



CERTIFICATE NUMBER

09-HS435863-PDA

DATE

26 March 2009

ABS TECHNICAL OFFICE

Houston SED - Ship Systems

CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of
ACR ELECTRONICS INC. - FORT LAUDERDALE

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: Lifejacket Light

MODEL: Firefly 3 Waterbug Lifejacket Light

ABS RULE: 2009 Steel Vessels Rules 1-1-4/7.7, 4-8-3/1.7, 4-8-3/1.11.1

OTHER STANDARD: Coast Guard Approval No.:161.012/58/0 Expires: 13 Sept 2009 & 161.112/58/0. Expires: 01 July 2009; IMO SOLAS Resolution MSC.48 (66) LSA Code and MSC.81(70). Imanna Laboratory Inc. Certification test report No.:16437-1 (1999 SOLAS Amendments DE 42/3/1).;

AMERICAN BUREAU OF SHIPPING

Hans P. Haendler

Engineering Type Approval Co-ordinator

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FL 33312
United States
Telephone: 954-981-3333
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MA Certificate No. 06-FL678461-X

Product: Lifejacket Light

Model: Firefly 3 Waterbug Lifejacket Light

Intended Service:

Water activated flashing lifejacket or personal floatation device rescue strobe light, with a sliding ON/OFF switch.

Description:

High intensity xenon strobe light for use with life vests, safety harnesses, float coats, work suits, immersion suits, backpacks, flight suits etc

Ratings:

Visibility up to 1 mile (1.6 Kms) to 2 miles (3.2 Kms), and flash rate of 60 +/- 10/minute, nominal.
Power: (2) 1.5 VDC.

Service Restrictions:

Requires 2 "AA" Alkaline Batteries which must be replaced annually. For SOLAS use, requires 2 "AA" Lithium Batteries which must be replaced 5 years before marked battery manufacturer expiration date.

Comments:

None.

Term of Validity:

This Design Assessment Certificate number 09-HS435863-PDA, dated 26/Mar/2009 will expire on 25/Mar/2014 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 2010, 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, 4-8-3/1.7, 4-8-3/1.11.1

National:

Coast Guard Approval No.:161.012/58/0 Expires: 13 Sept 2009 & 161.112/58/0. Expires: 01 July 2009

International:

IMO SOLAS Resolution MSC.48 (66) LSA Code and MSC.81(70).
Imanna Laboratory Inc. Certification test report No.:16437-1 (1999 SOLAS Amendments DE 42/3/1).