GVK MARINE SYSTEMS

Plot No. 21, IDA Mallapur, IE Nacharam, Hyderabad-500076
(Specialized in Shock, Noise, Vibration Analysis &
Measurements and valve testing for Marine Systems)
AN ISO 9001:2015 CERTIFIED COMPANY

SHOCK TEST REPORT

Test dated 14TH JULY 2023

1.	Client	:	VINPRA ENGINEERING INDIA PVT LTD
2.	Drawing No.	:	VP/1PC/TEBV/FLG/001
3.	Test Item	:	65 NB Ball valve
4.	Model No. & S.No.	:	B12179
5.	Material	:	LG4C
6.	Heat No.	:	13723
7.	Orientation of equipment	:	Vertical
8.	Test Results	:	Satisfactory

	Shock Test Levels	Acceptable Range
Acceleration	67.86g	60g to 83g
Time duration	8.66msec	7.42 to 9.07msec

G V RAMANUJAM
Engineer NVH
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OBJECTIVE

The aim of the shock test is to demonstrate generation of the shock levels as per NSS II with Valve.

Reference Standards

Naval Shock Standards – II (Nss – II)

Shock Levels as per NSS – II

	Recommended Value	Acceptable Range
Acceleration	72g	±16% (60g to 83g)
Time duration	8.25msec	±10% (7.42 to 9.07msec)

Test Description

a. The test specimen is positioned on the table and rigidly fastened along with the test fixture.
b. The table is then raised to a pre-calibrated and pre-fixed height.
c. The sensor is mounted on the table through magnetic base. The details of the sensor and data acquisition system are given in page No.3.
d. The required pulse generating rubber pads are placed below the drop table.
e. Signal continuity checks are carried out and once they are satisfactory, the quick release mechanism is fired and the table is allowed to hit the base table.
f. The test specimen is subjected to desired shock. This is a free fall type shock generating machine.

Results.

The shock imparted to the test specimen is shown in GRAPH-1. It can be seen that a half sine pulse with the following characteristics was obtained.

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Instrument Details

Shock Test Machine details	
Make / Developed by	GVK Cams Private Limited, Visakhapatnam
Serial No.	GVK/SH/001
Model	GVK250
Pay Load Capacity	250kg
Shock Level	upto 330g
Shock Pulse	Half sine
Pulse width	2 msec to 60msec
Table size	1500 mm x 1500mm
Data Acquisition System	
Make	Bruel & Kjaer
Powered	CCLD
Serial No.	3160-A-042
Range	0.00001g to 90,000g
Date of Calibration	28-08-2022
Accelerometers	
Make	Dytran
Model	3313A1
Serial No.	1249
Nominal Sensitivity	1 mV/g
Powered	CCLD
Range	0.0001g to 10,000g
Date of Calibration	11.10.2022
Calibration certificates enclosed	

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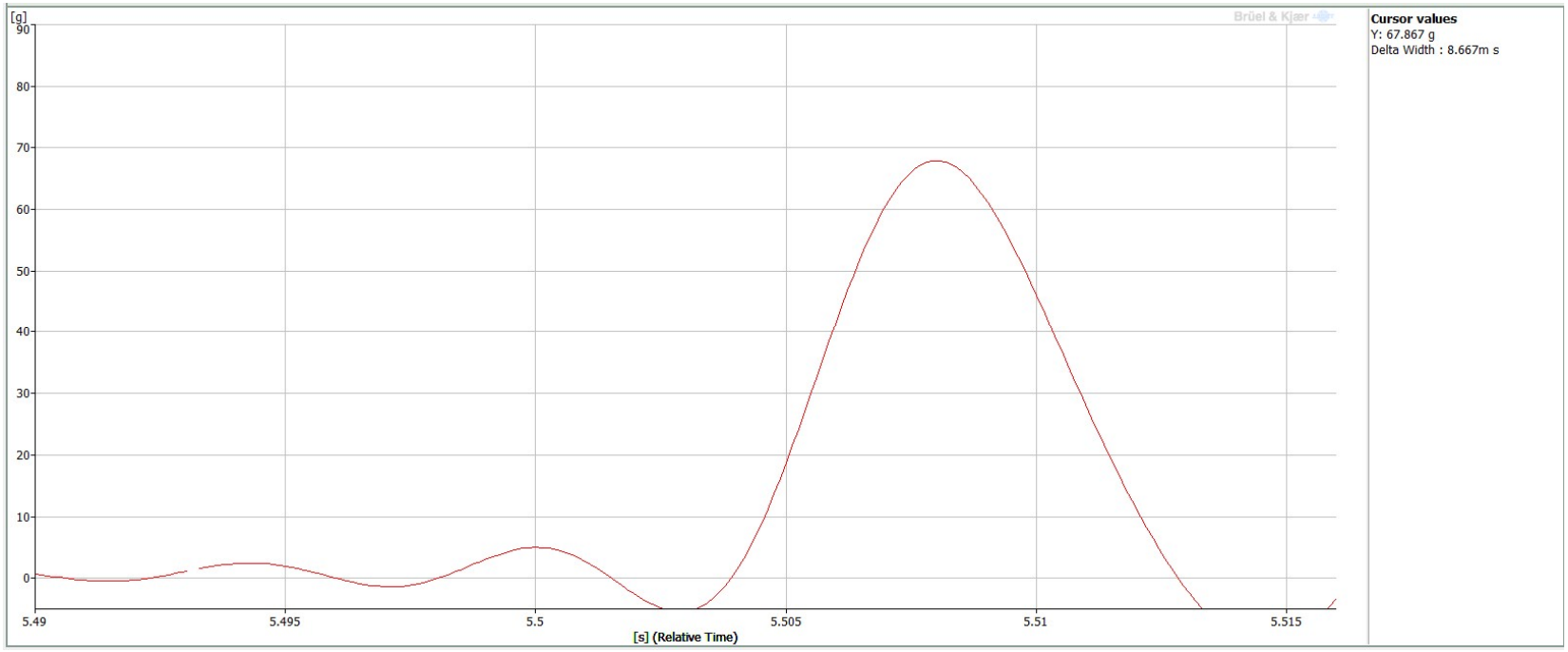
Shock Testing of Valve Graph (65NB Ball valve, S.No. B12179, H.No.13723)



Acceleration 67.86g and time duration 8.66msec

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