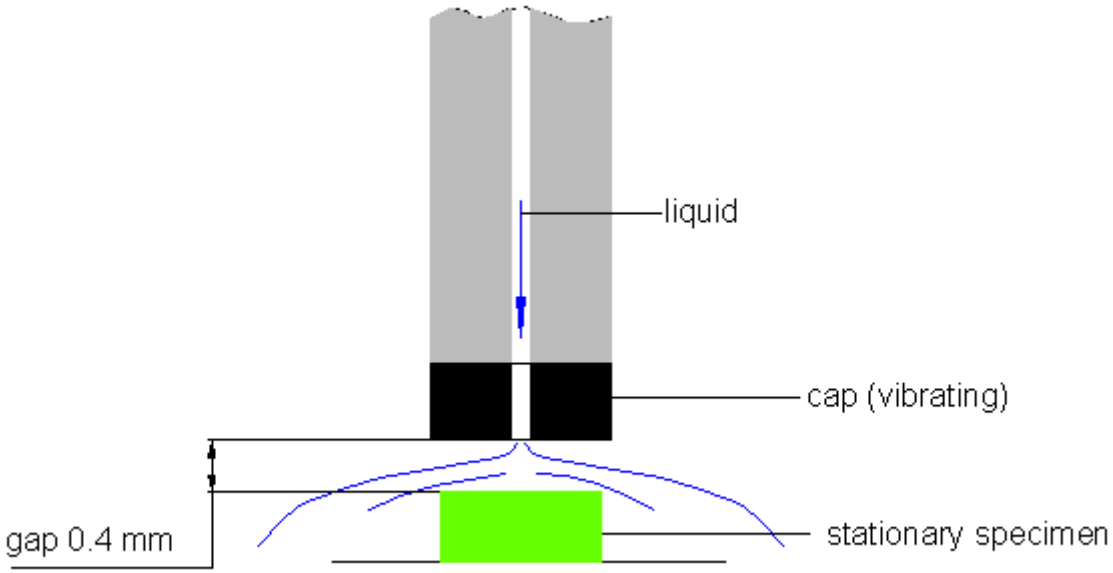
2. Basic operational data

input power:		W
oscillation frequency:	19.9	kHz
oscillation amplitude(p-p):	28	µm
standard temperature:	20±1	˚C
open/~~pressurised~~ vessel		
sample submergence depth (open vessel):		mm
mean liquid pressure at the specimen surface (pressurised vessel:	1013	hPa
vessel diameter: ..... mm height:		mm
sample area subjected to damage:.....	170	mm^2

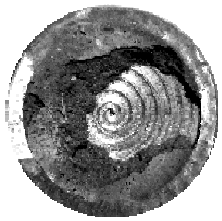
other data: .....

.....

designer/manufacturer: *BRANSON*



Sketch of the rig



INTERNATIONAL CAVITATION EROSION TEST

Laboratory Results Summarisation

Laboratory: **Prof. M.MATSUMURA**
DEPARTMENT OF CHEMICAL ENGINEERING
HIROSHIMA, Japan

Facility: VIBRATORY RIG (stationary specimen)

oscillation frequency: 19.9 kHz *tip/sample distance:* 0.4 mm
amplitude: 28.0 μm *impinged area:* 170.0 mm^2

working liquid: distilled water, temperature 40˚C

material	*Test duration*	*Volume loss*	*Eroded area*	*Mean&Max Depth of Penetration*		*Incubation period* $\tau_{0.2}$	*Incubation period* τ_{inc}	*MDPR max*	*MDPR ultimate*
	min	mm^3	mm^2	μm	μm	min	min	μm/min	
PA2	**150**	**31.67**	**170.0**	**186.3**	**468.3**	**1.4**	**29**	**1.675**	**-**
M63	1200	36.43	170.0	214	-	14	67	0.206	-
E04	1200	38.75	170.0	228	-	60	240	0.265	-
45	1200	6.85	170.0	40	-	33	333	0.046	-
1H18N9T	1200	0.93	170.0	5	-	136	400	0.0067	-
M63	**1230**	**37.11**	**170.0**	**218**	**415**		**67**	**0.206**	**-**
E04	**1260**	**40.44**	**170.0**	**238**	**570**		**250**	**0.230**	**-**
45	**4680**	**31.83**	**170.0**	**187**	**328**		**333**	**0.046**	**-**
1H18N9T	**6060**	**5.76**	**170.0**	**34**	**46**		**530**	**0.007**	**-**
tarnamide	**3480**	*none*	**-**	**-**	**56**		**100***	**0.286***	**-**

Comment

1 Hardness measurement at the surface was accomplished by extrapolating the data obtained at the cross section beneath the surface layer.

