# Indian Register of Shipping

## CLASS COMPLIANCE CERTIFICATE

PORT : **MUMBAI** | DATE : **09 Oct 2017** | CERTIFICATE NO.: **BOM17B001**

| | |
|---|---|
| CONSTRUCTED BY | **SHM SHIPCARE** |
| YARD NUMBER | **202** |
| TYPE OF THE VESSEL | **RESCUE BOAT** |
| LENGTH(OVERALL) | **4.73 m** |
| BREADTH(MOULDED) | **1.55 m** |
| DRAUGHT | **0.35 m** |
| CARRYING CAPACITY | **9 PERSONS (ALL INCLUSIVE)** |
| DEPTH(MOULDED) | **0.87 m** |
| APPLICABLE RULES | **RULES AND REGULATIONS FOR THE CONSTRUCTION AND CLASSIFICATION OF HIGH SPEED CRAFTS AND LIGHT CRAFTS, JULY 2016** |

***THIS IS TO CERTIFY***

*The above vessel has been built satisfactorily under our supervision in accordance with the approved/noted plans (refer annexure 1) and for compliance with the following equivalent notations*

**SU, HSLC, RS 2**

**RESCUE BOAT**

*NOTES*

1 *a) Inspection of the boat in accordance with IRS endorsed plans & QAP carried out and found satisfactory.*

*b) Type approved resin and glass fibre reinforcements used in the construction of hull and deck of the boat.*

*c) Verified and reviewed the controlled conditions at various stages in which the boat construction carried out and found satisfactory.*

*d) FRP laminate sample prepared by the yard during lamination of the hull tested in presence of the attending surveyor to this society at NABL accredated laboratory with satisfactory results.*

*e) Swamp test, conducted in the calm waters was witnessed and the test report has been reviewed & found in order for maximum 9 persons.*

*f) Water performance trails of the boats conducted by yard, in presence of the naval representative/s as per trial protocal prepared by the yard in calm water conditions at Vasai creek, Ghodbandar, Thane. Same witnessed and test reports endorsed.*

CERTIFICATE NO.: BOM17B001

# ANNEXURE – 1

## LIST OF APPROVED/ REVIEWED/ NOTED DRAWINGS

| Sr. No. | PLAN TITILE | DRAWING NO. | STATUS | Date |
|---|---|---|---|---|
| 1 | General Arrangement | SHM/202/01 Rev 0 | Noted | 08/06/2017 |
| 2 | Lines plan and offset table | SHM/202/03 Rev 0 | Noted | 02/06/2017 |
| 3 | Details of structural profile, bottom, deck and transverse section | SHM/202/02 Rev 0 | Approved | 08/06/2017 |
| 4 | Fuel tank structure | SHM/202/06 Rev.0 | Approved | 08/06/2017 |
| 5 | Sch. Fuel filling, sounding, supply and air vent | SHM/202/11 Rev.0 | Approved | 28/06/2017 |
| 6 | Endurance calculation | SHM/202/14 Rev.0 | Examined | 08/06/2017 |
| 7 | Details of deck fitting | SHM/202/07 Rev.0 | Approved | 08/06/2017 |
| 8 | Details of lifting arrangement | SHM/202/08 Rev.0 | Approved | 29/09/2017 |
| 9 | Buoyancy Distribution | SHM/202/05 Rev.0 | Noted | 27/06/2017 |
| 10 | Detail of collar arrangement | SHM/202/09 Rev.0 | Approved | 27/06/2017 |
| 11 | Weight calculation | SHM/202/13 Rev.0 | Noted | 27/06/2017 |
| 12 | Details of console | SHM/202/15 Rev.0 | Approved | 22/09/2017 |
| 13 | Swamp test procedure | SHM/202/12 Rev.0 | Approved | 27/06/2017 |
| 14 | Swamp test report | SHM/202/17 Rev.0 | Reviewed | 06/10/2017 |
| 15 | Electrical circuit diagram and load chart | SHM/202/10 Rev.0 | Reviewed | 13/06/2017 |
| 16 | Draught mark | SHM/202/04 Rev.0 | Noted | 02/06/2017 |

The vessel's hull scantling has been examined equivalent to a hull notation SU, HSLC, RS2, RESCUE BOAT for operation in Coastal waters having a sea condition such that the design significant wave height does not exceed 2.5 m towards issuance of Class Compliance Certificate.

The scantlings of the vessels have been verified in association with the following limiting criteria:

Speed of the vessel 22 Knots
Breadth at waterline 1.54 m
Length at waterline 3.552 m
acg value limited to 2.5 g
Displacement 0.9 tones
Service area RS 2
Design draft 0.35 m
Significant wave height 0.185 m
Dead rise angle at LCG 23.85°
Running trim angle 3°

The speed [V] /Design significant wave height [Hs] for the loading condition have been worked out and the same would be in accordance to the table below.

| V (Knots) | Hs (m) |
|---|---|
| 25 | 0.114 |
| 23 | 0.158 |
| 22 | 0.185 |
| 20 | 0.250 |
| 18 | 0.339 |

INDIAN REGISTER OF SHIPPING
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| | |
|---|---|
| 16 | 0.463 |
| 14 | 0.644 |
| 12 | 0.923 |
| 10 | 1.386 |
| 8 | 2.237 |

Any other operating conditions that will cause higher slamming pressure are to be reviewed for structural adequacy. The above limit of design significant wave height is to be clearly displayed at the coxswain position.

*g) Owner Details: L & T Shipbuilding (For FDN2 project).*

2 *Various requirements of NCD 4003, Issue 6 March 2015, have been verified during the survey. However, following not dealt with:*

*a). Certification of Outboard Engine.*

*b). Witnessing of Inclining test.*

*c). Verification of standard tools and OBM spares as required by NCD 4003, Issue 6, Clause-7.9, Pg 17/34.*

*d). As fitted drawings/ documents,Equipment Schedule,Boat Log book, maintenance and workshop manuals of OBM as required by NCD 4003, Issue 6, Clause-9.2, Pg 21/34.*

*e).List of fittings, accessories, onboard and B&D spares as required by NCD 4003, issue 6, clause - 11.*

*For identification purpose, the vessel has been identified by its Naval Regn no : " RIB 4.7-2017-162"*

for

**Neerav D. Akhani**

**(Surveyor to Indian Register of Shipping)**