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## **Inspection Report**

Applicant :

Declared Manufacturer : Qingdao Henger Shipping Supplies Co., Ltd.

Declared End User :

Declared Commodity & Quantity : Pneumatic rubber fender

DIAMETER: 4.5M, LENGTH: 6.5M: 5PCS

Inspection Date : January 19, 2024

Inspection Location : Jimo, Qingdao City, Shandong Province, China

Scope of Inspection : 1. Packing and Marking

2. Size checking (the overall L & D)

3. Overall visual inspection

4. Air tightness test to check for leakage

## INSPECTION PERFORMED

## **Storage Condition:**

At the time of our attendance at the factory, we found the fenders were stored in the manufacturer's open yard, in normal condition.

## Packing:

The Fenders were in nude packing, with the chains and used tires around the fenders' body.

#### Marking:

The marking was printed on two ends of fenders, details as below:

Malaysia Marine & Heavy Engineering (MMHE) Pneumatic Rubber Fender ISO 17357-1:2014 50Kpa 4.5D X 6.5L

## Size checking:

According to client's requirement,2pcs were randomly selected for measured sizes, including the overall length and overall diameter, details as below:

Size: 4.5D X 6.5L

Sample No. Diameter(M) Length(M)

1 4.39 6.67
2 4.41 6.62

## Remark:

The measurement tools were provided by the factory without the calibration certificate, and the measurement was done approximately as shown in pictures hereunder. The result was for reference only.



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## Air tightness test to check for leakage:

According to client's requirement, the above mentioned 5 pieces of fenders were charged at pressure declared by 50KPa under BV inspector witness, as far as visually checked, it's found in normal conditions, after 1 hour, checked the pressure again, found the pressure was 50Kpa, no obviously air leak was found visually.

#### Remark:

- BV inspector only witnessed the process of testing according to the mill in-house test procedures at the client's
  request, and the responsibility therein for test procedures' compliance with the related standards, test result
  accuracy and reliability, equipment calibration, test engineer qualification etc, fully remains with the client and the
  factory.
- The pressure gage was provided by the factory without the calibration certification, and the result was for reference only.

#### Overall visual inspection:

According to client's requirement, BV inspector found the above mentioned 5 pieces of fenders were in normal condition without obviously damage and scratches.

#### Witness test:

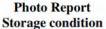
Compression recovery test:

As per client's request, based on ISO17357-1:2014, term 8.5.3,1piece of D:1.0m X L:1.5m was provided by the supplier to do the testing witness for compression recovery test. The detail as follow.

Deformation rate	Counter Force (KN)	Energy Absorption (KN-M)	Compression Recovery(within 5 minutes)
60%	187	71	99%

## Remark:

- 1. The pressure gage and testing equipment s were provided by the factory with the calibration certificate.
- BV inspector only witnessed the process of testing according to the mill in-house test procedures at the client's
  request, and the responsibility therein for test procedures' compliance with the related standards, test result
  accuracy and reliability, equipment calibration, test engineer qualification etc., fully remains with the client and
  the factory
- Due to the limited of testing equipment, the size of sample used for compression recovery test was DIA:0.8m X L:1.5m, which provided by the supplier, not randomly selected from a/m cargo by inspector, the results for reference only.









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Pressure testing to check for leakage







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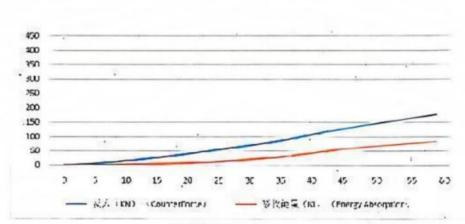
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# JYX-1000\*1500 性能测试"

(Performance Curve)

## 反为 (counter-force)



变形里(DEF)%

变形量 % (DEF)	反力 (KN) (CounterForce)	吸收能量(KJ) (Energy Absorption)
0	0	. 0
5	5.243	0.267393
10	15. 435	1. 5435
15	26.411	4.014472
20 -	39.543	8.027229
25	55. 713	13. 983963
30	69. 58	21. 08274
35	85. 701	30. 166752
40	105. 644	42.468888
45 128. 037		57. 87271967
50	139. 85	62.49664
55 160.74		68. 9837203
60	187. 082	71.00376

试验编号: IE-20231215

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开始时间:

间: 10:45:25

结束时间:

试验日期:

2024/1/19

试验单位:

青岛亨尔

Kevin Tang

Bureau Veritas Bivac Asian CRE (Shanghai) Inspection Co., Ltd.

We now certify that the above inspection has been carried out according to Bureau Veritas (findings are valid at time and place of inspection. The issuance of this inspection certificate do parties from their own responsibilities and the fulfillment of their obligations.

