



CERTIFICATE NUMBER	23-2343226-PDA
EFFECTIVE DATE	24-Jan-2023
EXPIRY DATE	23-Jan-2028
ABS TECHNICAL OFFICE	Houston ESD - Piping

CERTIFICATE OF Product Design Assessment

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

BLACKMER, A DOVER RESOURCES COMPANY

located at

**1809 CENTURY AVE SW, , GRAND RAPIDS, MI, United States,
49503**

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: Pump
Model: Magnes 3" to 4" Series, MI3, MI4, MS3 and MS4, Sliding Vane Magnetic Drive Pumps
Endorsements:
Tier: 4 - Enrolled in PQA Program

This Product Design Assessment (PDA) Certificate remains valid until 23/Jan/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

John Vincent Ulep
 John Vincent Bog-Acon Ulep 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 ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

BLACKMER, A DOVER RESOURCES COMPANY

1809 CENTURY AVE SW

GRAND RAPIDS MI

United States 49503

Telephone: 616-241-1611

Fax: 616-241-4104

Email: robin.skinner@psgdover.com

Web: www.psgdover.com/blackmer

Tier: 4 - Enrolled in PQA Program

Product: Pump
Model: Magnes 3" to 4" Series, MI3, MI4, MS3 and MS4, Sliding Vane Magnetic Drive Pumps

Endorsements:**Intended Service:**

Marine & Offshore Application - Transfer and Stripping Pumps for AFFF (Foam), Clean Distillate and Heavy Fuels, Lubes, Oil, and Dirty Distillate.

Description:

Magnes Series MI3 and MI4 Sliding Vane Pumps constructed with Ductile Iron (ASTM 536, 18% Elongation), and Magnes Series MS3 and MS4 constructed with Stainless Steel (ASTM A351, Grade CF-8M) or Stainless Steel (ASTM A747 CB7-CU1, Grade H1150)

Rating:

a) Magnes 3" Series, MI3 and MS3

Maximum Working Pressure: 225 psi (15.5 bar)

Maximum Differential Pressure: 200 psi (13.8 bar)

Maximum Temperature: 250°F (121 °C) with FKM or PTFE O-rings

Performance Data, MAGNES 3": 74 to 260 GPM

Speed (RPM): 250 to 640 RPM

Power (HP): 3 to 40 HP

b) Magnes 4" Series, MI4 and MS4

Maximum Working Pressure: 225 psi (15.5 bar)

Maximum Differential Pressure: 200 psi (13.8 bar)

Maximum Temperature: 250°F (121 °C) with FKM or PTFE O-rings

Performance Data, MAGNES 4": 200 to 520 GPM

Speed (RPM): 250 to 520 RPM

Power (HP): 3 to 75 HP

See "pdf" attachment for Performance Curves

Service Restriction:

Unit Certification is required for this product if the pumps are used for services listed in Marine Vessels Rules 4-6-1/7.3.1, hydrostatic and capacity testing is to be performed to the satisfaction of the Surveyor as indicated in Marine Vessels Rules 4-6-1/7.3.2 a), b).

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.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:

Drawing No. 110-001, Brochure Blackmer MAGNES Series Magnetic Drive Pump, Revision: A, Pages: 1

Drawing No. 110-025, Curves Blackmer MAGNES Series 3" Magnetic Drive Pumps, Revision: A, Pages: 1

Drawing No. 110-027, Curves MAGNES Series 4" Magnetic Drive Pumps, Revision: A, Pages: 1

Drawing No. 110-046, Parts List Blackmer MAGNES Series Magnetic Drive Pump 3" Models, Revision: A, Pages: 1

Drawing No. 110-047, Parts List Blackmer MAGNES Magnetic Drive Pump 3" Standard Units, Revision: A, Pages: 1

Drawing No. 110-091, MOC Blackmer MAGNES Series Magnetic Drive Pump Model MI3, Revision: A, Pages: 1

Drawing No. 110-092, MOC Blackmer MAGNES Series Magnetic Drive Pump Model MS3, Revision: A, Pages: 1

BLACKMER, A DOVER RESOURCES COMPANY

1809 CENTURY AVE SW

GRAND RAPIDS MI

United States 49503

Telephone: 616-241-1611

Fax: 616-241-4104

Email: robin.skinner@psgdover.com

Web: www.psgdover.com/blackmer

Tier: 4 - Enrolled in PQA Program

Drawing No. 110-093, MOC Blackmer MAGNES Series Magnetic Drive Pump Model MI4, Revision: A, Pages: 1
Drawing No. 110-094, MOC Blackmer MAGNES Series Magnetic Drive Pump Model MS4, Revision: A, Pages: 1
Drawing No. 110-101, Dimensions Blackmer MAGNES Series 3" Magnetic Drive Pumps, Revision: A, Pages: 1
Drawing No. 110-103, Dimensions Blackmer MAGNES Series MI4 Magnetic Drive Pump, Revision: A, Pages: 1
Drawing No. 110-104, Dimensions Blackmer MAGNES Series MS4 Magnetic Drive Pump, Revision: A, Pages: 1
Drawing No. 110-A00, IOM Blackmer MAGNES Series Magnetic Drive Pumps, Revision: A, Pages: 1
Drawing No. 110-A01, Parts List MAGNES Series Magnetic Drive Pump 3" Models, Revision: A, Pages: 1
Drawing No. 110-a02, Parts List Blackmer Series Magnetic Drive Pumps 4" Models, Revision: A, Pages: 1

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 23/Jan/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

STANDARDS

ABS Rules:

2023 Rules for Conditions of Classification; 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the followings;
2023 Rules for Building and Classing Marine Vessels: 4-6-1/7.3.1, 4-6-1/7.3.2

2023 Rules for Conditions of Classification - Offshore Units and Structures, 1-1- 4/9.7, 1-1-A2, 1-1-A3 which covers the following:
2023 Rules for Building and Classing Mobile Offshore Units: 4-2-2/3

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

None