

**BHARAT HEAVY ELECTRICALS LIMITED****HEEP HARIDWAR INDIA-PIN 249403****FAX NO: 0091 1334 226462****PHONE NO: 01334 285076****REQUIREMENT OF DESIGN, MANUFACTURING, TESTING AND SUPPLY OF AMMUNITION LOWER HOIST 3STEP:**

The Heavy Electricals Equipment Plant (HEEP) located in Haridwar, India is one of the major manufacturing plants of Bharat Heavy Electricals Ltd. The core business of HEEP includes design and manufacture of large steam and gas turbines, turbo generators, Defense Items and so on.

Details of items details as below:

Sl. No.	MAT CODE	ITEM DISCREPTION	Quantity (NOS)	LOT	LOT QTY	Delivery Date
1	W97058001090	DRG: DPE/TS/ALH/3STEP REV:01 DESIGN, MANUFACTURING, TESTING AND SUPPLY OF AMMUNITION LOWER HOIST 3 STEP AS PER DRGS AND TECHNICAL SPECIFICATION DPE/TS/ALH/3STEP	3	1 ST LOT	1	23-08-2027
				2 ND LOT	1	19-04-2028
				3 RD LOT	1	15-12-2028

1. ALL VENDORS TO PROVIDE POINT WISE REPLY/CONFIRMATION ALONG WITH RELEVANT SUPPORTING DOCUMENTS TO EACH AND EVERY POINT OF **PRE-QUALIFICATION REQUIREMENT**/PQR FOR ALL ENQUIRY ITEMS. NON-COMPLIANCE OF THESE MAY LEAD TO REJECTION OF OFFER AS THESE ARE ESSENTIAL CONDITION FOR PARTICIPATING IN TENDER ENQUIRY.
2. VENDOR TO SUBMIT DULY FILLED, SIGNED & STAMPED **PQR SHEET** (HW/DPE/PQR2025-26-094 REV00) WITH SUPPORTING DOCUMENTS ALONG WITH OFFER.
3. VENDOR TO SUBMIT DULY FILLED, SIGNED & STAMPED **COMMERICAL & QUALITY CHECKLIST** SHEET ALONG WITH SUPPORTING DOCUMENTS ALONG WITH OFFER.
4. VENDOR TO SUBMIT DULY FILLED, SIGNED & STAMPED MAKE IN INDIA CERTIFICATE, INTEGRITY PACT ALONG WITH OFFER.
5. EMD of **Rs 40,00000.00 (Forty Lakhs)/-** is applicable as per clause 12 of ATC. Details of EMD submitted must be enclosed with the offer.
6. SCOPE OF WORK/SUPPLY SHALL BE AS PER TECHNICAL SPECIFICATION OF ALH DPE/TS/ALH/3STEP REV01.
7. VENDOR TO ACCEPT THE TECHNICAL SPECIFICATION OF ALH DPE/TS/ALH/3STEP REV01 AND SUBMIT THE DULY SIGNED AND STAMPED COPY OF EACH PAGE ALONGWITH THE BID/OFFER.
8. VENDOR TO SUBMIT THE PROJECT MOINTORING SCHEDULE AS PER CLAUSE 25 OF TECHNICAL SPECIFICATION OF ALH DPE/TS/ALH/3STEP REV01.
9. VENDOR TO SUBMIT THE DOCUMENTS ALONG WITH THE BID AS PER CLAUSE 26 OF TECHNICAL SPECIFICATION OF ALH DPE/TS/ALH/3STEP REV01.
10. WARRANTEE SHALL BE 24 MONTHS FROM THE DATE OF RECEIPT OF MATERIAL.
11. ITEM IS DIRECT DELIVER TO BHEL SITE.

12. EARLY DELIVERY IS ACCEPTABLE.

13. QUALITY REQUIREMENTS:

- a) VENDORS TO CONFIRM FOR INSPECTION BY BHEL/BHEL TPIA AND INDIAN NAVY AS PER BHEL AND INDIAN NAVY APPROVED QUALITY PLAN.
- b) VENDOR TO SUBMIT DETAILED QUALITY PLAN COVERING RAW MATERIAL CHECKS, IN PROCESS AND FINAL STAGE CHECKS FOR BHEL AND INDIAN NAVY APPROVAL AS PER ATTACHED BHEL FORMAT IN-LINE WITH ENQUIRY DRAWING AND SPECIFICATION.
- c) IN CASE OF ORDERING, VENDORS TO FOLLOW INSPECTION TERMS AND CONDITION AS PER APPROVED QUALITY PLAN ONLY REPORTS.

PRE-QUALIFYING REQUIREMENT(PQR) for 3 STEP ALH

The vendors meeting the below mentioned criteria shall be considered for further evaluation. Vendor to state its response as per below

SN	PQR Requirement	Vendor Response (Yes / No / Enclosed)
1.	Manufacturers should have executed anyone of the following previously: 1a. Experience in designing customized/mechanical hoisting mechanism with electronic control circuits, electrical equipment, control module and logics. OR 1b. Experience in designing electromechanical system having feature of handling ammunition through an automatic/ semiautomatic equipment with electronic control circuits, electrical equipment, control module and logics. OR 1c. Experience in designing electromechanical system operated using electric motor having electronic control circuits, electrical equipment, control module and logics for Defence applications equipment.	Yes/No
2.	Manufacturers should have experience in system integrator and/or manufacturing of electromechanical systems.	Yes/No
3.	This equipment is intended to be used under saline atmosphere, so the design and manufacturing items which should withstand the saline atmosphere of sea, to be done. Vendor to confirm compliance.	Yes/No
4.	Vendor to submit documentary evidence in support of si. No. 1 & 2. i. Unpriced Purchase order copy. ii. Dispatch documents. iii. Technical description/specification of supplied system along with GA drgs and photographs. iv. Certificate issued by the actual end user confirming: <ul style="list-style-type: none"> Successful installation and commissioning of the supplied system, Continuous and trouble-free operation for a minimum period of one (1) year and Satisfaction with system performance The certificate must be on end-user letterhead, signed, and stamped. 	Documents enclosed: Yes/No Yes/No Yes/No Yes/No
5.	BHEL reserves the right to verify information submitted by vendor. In case the information is found to be false/incorrect, the offer shall be rejected.	



DEFENCE AND AEROSPACE BUSINESS GROUP

No: DPE/TS/ALH/3STEP
Rev. 01

Dated: 17/10/2025

DPE-DABG

TECHNICAL SPECIFICATIONS


Page: 1

Ammunition Lower Hoist 3 Steps

For

76/62 SUPER RAPID GUN MOUNT (SRGM)

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REVISION HISTORY

REV.	DATE	DESCRITPION
0	September 2024	First Issue
01	October 2025	Second Issue

1. Purpose

This technical specification provides information to develop, design, manufacture, test, supply and erection & commissioning of 3 step Ammunition Lower Hoist for the SRGM's.

2. Introduction of Ammunition Lower Hoist (ALH)

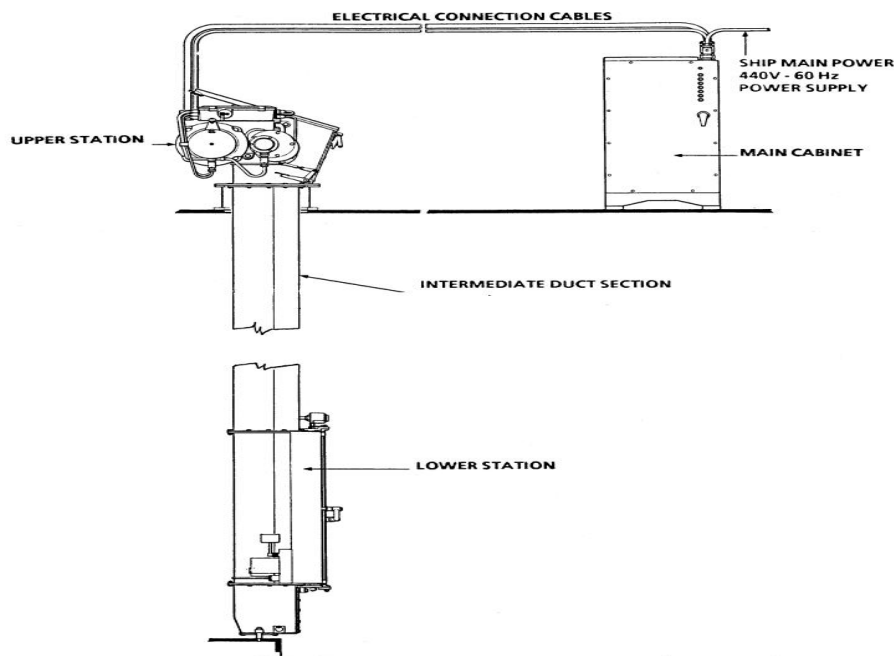
The Ammunition Lower Hoist performs two-ways, automatic and manual transport of ammunition between the Ammunition storage Room and the Loading Room, where the SRGM Mount is located.

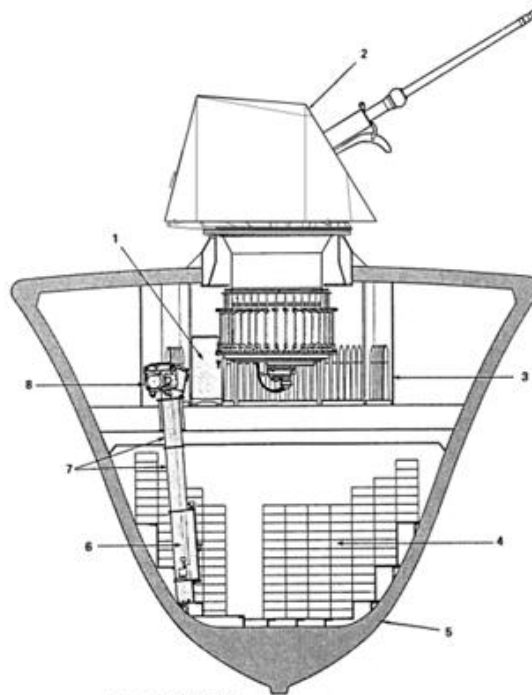
Ammunition Lower Hoist consists of following major assemblies:

- The Lower Station
- The Intermediate Duct
- The Upper Station
- Main Control Panel (power supplied by Ship)

The Ammunition Lower Hoist provides the following main functions:

- Automatic transport of Cartridges/ammunitions from the Ammunition Storage Room to the Loading Site (ascent mode) after the Cartridges/ammunitions are extracted from their containers;
- Automatic transport of Cartridges/ammunitions from the Loading Site to the Ammunition Storage Room (descent mode) for subsequent stowing into their containers.
- Transport of Cartridges/ammunitions ways by means of a mechanical device manually activated by a handwheel.
- The Upper Station and Lower Station located in the above-mentioned sites, and connected by an Intermediate Duct. An electric motor-driven lifting chain is housed in the Intermediate Duct. The chain performs the actual transport of cartridges in either the ascent or descent mode, when an operator of the two stations has provided power to the Hoist. The driving motor is automatically controlled by an electronic system installed in the Main Cabinet and in the Upper Station for two-way motion.
- All electrical and mechanical parts necessary to provide motion to the Hoist are installed in the upper deck next to the cartridge/ammunition introduction/extraction mouth.





