



CERTIFICATE NUMBER
19-HS1855685-1-PDA

DATE
16 Jul 2019

ABS TECHNICAL OFFICE
Houston ESD - Piping

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of

GATES CORPORATION

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: **Non-Metallic Flexible Hoses with End Fittings**

Model: **GMV Global MegaVac**

Multi Master GMV MegaFlex

This Product Design Assessment (PDA) Certificate 19-HS1855685-1-PDA, dated 16/Jul/2019 remains valid until 16/Apr/2024 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Tim Kimble

Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

GATES CORPORATION

330 INVERNESS DRIVE SOUTH

ENGLEWOOD CO

United States 80112

Telephone: 303-744-4189

Fax:

Email: Kai.Luo@gates.com

Web: www.gates.com

Tier: 2 - PDA Issued

Product: Non-Metallic Flexible Hoses with End Fittings

Model: GMV Global MegaVac
Multi Master GMV MegaFlex

Intended Service:

GMV Global MegaVac: Marine and Offshore Applications - For Hydraulic Fluid in Suction Lines or in Low-Pressure Return Lines.

Multi Master GMV MegaFlex: For use as hydraulic return and suction lines, fuel transfer lines or coolant lines.

Description:

Flexible Hose of Non-Metallic Material with External Fire Sleeve with Permanently Fitted Couplings (Type G, GL and GSP) which are tested in accordance with SAE J517, 2017 Edition.

Rating:

Maximum Allowable Working Pressure:

- 12 (3/4"): 350 psi (24 Bar)
- 16 (1"): 300 psi (21 Bar)
- 20 (1 1/4"): 250 psi (17 Bar)
- 24 (1 1/2"): 160 psi (11 Bar)
- 32 (2"): 150 psi (10.3 Bar)
- 40 (2 1/2"): 150 psi (10.3 Bar)
- 48 (3"): 150 psi (10.3 Bar)

Design Temperature: -40 °F to 275 °F (-40 °C to +135 °C)

Note: GMV Global MegaVac hoses are only available in sizes -12, -16 and -20

Service Restriction:

1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
2. The Hoses are to be used with Fire Sleeve.
3. Flexible hoses are not acceptable in high pressure fuel oil injection systems.
4. Flexible hose assemblies are not applicable to hoses intended to be used in fixed fire extinguishing systems.
5. The types of end connections utilized (e.g. threaded, flanged, etc.) are to comply with the applicable requirements and limitations of the ABS Marine Vessels Rules (MVR) 4-6-2/5.7.3 b)
6. Fittings made of aluminum are not to be used on the hose assembly.
7. All flexible Hoses Assemblies are to be burst tested to demonstrate they are able to withstand a pressure not less than four times its design pressure in accordance with MVR 4-6-2/5.7.5 b)

Comments:

1. The manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. The hoses are to be complete with factory assembled end fittings in accordance with manufacturer's procedure in accordance with MVR 4-6-2/5.7.3 (b).
3. Hose assemblies are to be installed only where flexibility is required and are not to be subject to torsional deflection under normal conditions. In addition, the length of the hose is to be limited to the required for flexibility only as indicated in MVR 4-6-2/5.7.4.
4. Flexible Hoses are to be permanently marked by the manufacturer with the following details: Hose manufacturer's, name or trademark, date of manufacture (month/year), designation type reference, nominal diameter, pressure and temperature rating in accordance with MVR 4-6-2/5.7.6.

Notes/Drawing/Documentation:

Drawing No. Multi Master GMV Megaflex, SUBMISSION FOR ABS TYPE APPROVAL - Multi Master GMV Megaflex

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Drawing No. GMV Global MEGAVAC, SUBMISSION FOR ABS TYPE APPROVAL - GMV Global MegaVac,
Multi Master GMV Megaflex Catalog
GMV Global MegaVac Catalog, GMV Global MegaVac® Return Line and Suction Hose
Fitting data sheet - G Type (MegaCrimp)
Fitting data sheet - GL Type
Fitting data sheet - GSP Type
LOCC12318 Multi Master GMV Megaflex Fire Test Report, Date: 01-21-19
Report No. WR7037, Gates Hose Burst Test Certificate, Date: 03-22-2018
Report No. WR7038, Gates Hose Burst Test Certificate, Date: 03-12-2018
Report No. WR7039, Gates Hose Burst Test Certificate, Date: 04-11-2018
Report No. 24GSP, Gates Hose Burst Test Certificate, Date: 03-12-2018
Report No. 32GSP, Gates Hose Burst Test Certificate, Date: 03-06-2018
Report No. 40362, Gates Hose Test Report, Date: 03-14-2018
Report No. 40279, Gates Hose Test Report, Date: 01-08-2017
Report No. 40322, Gates Hose Test Report, Date: 07-09-2017
Drawing No. 01.20535.06.001d, Southwest Research Institute: 20GMV with an External Fire Sleeve and G Coupling,
Date: 04-27-2015
Drawing No. 01.20535.06.001e, Southwest Research Institute: 16GMV with an External Fire Sleeve and G Coupling,
Date: 04-28-2015
Drawing No. 01.20535.06.001f, Southwest Research Institute: 12GMV with an External Fire Sleeve and G Coupling,
Date: 04-27-2015
ISO 15540 & 15541 - Burst & Fire Test;
Catalog Cut Sheets - Specification Details, dated 31 August 2012;
MSHA 2G - Flame resistance Acceptance;
Environ Laboratories LLC Engineering Report No. 25753-1 Fire Test;

Terms of Validity:

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STANDARDS**ABS Rules:**

Rules for Conditions of Classification, Part 1 - 2019 Marine Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
2019 Marine Vessels 4-6-2/5.7

Rules for Conditions of Classification, Part 1 - 2019 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:
2019 Mobile Offshore Units 4-2-1/11.29

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National:

NA

International:

ISO 15540 & 15541 - 2016

Government:

NA

EUMED:

NA

OTHERS:

NA