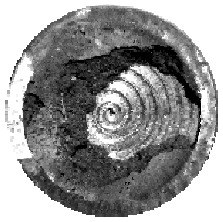


INTERNATIONAL CAVITATION EROSION TEST

Test Rig Identification Card

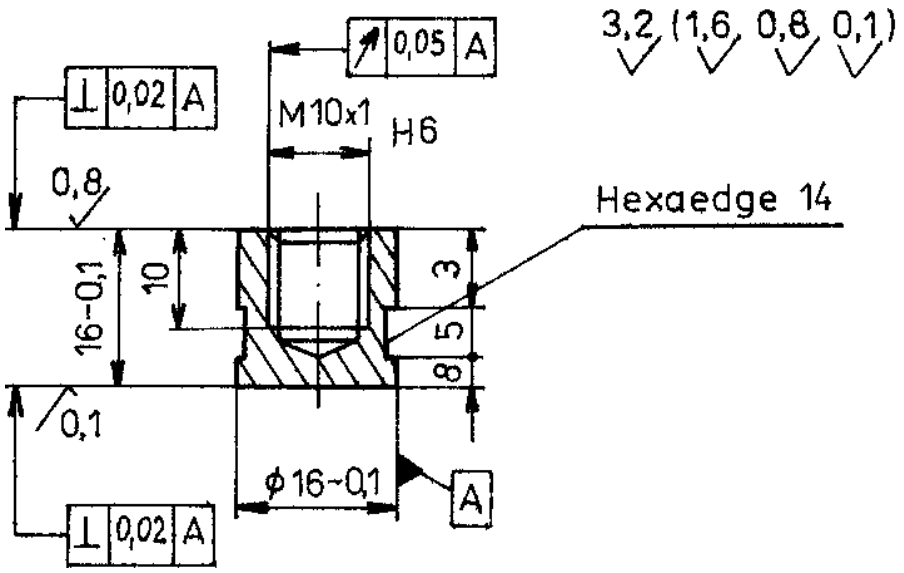
Facility: vibratory rig

Principle of vibration generation:

magnetostriction /~~piezoelectricity~~/

Laboratory: **Fluid Mechanics, Technical University of Ostrava, Tř.Vít.Unora, Ostrava-Poruba, CS-70833, Czechoslovakia**

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



Sample made from round stock of the diameter 20 mm.

2. Basic operational data

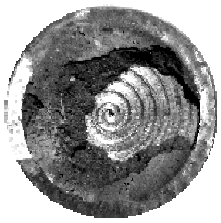
input power:	250	W
oscillation frequency: /resonance/	22,2 to 22,8	kHz
oscillation amplitude(p-p):/controlled/	15 to 30	µm
standard temperature: /regulated/	15 to 40	˚C

open/~~pressurised~~ vessel

sample submergence depth (open vessel):	2 to 3	mm
vessel diameter: 102 mm	water depth: 130	mm
sample area subjected to damage:	201	mm^2

other data: automatic control of oscillation amplitude automatic
automatic control of water temperature

designer/manufacturer: Ultrasonic generator – VUMA/ČSSR - adapted
control devices in our laboratory



INTERNATIONAL CAVITATION EROSION TEST

Laboratory Results Summarisation

Laboratory: **TECHNICAL UNIVERSITY OF OSTRAVA**
FLUID MECHANICS LABORATORY
OSTRAVA, Czechoslovakia

Facility: VIBRATORY RIG

oscillation frequency: 20.0 kHz sample submergence : 2 mm
amplitude: 40 ćm impinged area : 201.0 mm
working liquid: distilled water, temperature: 20 C

oscillation frequency: 20.0 kHz *sample submergence:* 2.5 mm
amplitude: 40.0 μm *impinged area:* 201.0 mm^2

working liquid: distilled water, temperature 20˚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	μm/min
M63	140	5.11	131	39.0	-	7	45	0.490	0.440
E04	300	4.86	105	46.2	-	27	69	0.234	0.173
45	300	2.56	125	20.7	-	45	119	0.112	-
1H18N9T	300	0.90	75	12.3	-	45	82	0.057	0.057
45	540	5.74	132	43.5	-	45	114	0.102	-
1H18N9T	600	2.09	75	28.6	-	45	82	0.066	-