1 - Main Cabinet
2 - SRGM
3 - Loading Room
4 - Ammunition Room
5 - Hull
6 - Lower Station
7 - Intermediate Duct
8 - Upper Station and Reduction Gear Drive

Example of Ammunition Hoist Installation (3 steps, typical)

As per existing ALH

3. General requirement of Ammunition Lower Hoist (ALH)

- ALH to be designed for Indoor applications.
- The ALH shall be designed and built according to the naval standard requirements for high MTBF (Mean Time Between Failure) and 10week MTTR (Mean Time To Repair) compatible with equipment complexity.
- ALH is an assembly comprises of upper station, intermediate section, lower station and main control cabinet.
- The ALH is powered by main cabinet and input supply for main cabinet is 3 phase, 415V, 50Hz.
- Mode of operation – Manual and automatic both.
- ALH upper station base plate should be capable to support a weight as per drawing.
- Final dimension of all parts of ALH shall be as per BHEL drawings.
- ALH shall be able to withstand the saline atmosphere of sea as per defined in standard MIL-STD-810 F meth.509.4.



- ALH should be stable and steady for ship motion, vibrations and shocks.
- All electrical wires/cables/electronic & electrical components shall be as per MIL grade and to withstand the saline atmosphere of sea.
- Material of ALH shall be as per drawing and to withstand the saline atmosphere of sea.
- Protection coating as per drawings and to withstand the saline atmosphere of sea.
- Finished assembly of the ALH shall be as per drawing.
- Applicable standards shall be MIL and as per drawing.
- Material of fabricated material shall be as per drawing.
- High degree of water-tightness as the Hoist only presents two openings; one in the Upper Station and the other in the Lower Station, for introduction and extraction of the Cartridges/ammunitions.
- Light weight and high strength obtained by using high strength, steel for the carrying structure and aluminum alloy for the accessories.
- Maximum safety for the operators and equipment is to be provided by extensive use of electromagnetic interlocks.
- Personnel Required for Operation Two operators are required for the Ammunition Hoist Operation: – one in the Upper Station dedicated to the turn on, operating mode presetting and extraction (introduction) of the Cartridges/ammunitions; – one in the Lower Station dedicated to the introduction (extraction) of the Cartridges/ammunitions.

4. Main Assemblies of existing ALH

4.1 Lower Station

- The Lower Station is located in the Ammunition storage Room. Cartridges/ammunitions are brought into the Station by the gun crew when the system is loaded. Removal of Cartridges/ammunitions from the Station is performed when the system is unloaded.
- The Lower Station consists of the following elements and subassemblies:
 - a) A carrying structure, vertically arranged, represents the lower terminal section of the Hoist, the lower part of the Lifting chain is located inside this section.

The Cartridges/ammunitions are introduced through a vertical opening provided with a closure door and a releasing handle. Inside the opening two Cartridges/ammunition retaining shutters open automatically when the Cartridges/ammunitions are introduced. The two shutters keep the Cartridges/ammunitions vertical and guide them during the first part of the ascent step toward the Upper Station. The shutters are provided with the



interlock “**Lower Station Door Closed**” and a hand lever for manually opening the retaining shutters when the Cartridges/ammunitions are extracted at the end of the descent phase. Inside the carrying structure, the interlock " Cartridges/ammunitions in the Lower Station" is installed with the related hand grip for manual operation. This interlock enables the transportation of the Cartridges/ammunitions still on the Hoist duct toward the Upper Station when further Cartridges/ammunitions are not being introduced in the Lower Station.

- b) A lower support formed by an extension of the carrying structure and forms the base of the ALH. It houses the chain driven sprocket and the chain stretcher. It connects the Hoist to the deck of the Ammunition storage Room by means of anchor bolts.
- c) A Junction Box for electrical connections of assemblies is installed in the Lower Station, and connected to those in the Upper Station.
- d) A Light Indicator Panel. This informs the Ammunition storage Room operator when the Hoist is ready to receive the Cartridges/ammunitions from the Ammunition storage Room, or for unloading them from the Loading Room.

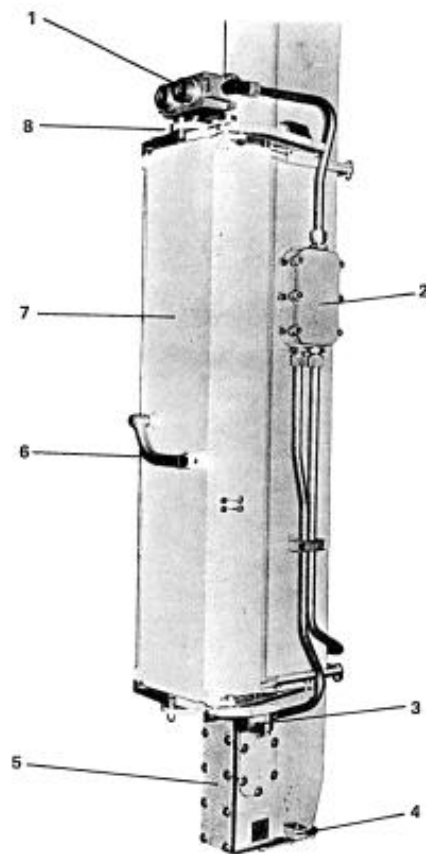
Operating procedure of Lower station

Descent mode

- a) Insert a Cartridges/ammunition in the Cartridges/ammunition introduction mouth by sliding its bottom along the chute until it reaches the shock absorber. Push the nose inside the duct until it reaches the nose rest against the lifting chain. At this point when the Cartridges/ammunition remains, the shutters close and the Hoist starts for an ascending step. The remaining Cartridges/ammunition leaves room for the next Cartridges/ammunition.
- b) As soon as the Hoist stops after completion of the steps, insert a new Cartridges/ammunition into the mouth. Again, the Hoist will automatically start for a new step upward.
- c) Keep on feeding the Hoist with Cartridges/ammunitions as required.

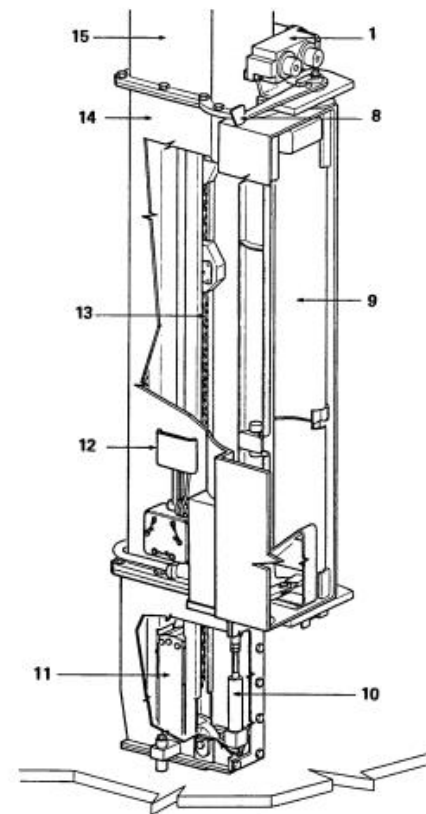
Ascent Mode

- a) Manually open the Cartridges/ammunition retaining shutters by means of the hand lever installed above the Lower Station door
- b) Extract the first incoming Cartridges/ammunitions.
- c) Let the shutters close and wait for the arrival of the next Cartridges/ammunition.



- 1 - Light Indicator Panel
- 2 - Junction Box
- 3 - Interlock "Lower Station Door Closed"
- 4 - Deck Anchoring Lug
- 5 - Lower Support
- 6 - Door Handle
- 7 - Closure Door
- 8 - Hand Lever

Lower Station External Parts



- 9 - Cartridge Retaining Shutters
- 10 - Chain Stretcher
- 11 - Chain Driven Sprocket
- 12 - Hand grip for Manual Activation of interlock "Cartridge in Lower Station"
- 13 - Lower Station Lifting Chain
- 14 - Carrying Structure
- 15 - Lower Part of the Intermediate Duct

Lower Station Internal Parts

4.2 The Intermediate Duct

The Intermediate Duct connects the Lower Station to the Upper Station - 3-step configurations. The Hoist duct consists of the upper part and as many parts as required. The Hoist duct houses a lifting chain provided with lifting supports that hold the bottom of the Cartridges/ammunition and Cartridges/ammunition nose rest.

The tightness along the intermediate duct is assured by seals installed at each junction of intermediate sections.

Intermediate duct section consists of the following subassemblies

- a) The Cartridges/ammunition guiding parts

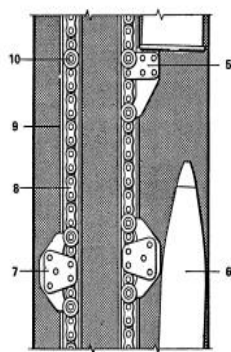
The Cartridges/ammunition guiding parts (2) and (3) connect the Upper Station to the Lower one, thus realizing a continuous guide and a protection for the Cartridges/ammunition during their travel inside the Ammunition Hoist in both directions. The upper guiding part (2) is formed by a single duct element, while the lower guiding part (3) may be formed by one or more duct elements.

The number of duct elements forming the lower guiding part depends on the distance between the Ammunition storage Room and the loading room where the Upper Station is located.

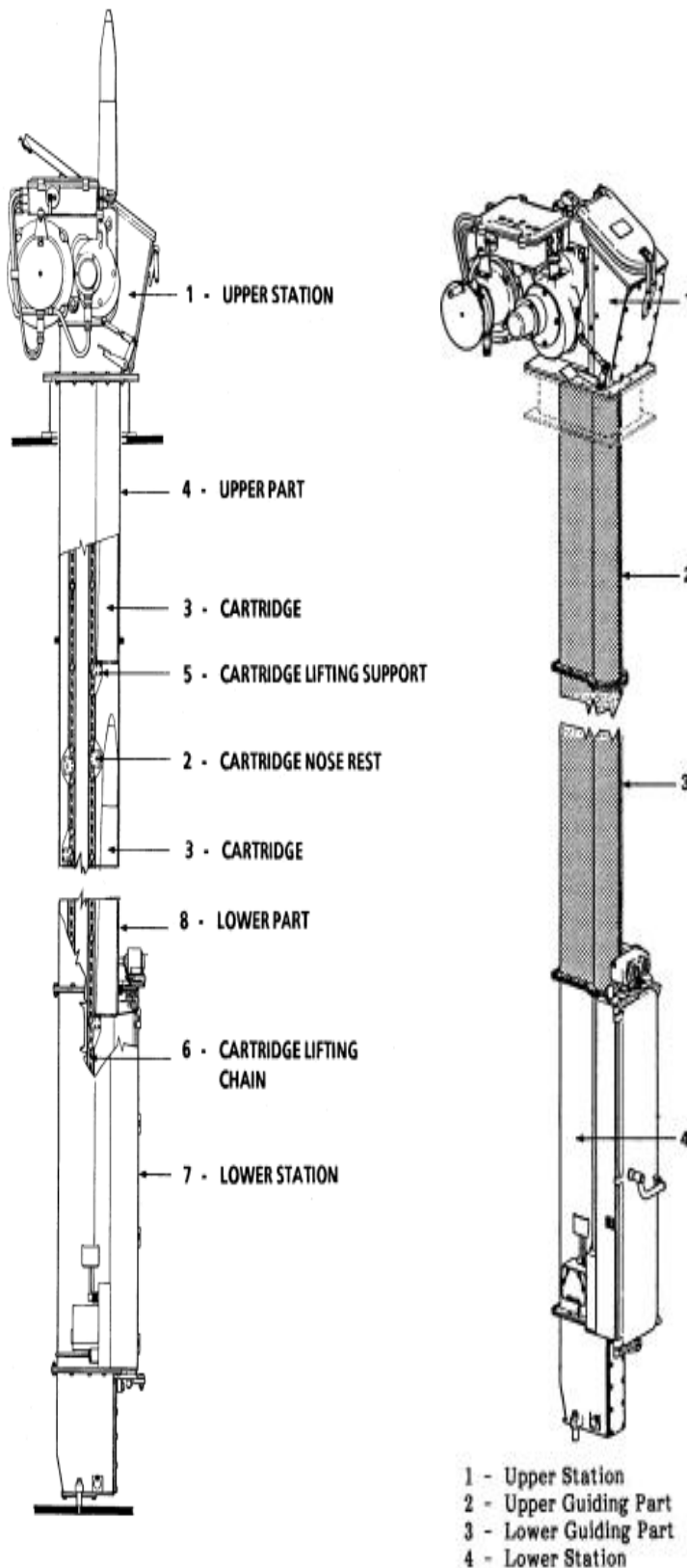
The Cartridges/ammunition guiding parts are connected between them and to the Upper and Lower Stations by means of screws and nuts. They carry two “C” shaped tracks in their interior; in these tracks the Cartridges/ammunition lifting chain slides.

