



CERTIFICATE NUMBER

DATE

07-SQ210570-1-PDA

07 December 2010

ABS TECHNICAL OFFICE

Shanghai Ship Engineering

# CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of  
**SHANGHAI YOULONG RUBBER PRODUCTS CO., LTD. -  
SHANGHAI**

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:

**Liferaft, Inflatable**

MODEL:

**KHD-12, KHD-15, KHD-16, KHD 20 and KHD-25**

This Product Design Assessment (PDA) Certificate 07-SQ210570-1-PDA, dated 07/Dec/2010 remains valid until 06/Dec/2015 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

Hong Zhu  
Engineering Type Approval Co-ordinator

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 manufacturing process 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).

**SHANGHAI YOULONG RUBBER PRODUCTS CO., LTD.**

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Telephone: +86-(21)-58941315  
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**Product:** Liferaft, Inflatable

**Model:** KHD-12, KHD-15, KHD-16, KHD 20 and KHD-25

**Intended Service:**

Liferaft for Vessel

**Description:**

Davit-launched Inflatable Liferaft

**Ratings:**

Model Type / Max. Carrying Capacity (persons) / A Pack Weight (kg) / B Pack Weight (kg) / Max. Stowage Height (m) / 2 Knots Towing Force (kN) / 3 Knots Towing Force (kN)

KHD-12 / 12 / 137 / 111 / 40 / 0.55 / 0.90

KHD-15 / 15 / 153 / 121 / 40 / 0.70 / 0.95

KHD-16 / 16 / 163 / 129 / 40 / 0.75 / 0.98

KHD-20 / 20 / 188 / 146 / 40 / 0.95 / 1.15

KHD-25 / 25 / 211 / 159 / 40 / 2.10 / 2.93

**Service Restrictions:**

1. Continuous compliance with the statutory requirements requires maintenance of full Type Approval and Unit Certification. (The scope of Type Approval is to comply with MSC.1/Circ.1221 dated 11 December 2006.)
2. Unless specially directed by the Administration, this approval is not to be construed as a substitute of a flag Administration's approval for the purpose of SOLAS 1974 as amended.
3. KHD-20/25 A Pack are not suitable for side-to-side transfer and have to be stowed for launching directly from the stowed position under unfavourable conditions of trim and list.

**Comments:**

1. This DA certificate does not cover Hydrostatic Release Unit.
2. Issued based on GL EC Type Examination Certificate No. 20 572 - 04 Lux dated 27 December 2004, and testing report No. 62842 SHA dated 22 January 2002 (for fabrics) and prototype test report No. 80623 SHA dated 22 December 2003 all endorsed by GL Surveyor.
3. Issued based on GL EC Type Examination Certificate No. 95 019 - 10 HH dated 20 July 2010, and prototype test report No. 97424 SHA dated 21 July 2008, 11653 SHA dated 14 May 2010, 10993 SHA 09 dated 10 August 2008 and 11680 SHA 09 dated 24 April 2009 all endorsed by GL Surveyor. And testing report No. W(X)2010-2465 issued by Testing Center of Shanghai Institute of Rubber Products for material test in accordance with IMO Resolution MSC.226(82).

**Notes / Drawings / Documentation:**

See attached drawing list for detail drawing numbers, revision numbers and titles.

**Term of Validity:**

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**STANDARDS**

**ABS Rules:**

ABS Rule 1-1-Appendix 3

**National:**

NA

**International:**

1. Sections 1.2, 4.1 and 4.2 of IMO LSA Code and IMO Resolution MSC. 218(82)
2. Section 5 of Part 1 of IMO Resolution MSC. 81(70) and MSC. 226(82)

**Government Authority:**

NA

**EUMED:**

NA

**Others:**

NA