2 The maximum depth of erosion was determined by means of a microscope with respect to the uneroded specimen rim.

* The value given corresponds to the maximum (not mean) depth of erosion

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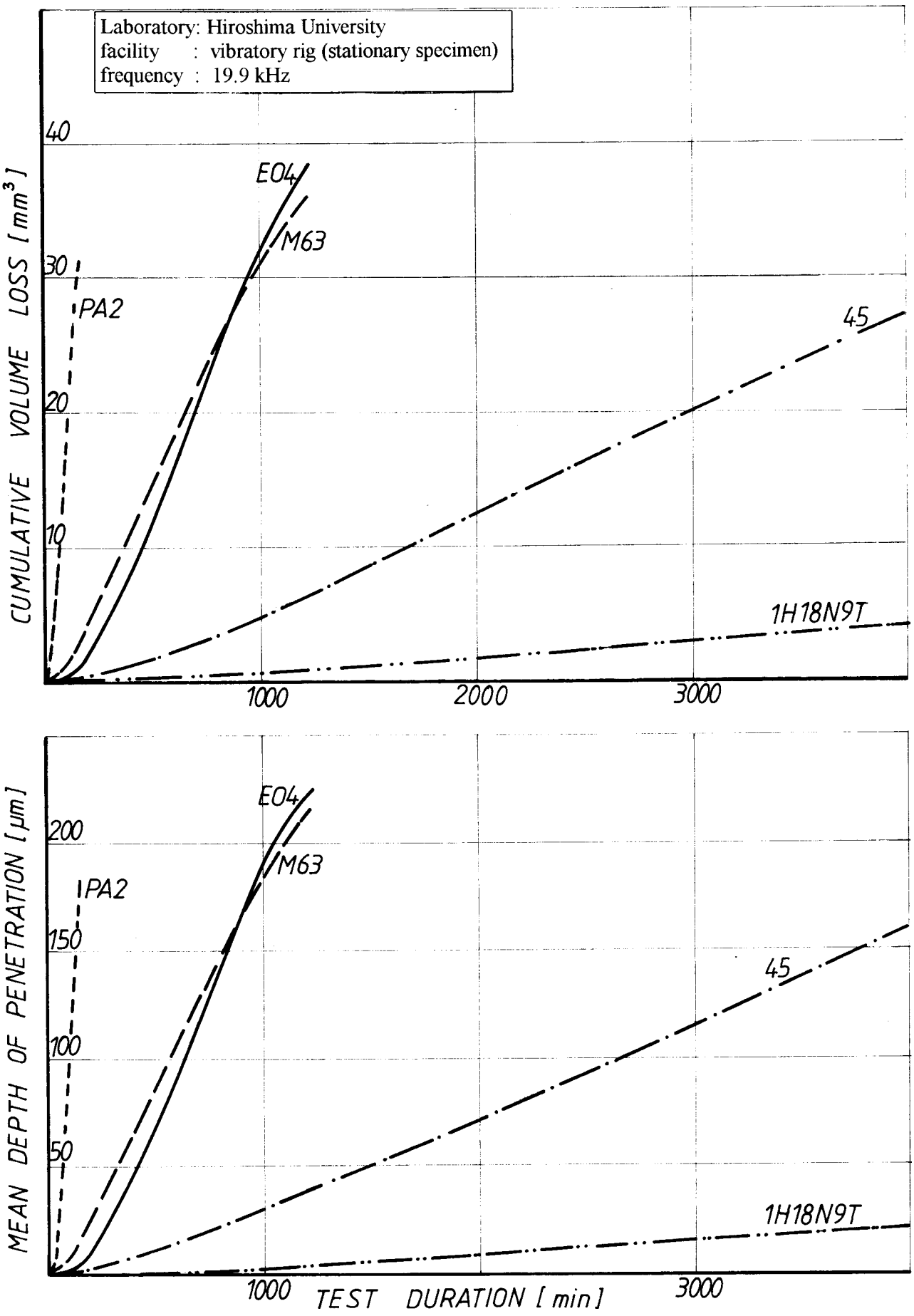
Laboratory: Hiroshima University
facility : vibratory rig (stationary specimen)
frequency : 19.9 kHz
CUMULATIVE VOLUME LOSS [mm³]
40
30
20
10
E04
M63
PA2
45
1H18N9T
1000
2000
3000
MEAN DEPTH OF PENETRATION [µm]
200
150
100
50
E04
M63
PA2
45
1H18N9T
1000
TEST DURATION [min]
3000