b) The Cartridges/ammunition lifting chain

The Cartridges/ammunition lifting chain (8) is of the Galle type with articulated links and runs in the tracks (9) in the intermediate duct section by means of a series of guide rollers (10) swiveling on the links themselves. The Cartridges/ammunition lifting chain carries the Cartridges/ammunition lifting supports (5) and the Cartridges/ammunition nose rests (7) which maintain the Cartridges/ammunition in contact with the wall of the duct in order to avoid uncontrolled oscillations. The lifting chain is composed of a different number of elements according to the number of elements according to the number of steps of the Hoist.



- 5 - Cartridge Lifting Support
- 6 - Cartridge
- 7 - Cartridge Nose Rest
- 8 - Chain
- 9 - Chain Guide
- 10 - Guide Roller



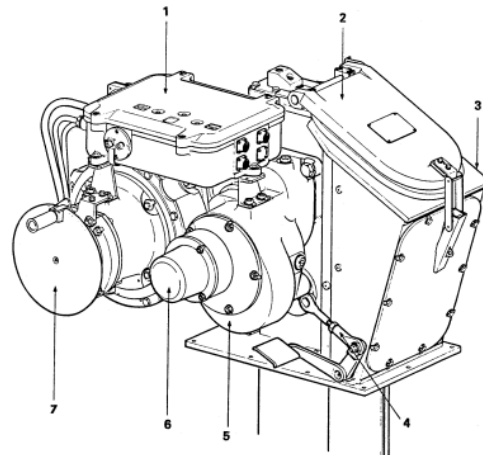
4.3 The Upper Station and Motor Gear Drive

All electrical and mechanical parts necessary to provide motion to the Hoist are installed in the upper deck next to the cartridge introduction/extraction mouth. The Upper Station and

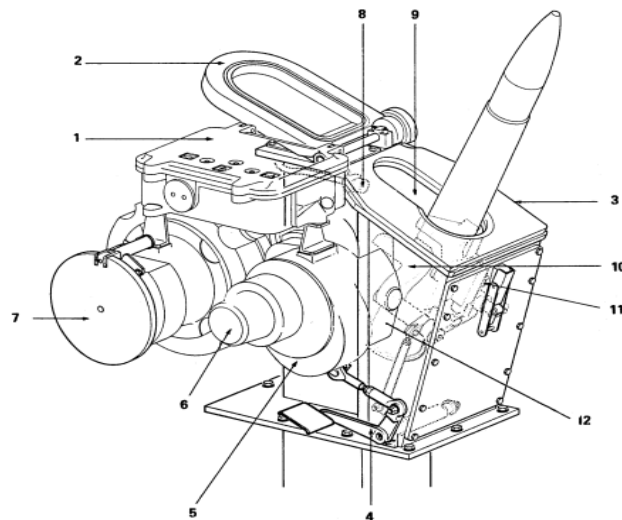


Motor Gear Drive are integrated in a single assembly. The assembly component and subassemblies contain the following components and subassemblies:

- a) A carrying structure supporting all components of the Upper Station.
The structure has an extraction mouth that allows Cartridges/ammunitions to be inserted or extracted when the structure is tilted. The opening is protected by a watertight cover that activates an interlock during manual operation. When the cover is closed the interlock deactivates the Hoist.
The structure also houses the lifting chain driving sprocket.
The sprocket is connected to the Motor Gear Drive Shaft.
- b) Two retaining levers are activated by the Cartridges/ammunition when it reaches the Upper Station. The Cartridges/ammunition is kept oblique by the levers until it is extracted. The mechanism connected to the levers activates an interlock that steps the ascending motion of the chain when the Cartridges/ammunition is in the extract position.
- c) A transmitting mechanism for activating the levers. This mechanical connection is also linked to the Reduction Gear Drive Box.
- d) The interlock "Cartridges/ammunitions in the Upper Station" contains a proximity switch that is activated by a Cartridges/ammunitions when it reaches the Upper Station. When it is necessary to unload a Cartridges/ammunitions from the Intermediate Duct, the interlock is manually activated by using the dedicated tool hooked to the cover.
- e) The Reduction Gear Drive Box installed on the left side of the carrying structure. It houses the gears which transmit the motor drive shaft motion to the lifting chain driving sprocket. The Reduction Gear Drive is also fitted with a cam that controls the tension rod of the Cartridges/ammunition retaining levers.
- f) The drive electric motor. It contains an electromagnetic brake for engaging the handwheel for manual operation of the Hoist.
- g) A tachometer for the Cartridges/ammunition speed control (located behind the electric motor, but not visible in the figure). The tachometer is keyed to the electric motor shaft and tachometer feedback signal is used to control the motor rotational speed.
- h) A Synchro Box, installed on the Reduction Gear Drive box and housing a synchro mechanically slaved to the Reduction Gear Drive. The synchro controls the length of each step of the Hoist.
- i) A Control Panel, installed near the left side of the carrying structure, on the electric motor and the Reduction Gear Drive Box. The Control Panel electrically connects the Upper and the Lower Station assemblies to the Main Cabinet. The Control Panel contains the ascent and descent pushbuttons for presetting the Hoist modes of operation and their related indicator lamps. Three receptacles and the waterproof cable entry tubes for the connection cables of the Ammunition Hoist are arranged on the sides of the Control Panel.
- j) **For parts and applicable standards refer part drawing of upper duct.**



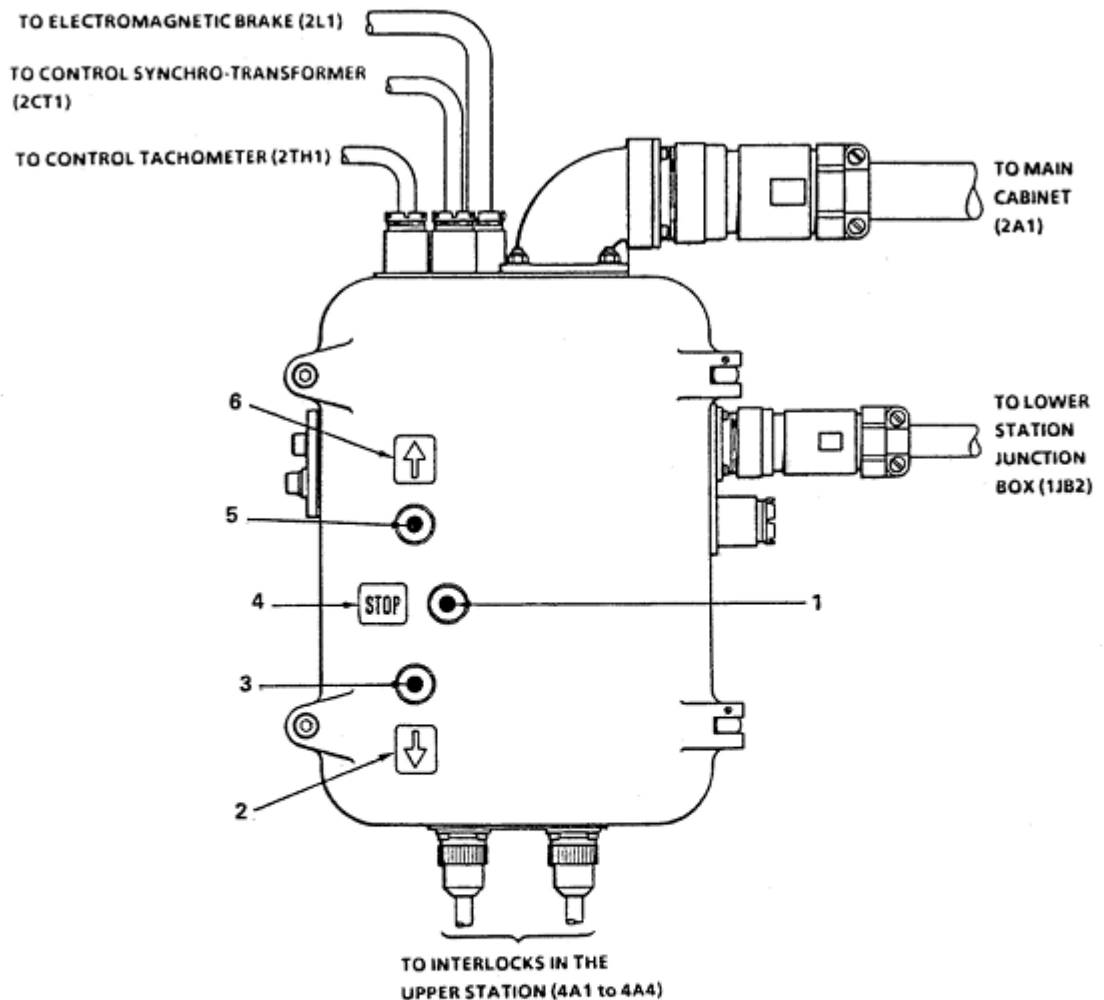
- 1 - Control Panel
- 2 - Extraction Mouth Cover
- 3 - Carrying Structure
- 4 - Lever Control Transmission
- 5 - Levers Control Cam Box
- 6 - CT Synchro Box
- 7 - Handwheel for Manual Operation and Electrical Drive Motor



- 8 - Interlock "Cartridge in the Upper Station"
- 9 - Cartridge Extraction Mouth
- 10 - Left Lever
- 11 - Interlock "Cartridge in the Upper Station (for the ascent)"
- 12 - Reduction Gear Drive Box for the Lifting Chain

