



CERTIFICATE NUMBER

DATE

04-HS416525C/1-PDA

29 December 2008

ABS TECHNICAL OFFICE

Houston SED - Ship Equipment

# CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of  
**Blackmer - A Dover Resource Company - Grand Rapids**

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. It will remain valid as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Pump

MODEL: ML & MLX 4" Series

ABS RULE: 2009 Steel Vessels Rules 1-1-4/7.7, 4-6-1/7.3

OTHER STANDARD: Mfr. Spec Sheet 106/4(Dec 1997), Sheet 106/091(Sept 2007), Sheet 106/021(Dec 2005), Sheet 106/093 (Sept 2007);;

AMERICAN BUREAU OF SHIPPING

Hans P. Haendler

Engineering Type Approval Co-ordinator

**Blackmer - A Dover Resource Company**

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Grand Rapids  
Michigan 49509  
United States  
Telephone: 616-248-9269  
Fax: 616-241-4104

**MA Certificate No.**            07-CH859933-X

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**Product:**                    **Pump**

**Model:**                    **ML & MLX 4" Series**

**Intended Service:**

Transfer and Stripping Pumps for AFFF (Foam), Clean Distillate and Heavy Fuels, Lubes, Oil, Dirty Distillate and Heavy Oils

**Description:**

Positive Displacement Rotary Vane Pumps, Ductile Iron

**Ratings:**

Performance Data :

MLX4 & MLN4 - Capacity to 64 to 550 GPM; Speed: 68 to 600 RPM; Power: 6.5 to 21.4 HP;

Max. Operating Limits:

MXL4 -590 GPM; Pump Speed: 600 rpm; Differential Pressure: 200 psi (1379 kPa); Working Pressure: 250 psi (1724 kPa); Temperature: 300°F (148°C)

MLN4 - 590 GPM; Pump Speed: 600 rpm; Differential Pressure: 150 psi (1034 kPa); Working Pressure: 200 psi (1379 kPa); Temperature: 400°F ( 204°C)

**Service Restrictions:**

Unit Certification is required for this product if the pumps are used for services listed in 4-6-1/7.3 of the Rules, capacity and hydrostatic testing is to be performed to the satisfaction of the ABS Surveyor.

**Comments:**

Pumps are fitted with standard ANSI companion flanges for direct mounting to NEMA C- face motors

**Notes/Documentation:**

This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

**Term of Validity:**

This Design Assessment Certificate number 04-HS416525C/1-PDA, dated 29/Dec/2008 will expire on 28/Dec/2013 or at an earlier date should there be alterations to the product's design or changes to the referenced ABS Rules and other specifications, which affect the product. Product use on or after 1 January 2009, will be subject to compliance with the ABS Rules or specifications in effect when the vessel, MODU or facility is contracted. The product's acceptability on board ABS-classed vessels or facilities is defined in the service restrictions of this certificate.

**STANDARDS**

**ABS Rules:**

2009 Steel Vessels Rules 1-1-4/7.7, 4-6-1/7.3

**Others:**

Mfr. Spec Sheet 106/4(Dec 1997), Sheet 106/091(Sept 2007), Sheet 106/021(Dec 2005), Sheet 106/093 (Sept 2007),