

SOTR FOR STORE LIFT AND MOTOR

1. Brief Description / Use

(a) The Store Lift is to be used to transfer fresh & dry provision to stores between decks. The lift should be capable of transferring a maximum of 500 Kg. load at one time in form of gunny bags, tins, cartoons, carcasses, packets etc. The lift is to be installed with necessary rigging gear in watertight vertical trunk ways. It is to be powered by rotating electrical machinery. The lift should be able to travel at a speed of 12-15 meters per minute. The scope includes following activities:

Design, Manufacturing, Testing, Certification, Supply, Preservation, Assistance in Installation, Installation, Setting to work, Trials & Commissioning of STORE LIFT and specification mutually agreed between IHQ of MOD (N) / MDL and OEM (Vendor) for ships of Indian Navy.

(b) The following power supplies will be made available from the ship's systems:

- (i) 380V, 50Hz, 3Ph
- (ii) 230V, 50Hz, 1Ph

(c) Supplier should make suitable provisions in their systems to cater for power supplies other than that is mentioned above.

2. Product Support

The supplier shall assure availability of spares to support the operation of the Equipment/Item for a period of 25 years.

3. Technical Requirements

- i) Maximum capacity of Lift = 500 kg
- ii) Speed of the lift = 12-15 m/min
- iii) Minimum preferred floor area of the lift cage 1 M².

4. Environmental Conditions (Survival Parameters):

(a) The equipment shall be able to withstand the following sea way condition and subsequently operate without any deviation at its normal operating parameters.

- i) Roll: Max ± 25 deg with 10s period (3% Exceedance)
- ii) Pitch: Max ± 10 deg with 20s period - do -
- iii) List: Max 20 deg from vertical (permanent) - do -
- iv) Trim 5-8 Degrees

(b) The equipment should operate smoothly under tropical marine conditions sea state 3 given below:

i) Humidity	95%	Roll	6°	Roll Ver.	2.53°/Sec.
ii) Ambient Temp.- up to	55° C	Pitch	0.5°	Roll Accl.	1.47dy/Sec. ²
iii) Max ^m . Temp. in compt	45 ⁰ C	List	15°	Pitch Ver.	0.4°/Sec.
iv) F W temp	2-45 ⁰ C	Trim	5-8°	Pitch Accl.	0.5dy/Sec. ²

5. Requirement For AC Motor

(a) **A.C. Motor**

Specification

(i) All motor shall conform to specification EED-Q-071 (R-3) and NES-632.

(ii) Enclosure Protection

The enclosure protection to be provided would depend on the purpose and location of the motor. The IP specifications for motors are as follows:-

IP 56	-	motors installed below deck
IP 57	-	motors installed on weather deck
IP 58	-	submersible motors up to 10 mtrs depth
IP 68	-	submerged beyond 10 mtrs depth

(iii) Shock Standard

Naval shock standard NSS-Grade 'A' or 'B' (As specified in main TSP) in conjunction with BR 3021.

(iv) Vibration Standard

5-33 Hz (Conform to para 3.1.7 of specification JSS - 55555).

(v) Insulation

Class 'F' or higher grading.

(vi) EMI / EMC Tests

EMI / EMC test on all motors shall be carried out in accordance with MIL STD 461E.

(vii) Governing Specifications

i)	EED-Q-071 (R-3)	Electrical specification for AC Motors & starters
ii)	NES 632	Requirement for AC & DC Motors
iii)	NES 629	Requirement for testing of rotary electrical machinery
iv)	DGS/EED/VI/1535-R6 or NES514	Cable glands
v)	NES-723	Tally plates / diagram plates
vi)	DGS-251	Painting specification
vii)	JSS-55555	Environmental test methods for electrical and electronic equipments.
viii)	MIL STD 461 E	EMI / EMC
ix)	NES-511	General requirement for electrical testing of equipment.