Upper Station Parts

Control panel



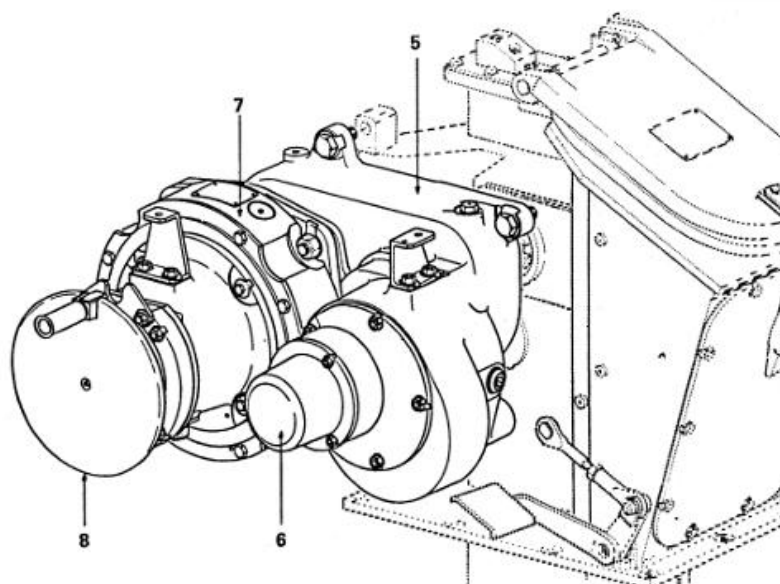
- 1 - 4P3 - Stop Push-button
- 2 - ADS4 - Light Indication of "Ammunition Hoist Preset for the Descent"
- 3 - 4P2 - Descent Presetting Push-button
- 4 - ADS6 - Light Indication of Servo-System STOP
- 5 - 4P1 - Ascent Presetting Push-button
- 6 - 4DS2 - Light Indication of "Ammunition Hoist Preset for the Ascent"

Reduction Gear Drive

The reduction gear drive (5) is mechanically connected to the driving electric motor (7) (figure A). The reduction gear drive is of the spur gear type; it is driven by the electric motor, the motion of which, suitably reduced, is transmitted by the reduction gear drive to

the Ammunition Hoist Chain. Its driving shaft (49) is horizontal, as are all the shafts of its reduction gears (see figure 3 5-16). The functional group of the reduction gear drive are as follows: – a watertight support casing (46) – two reduction gear pairs (44 and 48) for operating the chain driving sprocket (17) – a control cam (34) (one turn for each step in the ascending or descending direction with its driving transmission).

Figure A



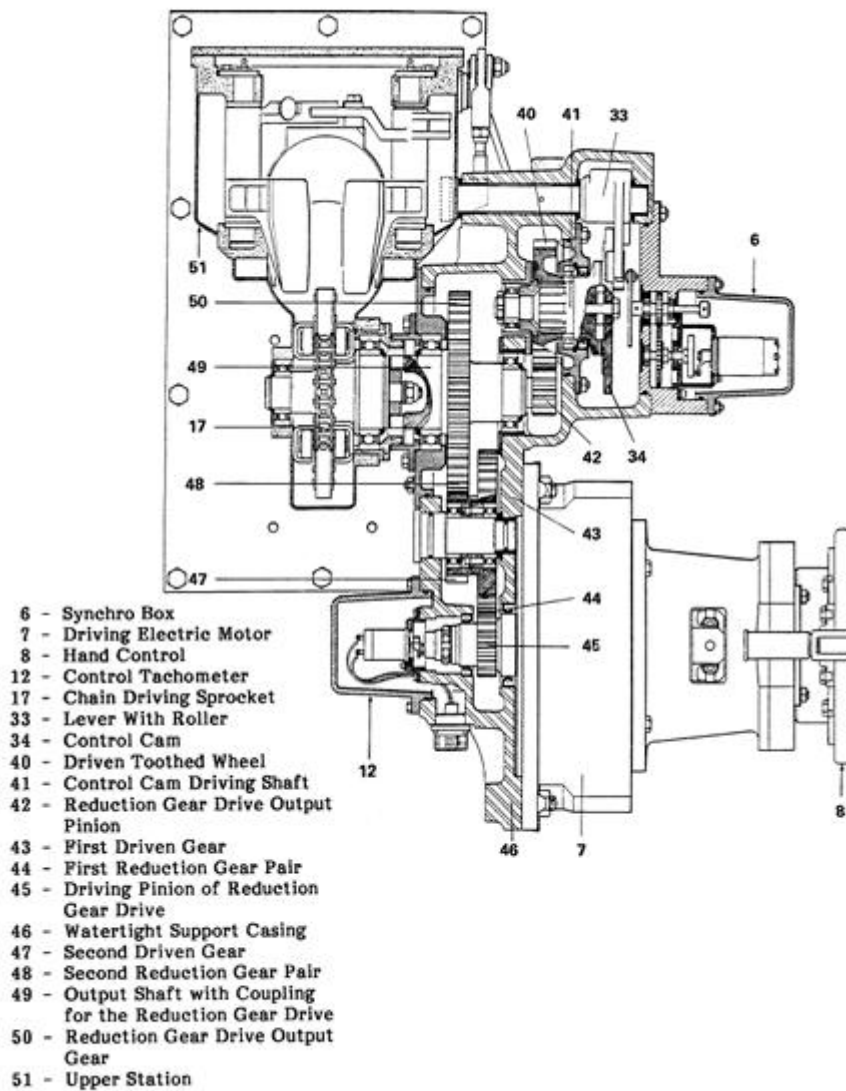
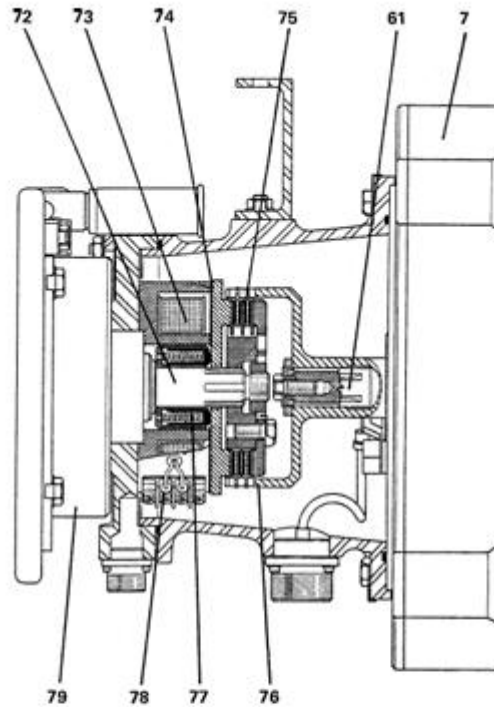


FIG. 3-5-16. Reduction Gear Drive, Cutaway View



- | | |
|---------------------------------------|----------------------------------|
| 7 - Driving Electric Motor | 75 - Clutch Plates |
| 61 - Driving Shaft | 76 - Cup Coupling |
| 72 - Main Shaft | 77 - Return Spring Plunger |
| 73 - Electromagnet Coil | 78 - Terminal Board |
| 74 - Mobile Part (Electromagnet Core) | 79 - Ratchet Gear with Handwheel |

Hand Control, Electromagnetic Brake



4.4 Main Cabinet

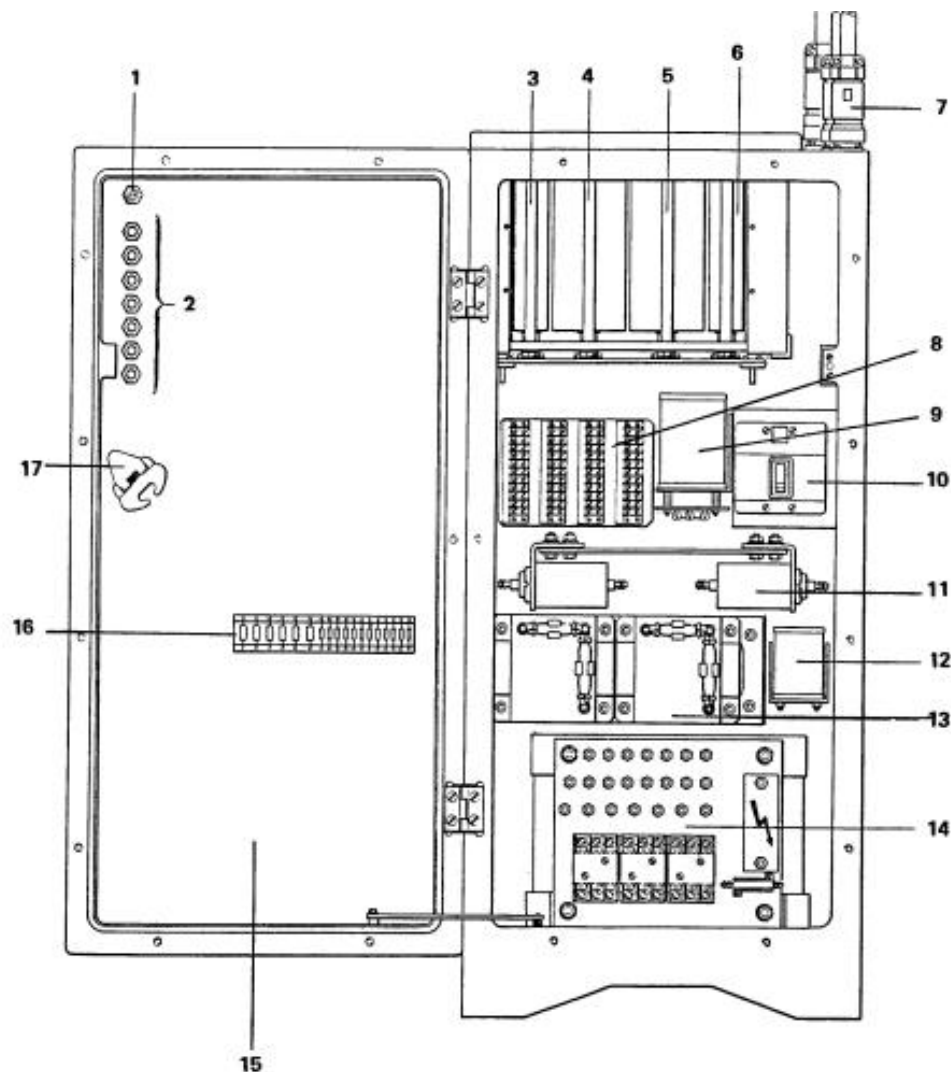
The Main Cabinet contains all the electromechanical, electrical and electronic components used for providing power and control to the Hoist. The **existing** Main Cabinet houses the following indicative electrical components relevant to the control and supply of the Hoist:

- The main Circuit Breaker, the handle.
- Indicator lamps.
- The Main Transformer, the rectifying diodes mounted on a board, and the protection fuses. Note that Main Transformer suitable to supplies power for the 2 to 8-step Hoist.
- The auxiliary transformers, one for the synchro and interlock circuits, and the other for the saw tooth signal generators.

