INTERNATIONAL CAVITATION EROSION TEST
Test Rig Identification Card

Facility: cavitation tunnel

Cavitation is generated by means of:

Cavitator /~~venturi~~/

Laboratory: **China Ship Scientific Research Centre** (CSSRC)

1. Sketch of the cavitation chamber with specimens and basic dimensions (streamwise and transverse sections), dimensions and installation sites of the cavitator, specimen, pressure taps etc.

test section: 900 × 500 × 100 mm

cavitator: Ø 50 mm (cylinder)

specimen: 100 × 60 × 3 mm

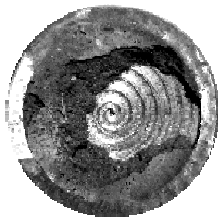
2. Basic operational data

pump power	100	kW
liquid velocity in the undisturbed flow	20	m/s
liquid pressure in the undisturbed flow	5 ÷ 250	kPa
liquid velocity at the specimen surface		m/s
liquid pressure at the specimen surface		kPa
standard temperature of liquid	≈ 15	˚C

other data ……

designer *Xu Boxun*

manufacturer: *CSSRC factory*



INTERNATIONAL CAVITATION EROSION TEST

Laboratory Results Summarisation

Laboratory: **CHINA SHIP SCIENTIFIC RESEARCH CENTER**
WUXI, China

Facility: CAVITATION TUNNEL

cavitator: cylindrical bolt
specimen: rectangular plate

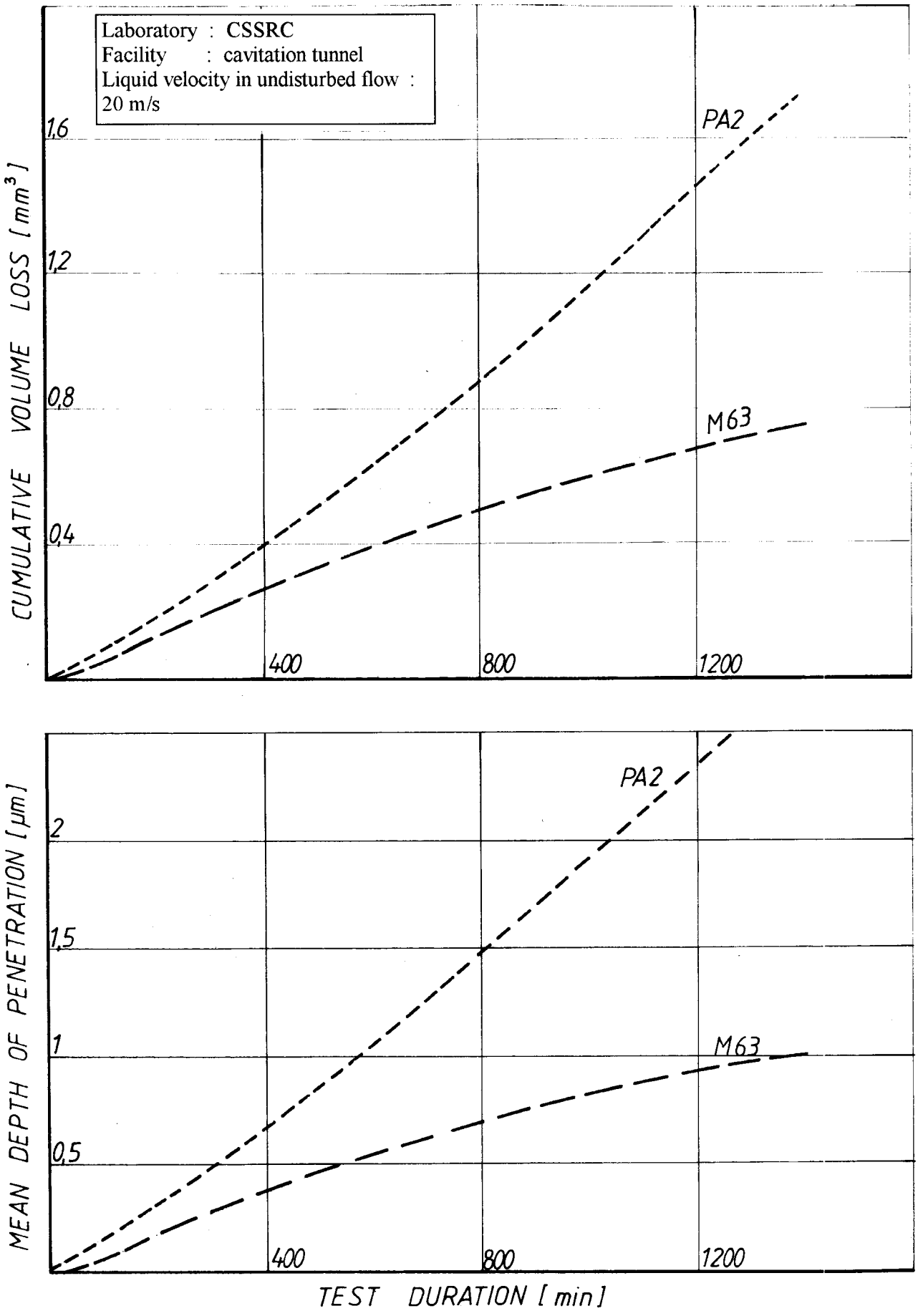
pressure: 103.0 kPa
flow velocity: 14 m/s
impinged area: 3096 mm^2

working liquid: tap water, dissolved air: 17.6 ml/l, oxygen: 2.17 mg/l
chloride: 22 mg/l, turbidity: 1°, temperature: 20 ^{0}C

material	*Test duration*	*Volume loss*	*Eroded area*	*Mean&Max Depth of Penetration*		*Incubation period*		*MDPR*	
						$\tau_{0.2}$	τ_{inc}	*max*	*ultimate*
	min	mm^3	mm^2	μm	μm	min	min	μm/min	
PA2	1400	1.91	685	2.8	22	82	172	0.0023	-
M63	1400	0.712	712	1.0	7	100	70	0.0013	-

Comment

Eroded area was not specified by the Contributor. Rough estimation is made basing on the mean depth of erosion and removed volume data.


Laboratory : CSSRC
Facility : cavitation tunnel
Liquid velocity in undisturbed flow : 20 m/s
CUMULATIVE VOLUME LOSS [mm³]
1,6
1,2
0,8
0,4
400
800
1200
PA2
M63
MEAN DEPTH OF PENETRATION [µm]
2
1,5
1
0,5
400
800
1200
PA2
M63
TEST DURATION [min]