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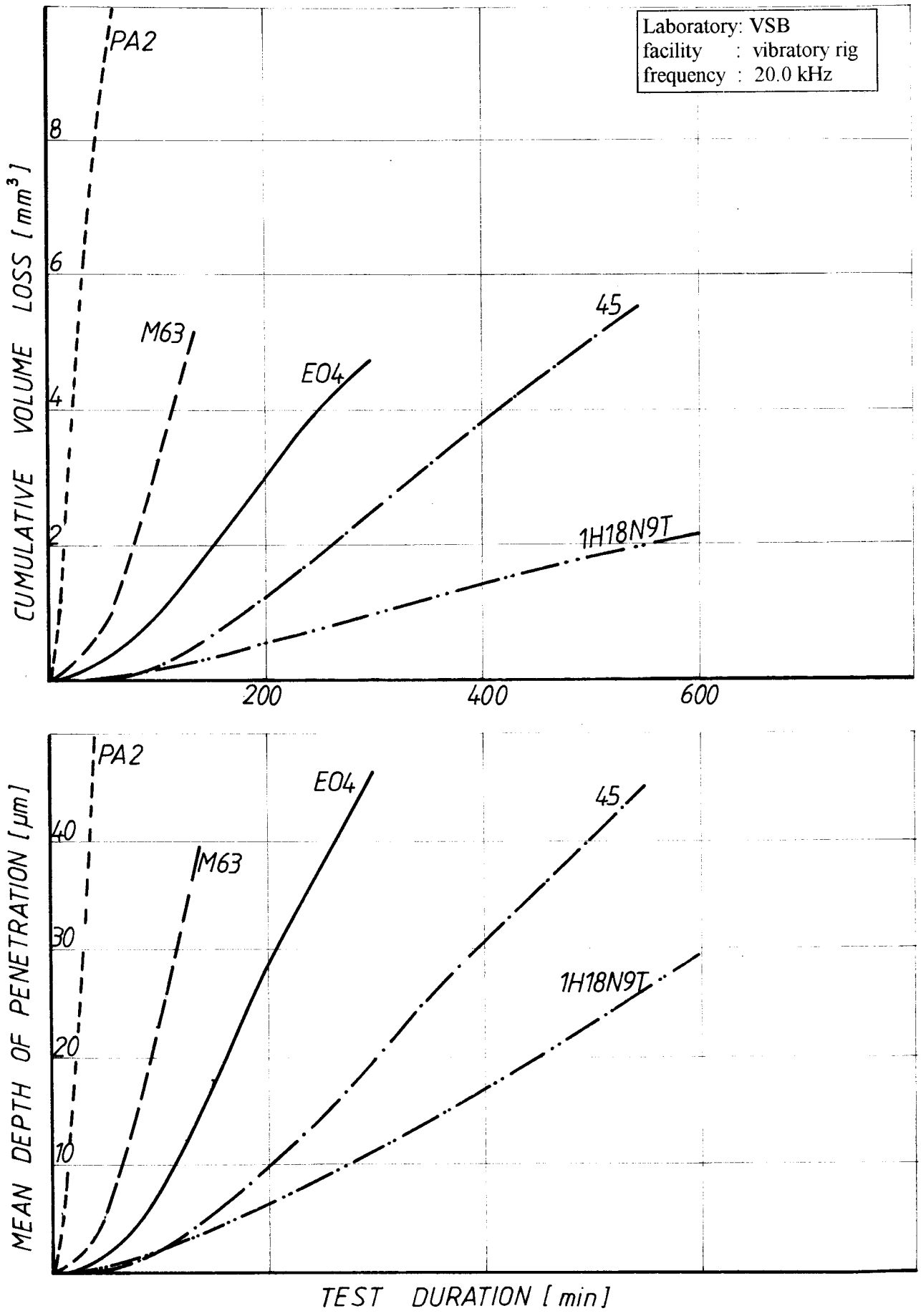
phone: (+4858) 341 12 71, fax: (+4858) 341 61 44, e-mail: steller@imp.gda.pl


Laboratory: VSB
facility : vibratory rig
frequency : 20.0 kHz
PA2
M63
E04
45
1H18N9T
8
6
4
2
200
400
600
CUMULATIVE VOLUME LOSS [mm³]
MEAN DEPTH OF PENETRATION [μm]
40
30
20
10
TEST DURATION [min]