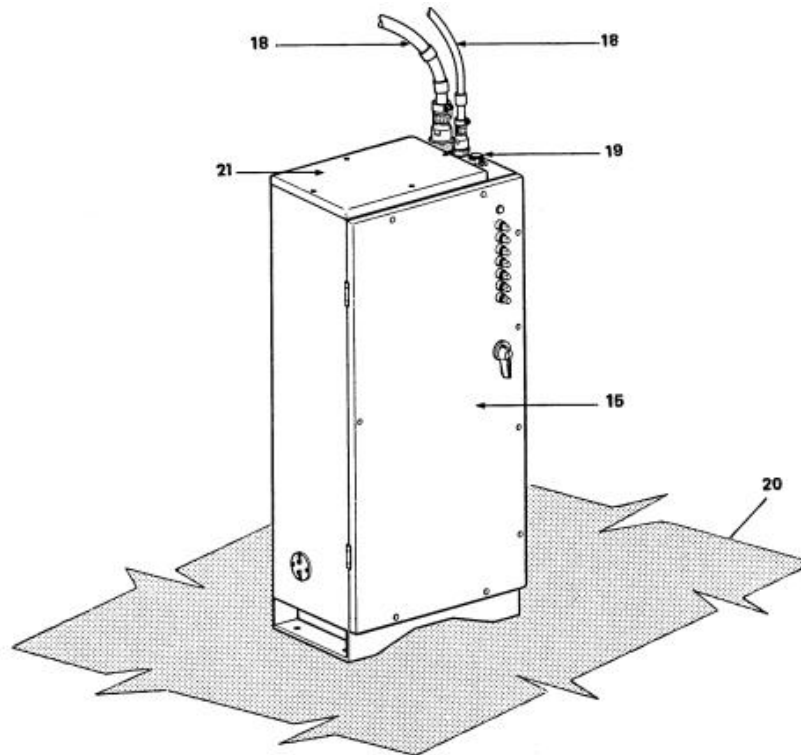
A set of four modules housing the electronic circuits detailed as follows:

- one module containing submodules supplying all the electronic circuits and proximity switches and the reference signal generator submodules.
- two power supply modules containing the SCR diodes and related control submodules for the Hoist drive motor supply; the electronic circuits and the proximity switches; the submodules of the reference signal generator for the electronic control;
- two power supply modules containing the SCR diodes and control submodules;
- one logic and control module containing the submodules for automatic functions of the Hoist.
- A set of terminal boards for connecting the modules to other circuits of the Main Cabinet.
- Six noise filters and inductors for equalizing the current sent to the electric motor.
- Refer drawing for applicable standard of electronic components, transformers, resistors, inductances, electronic control modules, interlocks, diodes, SCR's, fuses etc.
- **For parts and applicable standards refer part drawing of main cabinet.**

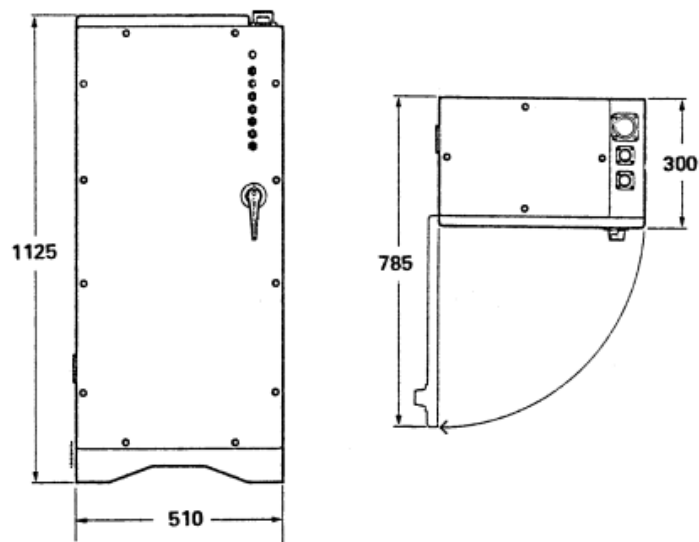
The Main Cabinet is provided with a front cover and connectors for external connections and to the Reduction Gear Drive and to the Ship Supply Main line.



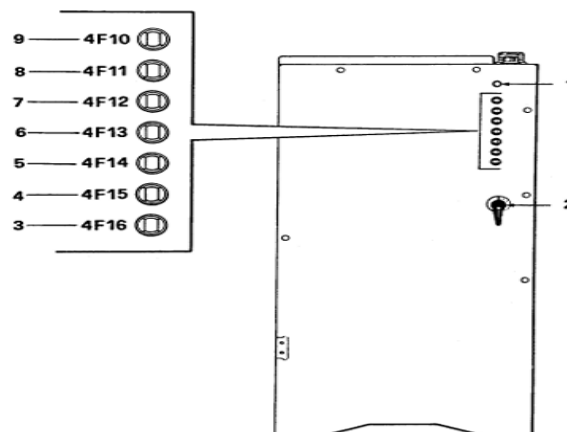
- | | |
|---|---|
| 1 - Indicator Light 440V-60 Hz | 10 - Main Circuit Breaker |
| 2 - Protection Fuses | 11 - Filters |
| 3 - Power Supply and Reference Signal Module | 12 - Auxiliary Transformer for Synchronous and Interlock Circuits |
| 4 - SCR Module | 13 - Inductors |
| 5 - SCR Module | 14 - Main Transformer |
| 6 - Logic and Control Module | 15 - Front Cover |
| 7 - Connectors | 16 - Rectifying Diodes |
| 8 - Terminal Board | 17 - Main Circuit Breaker Handle |
| 9 - Auxiliary Transformer for Saw-Tooth Signal Generators | |



- 15 - Front Cover
- 18 - Connecting Cables to Reduction Gear Drive Motor
- 19 - Power Supply 440V 60 Hz Input
- 20 - Upper Deck Floor
- 21 - Upper Cover



POS.	REF. DESIGN.	TYPE	FUNCTION
1	4CB1	Main circuit breaker	Used to apply primary power to the Hoist. When set to "I" (handle rotated clockwise), a 3-phase, 440V 60 Hz primary supply voltage is applied to the Main Cabinet circuits, and hence to all Hoist circuits (4DS1 lights up). When set to "0" (handle rotated counter clockwise), the power supply voltage is disconnected (4DS1 turns off).
2	4DS1	White colour bulb indicator	Indicates 440V 60Hz, primary power voltage is applied after the main circuit breaker 4CB1 is set to "I".
3	4F16	Transparent indicator of the fuseholder	Indicates that the 78V Synchro Reference voltage protection fuse F16 is open.
4	4F15	Transparent indicator of the fuseholder	Indicates that the +28V Interlock Circuit voltage protection fuse F15 is open.
5	4F14	Transparent indicator of the fuseholder	Indicates that the +28V Light Indicator voltage protection fuse F14 is open.
6	4F13	Transparent indicator of the fuseholder	Indicates that the -12V Logic and Starting Control Boards voltage protection fuse F13 is open.
7	4F12	Transparent indicator of the fuseholder	Indicates that the +12V Gate Control Amplifiers voltage protection fuse F12 is open
8	4F11	Transparent indicator of the fuseholder	Spare
9	4F10	Transparent indicator of the fuseholder	Indicates that the +28V Brake and Relays voltage protection fuse F10 is open.



- 1 - 4DS1 Indicator
- 2 - 4CB1 Circuit Breaker Handle
- 3 - 4F16 Fuse Indicator
- 4 - 4F15 Fuse Indicator
- 5 - 4F14 Fuse Indicator
- 6 - 4F13 Fuse Indicator
- 7 - 4F12 Fuse Indicator
- 8 - 4F11 Fuse Indicator
- 9 - 4F10 Fuse Indicator

5 Control and indicators

a) Controls and Indicators - Main Cabinet

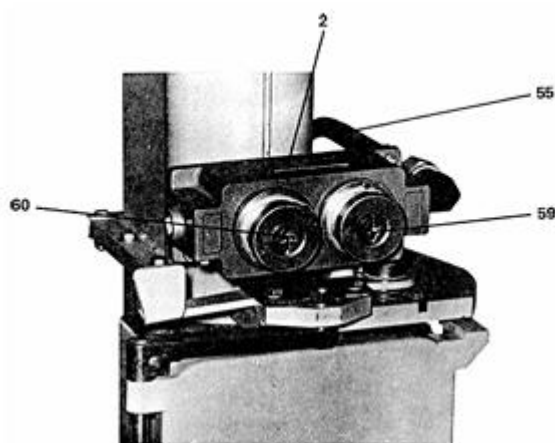
Controls and Indicators located in the Main Cabinet, mainly refer to primary power supply voltage for the Hoist and to the monitoring of auxiliary control circuits.

b) Controls and Indicators - Control Panel

Controls and Indicators located on the Control Panel refer to selection and monitoring of operations

c) Indicators - Light Indicator Panel (in lower station)

The Light indicator provides the Ammunition storage Room operator with information about the presetting performed by the operator in the Upper Station. The light indicator is fitted on the front part of the carrying structure and consists of a watertight box inside which two indicator lights are mounted.



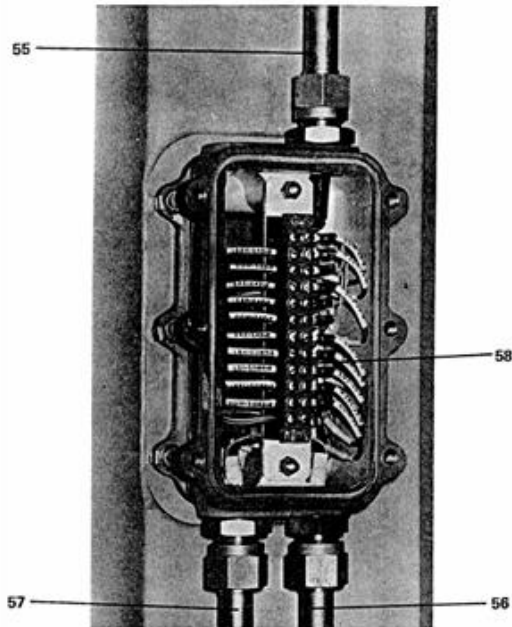
- 2 - Light Indicator
- 55 - Cable Connected to Junction Box
- 59 - Directional Arrow of Ammunition Hoist Preset for the Descent (Cartridge Unloading)
- 60 - Directional Arrow of Ammunition Preset for the Ascent (Cartridge Feeding)

d) Junction box – Lower station

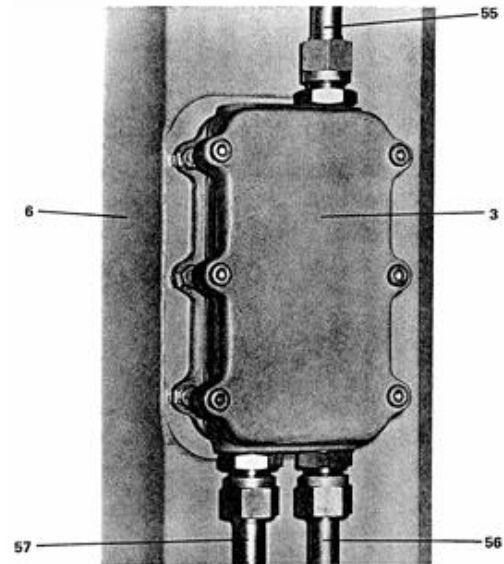
The Junction Box connects the electrical components fitted on the lower station with those on the Upper Station. It is installed on the left side of the carrying structure and consists of a box with a watertight closure cover. The terminal board for wiring the connection cables is installed inside the box. The cables that terminate in the terminal board are connected to the following subassemblies fitted in the Lower Station: –

- the proximity switch of the “Cartridge in Lower Station “ interlock 1A1 (cable 56);
- the proximity switch of the “Lower Station retaining shutters closed” inter lock 1A2 (cable 57);

- the light indicator (55).



