



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/002
3. Test Item : 40 NB Ball valve
4. Model No. & S.No. : B12150
5. Material : LG4C
6. Heat No. : 17723
7. Orientation of equipment : Vertical
8. Test Results : Satisfactory

	Shock Test Levels	Acceptable Range
Acceleration	71.59g	60g to 83g
Time duration	7.81msec	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

- The test specimen is positioned on the table and rigidly fastened along with the test fixture.
- The table is then raised to a pre-calibrated and pre-fixed height.
- 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.
- The required pulse generating rubber pads are placed below the drop table.
- 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.
- 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	



Signature

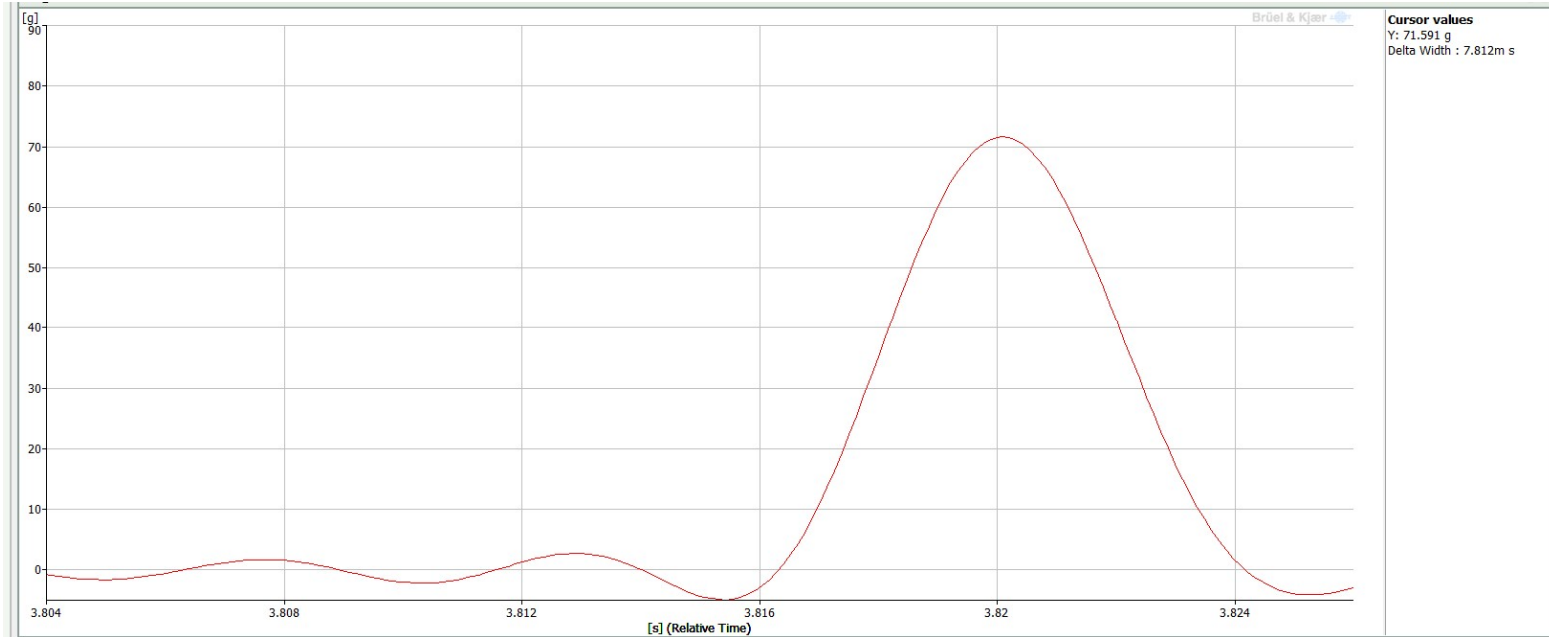


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Shock Testing of Valve Graph - 1 (40NB Ball valve, S.No. B12150, H.No.17723)



Acceleration 71.59g and time duration 7.81msec