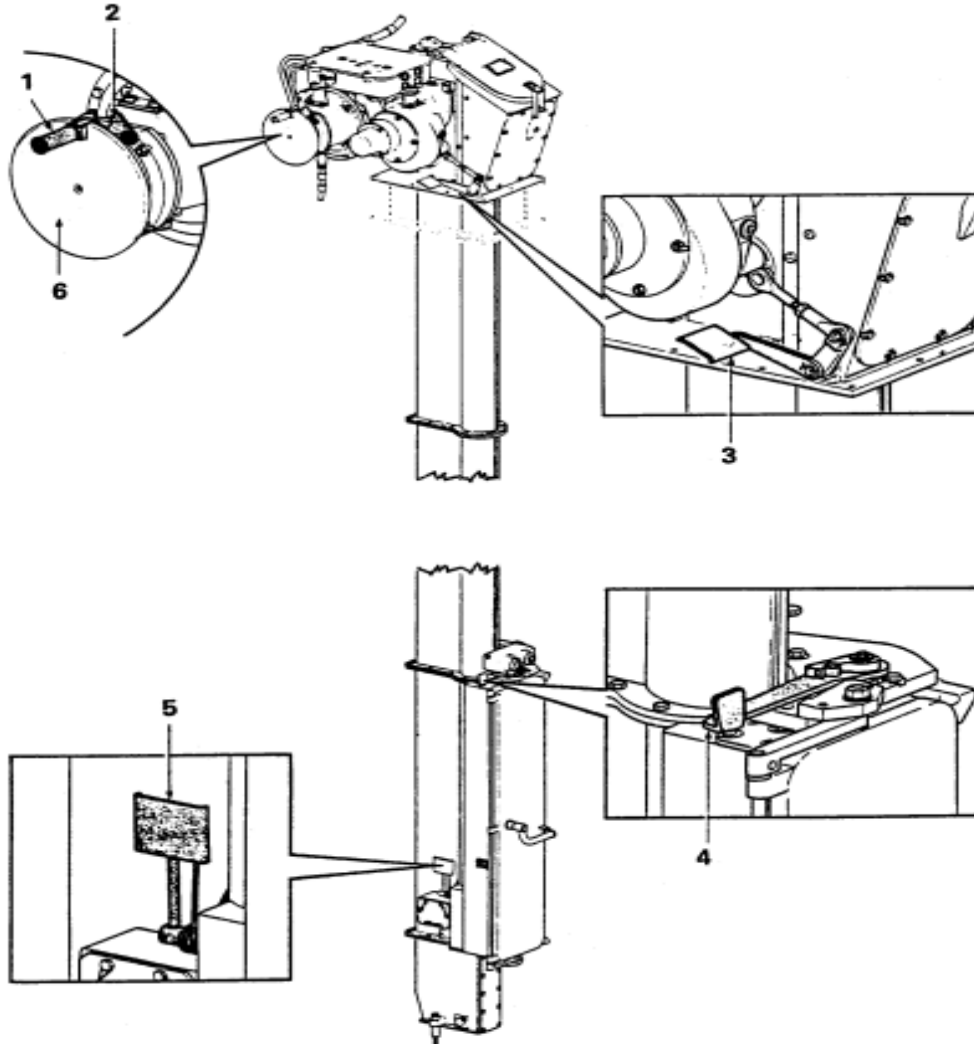
- 55 - Cable Connected to Light Indicator
56 - Cable Connected to "Cartridge in Lower Station" Interlock 1A1
57 - Cable Connected to "Lower Station Retaining Shutters Closed" Interlock 1A2
58 - Terminal Board for Wiring Connection Cables



- 5 - Junction Box
6 - Carrying Structure
55 - Cable Connected to Light Indicator
56 - Cable Connected to "Cartridge in Lower Station" Interlock 1A1
57 - Cable Connected to "Lower Station Retaining Doors Closed" Interlock

e) Mechanical Controls

The mechanical controls are located along the Hoist structure.



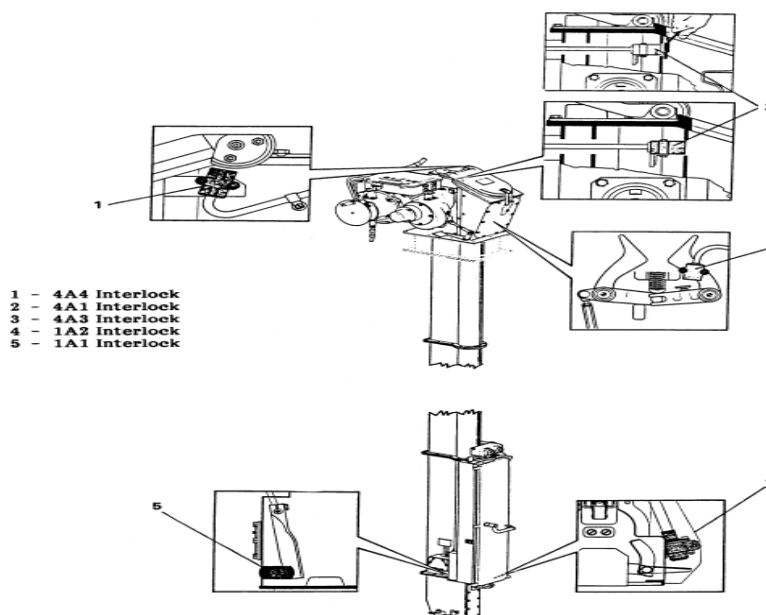
- 1 - Crank in Open Operating Position
- 2 - Holding Bracket
- 3 - Footlever for Opening Cartridge Retaining Grips
- 4 - Hand Lever for Opening Cartridge Retaining Shtters
- 5 - Hand Grip for Manual Operation of Interlock 1A1
- 6 - Handwheel for Hoist Manual Operation

6 Electromechanical interlocks

Mnaufcaturer to ensure provisoion of electromechanical interlocks, which shall be activated during operation.

Below is the indicative list of existing ALH

POS.	REF. DESIGN.	TYPE	FUNCTION
1	4A4	Interlock for Upper Station Cover Open	Prevents operation of the Hoist either in ascent or descent mode when the cover in the Upper Station is closed causing the activation of interlock 4A4.
2	4A1	Interlock for cartridge present in Upper Station (for descent mode)	When activated by the body of the cartridge present in the Upper Station, enables the Hoist to make one step in case descent mode is preset on the Control Panel in the Upper Station (4P2). It is possible to simulate the presence of a cartridge in the Upper Station by manually operating the interlock to allow unloading of all the cartridges present in the Hoist duct.
3	4A3	Interlock for cartridge present in Upper Station (for ascent mode)	Activated when the cartridge reaches the Upper Station and prevents operation of the Hoist in ascent mode until the cartridge is kept in the Upper Status.
4	1A2	Interlock for cartridge retaining shutters of Lower Station closed	Activated when the retaining shutters in the Lower Station are closed or open; hence, it enables or disables the Hoist in either ascent or descent mode.
5	1A1	Interlock for cartridge present in Lower Station	Activated by the body of the cartridge present in the Lower Station and enables the Hoist to make one step in case ascent mode is preset and prevents the Hoist from operating when descent mode is preset.



7 Safety Interlock Devices in ALH

The existing Hoist circuits in the Main Cabinet and Control Panel are supplied with high and voltages dangerous to service personnel and operators. Safety device of the interlock type are therefore provided for disconnecting power.



POS.	REF. DESIGN.	TYPE	FUNCTION
1	4S3	Interlock	Disconnects the 415 V 50 Hz primary power from the Hoist when the door of the Control Box is open.
2	4S2	Interlock	Disconnects the 415 V 50 Hz primary power from the Hoist when the upper cover of the Main Cabinet is open.
3	4S1	Interlock	Disconnects the 415 V 50 Hz primary power from the Hoist when the front door of the Main Cabinet is open.

8 Safety devices – Fuses/isolators/circuit breakers

Suitable safety devices shall be provided for the protection of the Hoist circuits. The safety devices to be installed in series to the primary supply lines are mounted on a board inside the Main Cabinet; the protective- safety devices for auxiliary circuits can be reached from the outside, on the Main Cabinet door, and are provided with fuse holders and indicators. Safety devices standard shall be as per MIL.

9 Motor supply and control

The supply and control function are performed by the electric circuits contained in modules of the Main Cabinet. The motor control is implemented by closed loop: the output function through a feedback network.

The feedback consists of:

- A current feedback; controls the torque provided by the motor. Given by a signal proportional to the current flow in the motor windings.
- A tachometer feedback; controls the retaking speed of the motor. Given by a signal proportional to the motor rotating speed.
- A position feedback; controls the actual position of the Cartridges/ammunition along the step. Provided by a synchro control transformer.

10 Functional Description of existing ALH

For a functional description of the Hoist, refer to the general block diagram shown in figure A. The Motor drives the Reduction Gear Drive which drives the lifting chain-drive sprocket of the Hoist. The chain trans ports the cartridges (step-by-step motion) between the two Stations (Upper and Lower) in response to the control positions on the Control Panel preset by the operator. The logic circuits that control the execution of each step are contained in the Main Cabinet. These circuits also control the interlock signals produced by electromechanical devices in the Upper and Lower Stations. The circuits which control the speed and direction of motor rotation are located



in the Main Cabinet. The output signs from these circuits are also affected by the output signal from a tachometer that is keyed to the drive motor shaft, and by a synchro control transformer, which is driver' by the gear keyed to the motor. All Hoist power supply circuits are housed in the Main Cabinet. The Hoist lifting chain continuously links the Upper Station to the Lower Station while running inside the Intermediate Duct. The Chain is guided during its travel through the deck(s) between the two Stations. The Stations are provided with openings for introducing and extracting the cartridges. The lifting chain can also be manually operated in both directions by using the handwheel and crank keyed to the Drive Motor shaft. The Hoist can be preset to:-- transfer the cartridges to or from the Loading Room or; transfer the cartridges to the Ammunition Room. Presetting either mode of operation is performed by the operator in the Upper Station. The operator in the Ammunition Room (Lower Station) is notified by an indicator lamp.

a) **Ascent Mode**

When the Hoist is preset to the ascent mode, cartridge transport automatically begins as soon as the duct is manually fed with a cartridge from the Lower Station, and the cartridge retaining shutters close. Operation of the Hoist continues until the first cartridge reaches the Upper Station as shown in figure A. The cartridge itself causes the lifting chain to stop. Operation of the Hoist automatically restarts as soon as the cartridge is extracted from the Upper Station and continues until another cartridge arrives.

b) **Descent Mode**

When the Hoist is preset to the descent mode, cartridge transport automatically begins as soon as the duct is fed from the Upper Station by introducing a cartridge. The operation continues until the cartridge reaches the Lower Station. The Hoist automatically restarts as soon as the cartridge is extracted from the Lower Station. During the ascent and descent operations, cartridge transportation is continuously controlled by a number of interlocks that allow automatic operation of the Hoist. The interlocks refer to the condition of the openings (open or closed) and to the presence of cartridges in the two stations; the latter can be manually actuated by the operator in order to extract the cartridges that remain in the intermediate duct at the end of operation. In emergency conditions Hoist operation is assured by a manual device that drives the control gears of the driving sprocket and chain.

Hoist operation, with the exception of cartridge loading and unloading (performed manually by dedicated personnel), is fully automatic and controlled by electric logic circuits. That logic controls the cartridge position at each step in the Upper Station, and in the Lower Station by means of proximity sensors. This allows or prevents execution of the following step to avoid

any risk of stacking hence damaging the cartridges. In addition, the risk due to a possible error during operations is eliminated by using a safety hook which, in the ascent mode only, automatically locks the hoist at the end of each step. The Hoist logic considers the three following conditions:

- 1) those preventing Hoist operation in ascent and descent mode (Fig 1-2-13);

The operation is inhibited for personnel and cartridge safety when:

- the Lower Station shutters are not fully closed (relevant interlock is not activated)
- the Upper Station cover is not open (relevant interlock is not activated);
- the cartridge retaining are open, i.e. the cartridge is still in the Upper Station, in oblique position, ready to be extracted (relevant inter lock activated).

The occurrence of either one of the above conditions causes power interruption to the lifting system, and therefore the chain stops immediately.

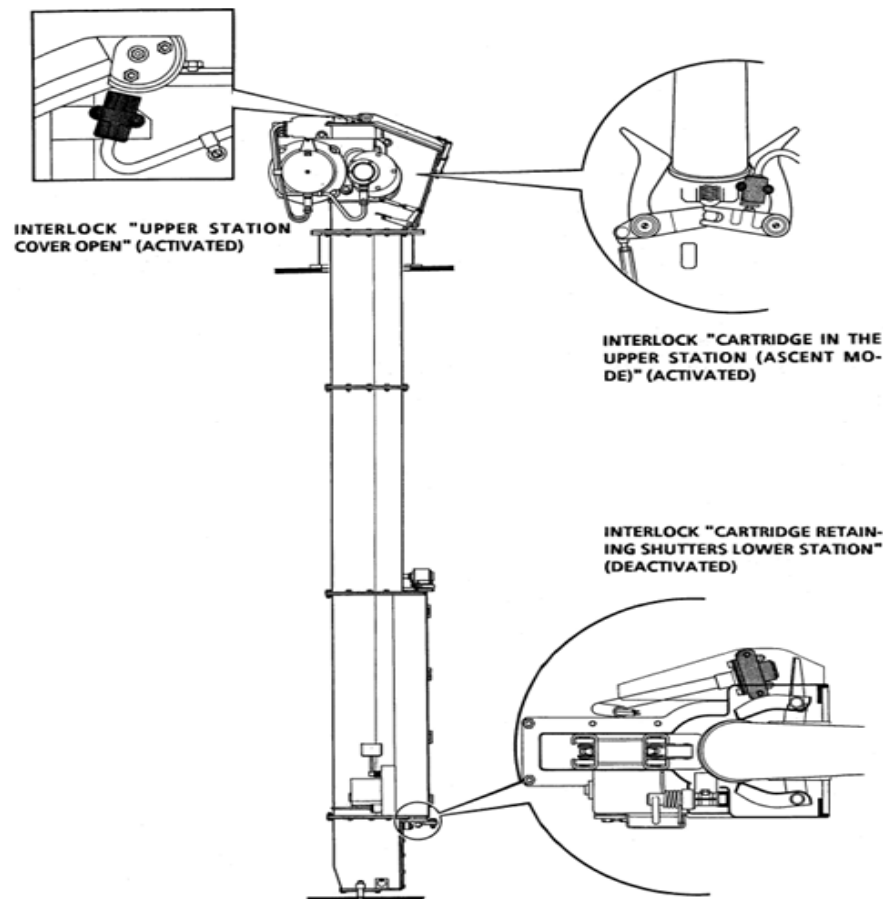


FIG. 1-2-13. Conditions which Prevent Hoist Operation for both Ascent and Descent Mode (3-Step Configuration, typical)

- 2) those causing motion of one step upward (fig 1-2-14);

Motion of one step upward is automatically executed when the following conditions are verified at the same time (provided none of the inhibitions of paragraph (1) occur):

- the Hoist is preset for mode (ascent push-button or' the Control Panel pressed and relevant arrow light on the Light Indicator Panel lights up);
- a Cartridge is preset in the Lower Station (relevant interlock activated).

The concurrence of these conditions causes the lifting system to operate in ascent mode.

The Hoist stops when a step is completed and re-starts for the following step as soon as the above conditions are verified again.

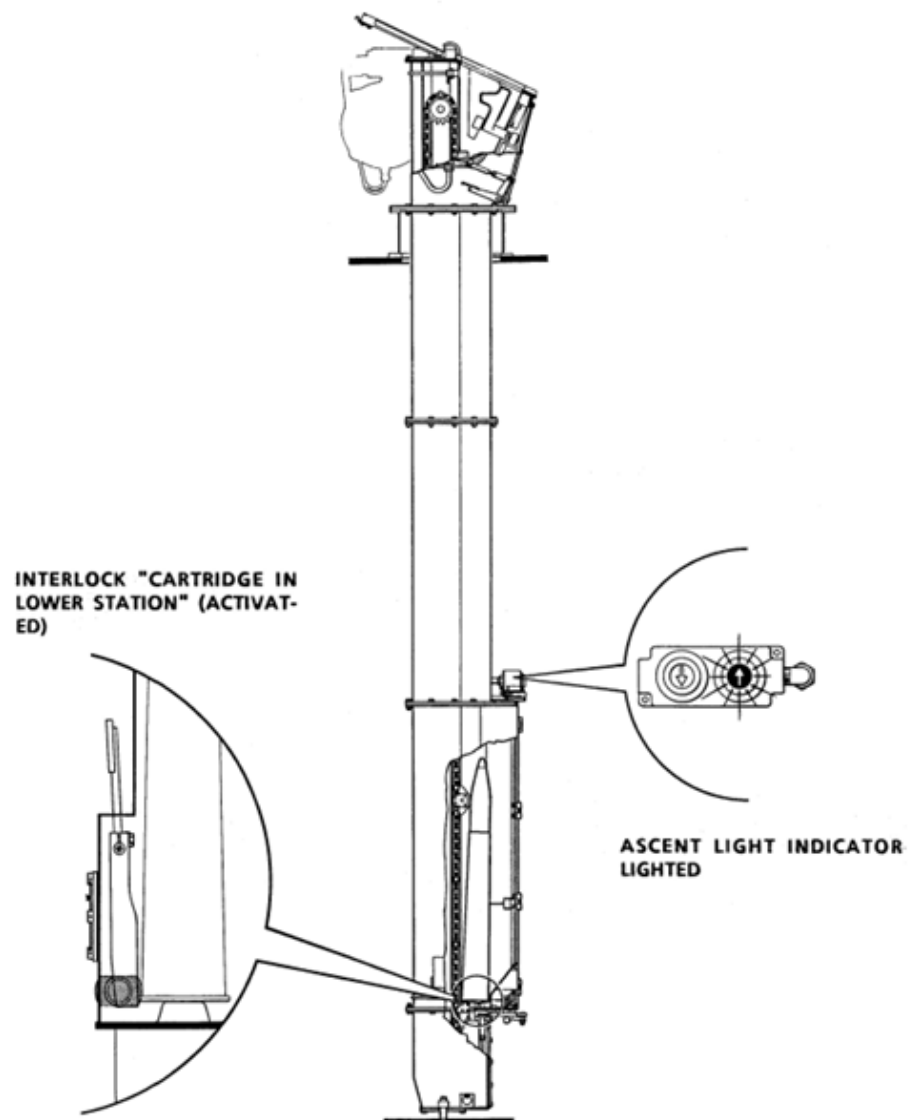


FIG. 1-2-14. Conditions which Cause Hoist Motion of One Step Upward (3-Steps Configuration, typical)

3) those causing motion of one step downward (Fig 1-2-15)

Motion of one step downward is automatically executed when the following conditions are verified at the same time (provided none of the inhibitions of paragraph (1) occur):

- the Hoist is preset to mode (descent push-button on the Control Panel pressed and relevant arrow light on the Light Indicator Panel lights up);
- a Cartridge is present in the Upper Station (relevant interlock activated);
- no Cartridge is present in the Lower Station (relevant interlock deactivated).

The concurrence of these conditions causes the lifting system to operate in descent mode. The Hoist stops when a step is completed and re-starts for the following step as soon as the above conditions are again verified.

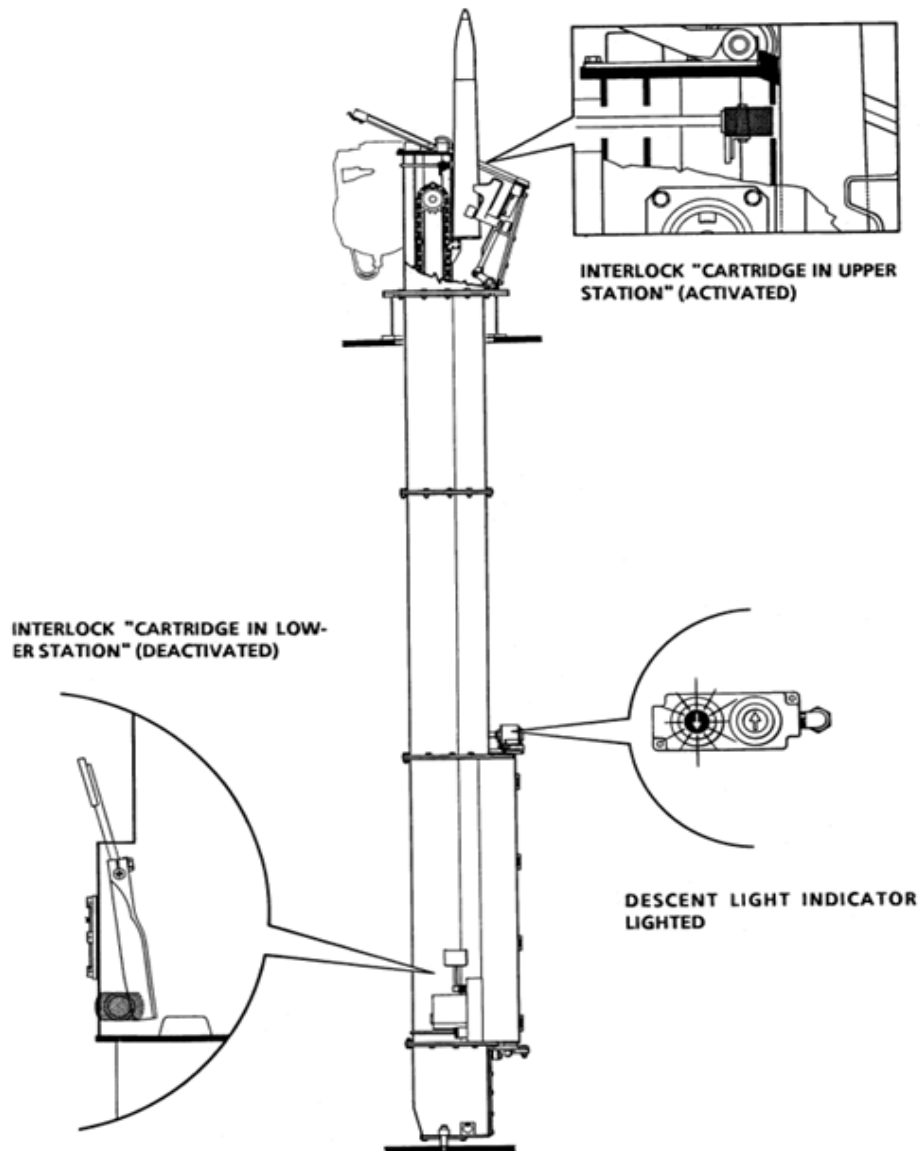


FIG. 1-2-15. Conditions which Cause Hoist Motion of One Step Downward (3-Steps Configuration, typical)

11 Scope of work

Design, manufacture, integration, testing, supply & commissioning of ALH.

- Electrical and control portion as per vendors design.
- Mechanical portion shall be as per existing ALH.

ALH scope of work:

- All Electrical and electronics items like Motor with gear drive and hand control, controls and logics in main cabinets, control panels on upper station, control junction and indicators on lower station, necessary proximity and safety switches, cables etc. for the completeness of the system.
- Mechanical items of ALH – upper structure, gear box, Hand wheel assly for manual operation, lower and intermediate structure etc. for the completeness of the system.



- c) The system shall be of modular construction, designed to accommodate varying overall heights corresponding to **2 to 8 steps**. The required height adjustment shall be achieved through the provision of **intermediate duct sections**.
- d) Integration, testing, erection and commissioning of ALH.
- e) It shall be the **sole responsibility of the vendor to ensure the completeness, reliability, and smooth operational performance of the ALH**, including all associated components, sub-systems, and interfaces, in accordance with the technical requirements.

11.1 Electrical, electronic items and Motor complete assembly

The scope and supply include but not limited to

1) Design/development and supply of following:

- a) Main Distribution cabinet – For Automatic operation, it contains all the electrotechnical, electrical and electronic components related to the control logic circuits, and distributes primary power supply and control to the Hoist equipment.

Input supply for main Distribution cabinet is 3 phases, 415V, 50Hz(available in ship).

The vendor shall manufacture and supply a complete Main Cabinet, inclusive of all components, accessories, and subsystems necessary to ensure the smooth and reliable operation of the ALH in both automatic and manual modes for ascent and descent sequences. The Main Cabinet shall house all necessary power distribution, control, monitoring, protection, and interface components required to ensure continuous, reliable, and fail-safe operation. All components, coatings, materials, terminals, and fasteners shall be suitable for use in high-salinity, corrosive atmospheric environments. All supplied components shall be suitable for operation in a saline atmospheric environment and shall comply with relevant MIL-grade standards.

The following list indicates the typical items expected in the Main Distribution Cabinet. **However, it is the sole responsibility of the vendor to ensure that the cabinet is fully complete and meets all functional, environmental, and technical requirements as specified for the smooth, reliable and fault free operation of the ALH.**

- i. Main cabinet frame
- ii. indicators
- iii. fuses
- iv. capacitances
- v. inductances
- vi. filters
- vii. resistances
- viii. cables
- ix. main circuit breaker
- x. push buttons
- xi. PCB's / Electronic cards



- xii. safety switches
- xiii. transformers with watertight enclosure.
- xiv. Command logic circuits - for ascent, descent and stop.
- xv. Fasteners and gaskets
- xvi. Heat sinks
- xvii. Heat dissipation arrangement, if required.
- xviii. Earthing
- xix. Any other items required for smooth operation of the ALH.

The Cabinet shall be rated **minimum IP56**.

- b) Gear Drive assembly with Hand assembly – It constitutes Motor (shaft of motor shall have gear & coupling for clutch of Hand assembly and gear for engagement with gears of gear box), Synchro / Encoder, Panel mounted on Gear box casing to operate ALH for electrical connection between the main cabinet and presetting to the operation of the ALH. **Gear Box & Hand assembly defined in cl no 11.2.**

Major parts are:

- i. Motor having shaft with gear & coupling for Hand assembly and gear to be engaged with pinion of gear box.
 - ii. Operating panel,
 - iii. interconnecting cables
 - iv. Synchro system / Encoder system.
 - v. Tachometer, if applicable
 - vi. Any other items required for smooth operation of the ALH.
- 2) Proximity switch cable assemblies applicable for complete ALH.
- 3) Control panel for upper station. A **Control Panel** shall be provided at the **Upper Station** of the Ammunition Hoist. The panel shall include **all necessary controls, command switches, and indicator lights** required for the **presetting, operation, and monitoring** of the hoist system. All electronic items fitted inside the box shall be MIL grade. The control panel assembly shall be constructed in accordance with IP56 protection class.
- 4) Junction Box and cable harnessing for complete ALH including Light Indicators.

Junction Box is installed in the Lower Station and shall include **terminal boards** designed to securely terminate and interconnect cables running between the **Upper Station and Lower Station**, and cables associated with **interlock and safety-related signals**.

The Junction Box shall gather all **presetting information** for both **ascent** and **descent** of the ALH and sent this information via cables to light indicators.

Junction box and Light Indicators shall be IP56.



- 5) Integration & operation of Gear Drive assembly with Hand assembly & Main Distribution cabinet providing all interconnection for power supply & control as required for smooth operation of ALH.
- 6) Integration of electrical assemblies with fabricated structure for smooth operation of ALH.
- 7) Type & routine tests as specified in the specification and applicable standards.
- 8) Functional and operational testing of complete assembly of ALH and satisfactory operation of ALH.

All electronic/electrical items shall comply the MIL grade specifications.

Vendor to submit the main cabinet and complete electrical scope drawings along with all Bill of material for approval.

The vendor shall bear **full and unconditional responsibility** for ensuring total system completeness and compliance with all BHEL technical specifications, standards, and requirements. The vendor shall also be solely responsible for the smooth, safe, and reliable operation of the ALH under all specified operating conditions, including the integration of all subsystems, whether or not explicitly mentioned in the scope of supply.

11.2 Mechanical items of ALH – upper structure, gear box, Hand wheel assembly lower and intermediate station.

Major mechanical assemblies of ALH are:

The scope includes generation of BOM and components drgs based on general arrangement drgs furnished by BHEL, manufacturing & supply of following major mechanical assemblies of ALH but is not limited to

1) Lower Station

- Carrying Structure
- Lower Support
- Light Indicator
- chain tightening arrangement
- lever mechanism for Door operation
- Door and handles.
- Foundation & base plates for lower station
- Sensor connecting arrangement lower station
- Any other items required for smooth operation & completion of the ALH

2) Intermediate Duct

- Cartridges/ammunition guiding parts
- Cartridges/ammunition lifting chain
- lugs & levers intermediate station
- Any other items required for smooth operation & completion of the ALH

3) Upper Station

- Gear Box & Hand assembly.



- Carrying structure with the chain driving sprocket.
- Duct
- Cartridges/ammunition retaining levers the “Cartridges/ammunition in Upper Station” interlock.
- Levers mechanism & sprocket
- Lid mounting & assembly
- Safety hook
- Frame/Structure for motor, gear drive, hand control, synchro/tachometer/encoder.
- Any other items required for smooth operation & completion of the ALH

11.3 Installation, commissioning, testing and calibration:

- i. Complete assembly of ALH & its calibration.
- ii. Functional testing and calibration shall be performed by vendor at its works as per approved QAP.

NOTES:

- Approval of drawings by BHEL shall be obtained prior to commencement of manufacturing.
- Material, painting, protection coating requirement specified in GA drawings provided by BHEL to be used for selection/finalization of material of construction (equivalent or superior material to be used after approval from BHEL). However approved drawings (after award of order) shall be applied for manufacturing.
- Material test certificates for chemical, mechanical and other specified properties as per material specification from NABL approved lab to be provided.
- Inspection shall be as per approved QAP.
- Type test shall be performed as per approved quality plan for the first set.
- The vendor shall bear **full and unconditional responsibility** for ensuring total system completeness and compliance with all BHEL technical specifications, standards, and requirements. The vendor shall also be solely responsible for the smooth, safe, and reliable operation of the ALH under all specified operating conditions, including the integration of all subsystems, whether or not explicitly mentioned in the scope of supply.

**12 Power input specifications:****a) Input voltage**

Rated voltage	415V, 3 – Phase, Floating Neutral
Voltage range	±10%
Maximum Unbalance	2%
Maximum Modulation	2%
Transient State	±15% of rated voltage
Recovery Time	1 second
Voltage Spikes (peak)	2.5 KV
Individual Harmonic (Maximum)	3%
Total Harmonic Distortion (Maximum)	5%

Input frequency

Rated frequency	50 Hz
Frequency range	± 5%
Modulation	± 0.25%
Transients	± 3.75%
Load Tolerance	± 2.5%
Recovery Time	2 seconds

13 Mode of operation

The ALH shall work in following two mode of operation:

a) Automatic mode.

- Automatic transport of Cartridges/ammunition s/ammunition from the Ammunition storage Room to the Loading Site (ascent mode) after the Cartridges/ammunition are extracted from their containers.
- Automatic transport of Cartridges/ammunition from the Loading Site to the Ammunition storage Room (descent mode) for subsequent stowing into their containers.
- Automatic operation for the ALH is controlled by the following functional groups
 - a. Transmission and reduction gear drive box
 - b. Velocity and position control
 - c. Command logic
 - d. Motor supply and control

**b) Manual mode.**

Transport of Cartridges/ammunition ways by means of a mechanical device manually activated by a handwheel.

Manually operation of the Hoist is usually carried out for control and maintenance purposes, or in case of power failure/malfunctioning of electronic circuit/emergency situation.

Manually operation of the Hoist shall be designed such that, when the actuating force is removed, it will automatically stop and hold the load in the raised position.

Manual operation shall be in both the direction:

- a) Accent mode
- b) Descent mode

14 General Technical data sheet of ALH 3 steps (Indicative, Vendor to submit as per their own design)**Dimension**

Intermediate duct (refer drg)	
Single step length	1066.8mm
Upper Station	
Height	598 mm
Length	750mm
Width	752.5
Lower station	
Lower station - Dimensions of the Cartridges/ammunition introducing mouth	1150x226mm
Main Cabinet	
Height	1125mm
Length	510mm
Width (door close)	300mm



Width (door open)

785mm

Weight

Main Cabinet

150 kg approx..

Complete ALH

540 kg approx..

Operating data

Maximum Cartridges/ammunition rate per minute

60 nos.

Maximum feeding time available to operator (sec)

0.65 sec

Cartridges/ammunition support, total (3 steps configuration)

07 nos.

Cartridges/ammunition contained in the Hoist during operation

Lower Station
Intermediate Duct
Upper Station01
01
01

Cartridges/ammunition insertion position in the Lower Station

Vertical

Cartridges/ammunition arrival position in the Upper Station

Vertical

Cartridges/ammunition extraction or insertion position in the Upper Station

25 Degree

**Drive Motor (to be use as per design requirement to meet system requirement),
Indicative parameters as below:**

Motor type

DC

Rotation speed

3000rpm (or design requirement)

Power consumption at 3000 rpm

4500 W

Voltage at 3000 rpm

140 V

Input Current

36.2 A



Total Weight	35 kg
Protection	IP56

Power consumption

2-8 steps	4.5KW
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Cartridges/ammunition

Length	907.5mm
Weight	12.25kg

15 Protection and safety

The ALH circuits in the Main Cabinet and Control Panel are supplied with high and voltages dangerous to service personnel and operators.

Safety device of the interlock type are therefore provided for disconnecting power.

It should be noted that for maintenance operations the Hoist can be set to operation mode even with doors open by simply pulling out their microswitch actuators.

Suitable fuses shall be provided to protect the circuits of ALH.

The ALH shall be designed and built according to the naval standard requirements for high MTBF (Mean Time Between Failure) and 10w MTTR (Mean Time To Repair) compatible with equipment complexity. Maximum safety for the operators and equipment is provided by extensive use of electromagnetic interlocks.

Suitable Indicators shall be provided on the main cabinet, control panel, lower station.

Provision for Emergency stop shall be provided.

Suitable proximity switches shall be provided at all necessary locations.

Control panels will incorporate following protection:

- Voltage control: Over voltage and under voltage protection
- Frequency control: Over frequency and under frequency protection. Compensation for variations under varying ambient conditions, voltages and loads will be automatic.
- Short circuit and overload: The panels shall be designed so that it can withstand, without damage a short circuit at output terminals at any permissible input and output conditions.
- High temperature sensors.



- Indication lamps as applicable.

16 Environmental conditions

- a) ALH for marine applications and requirement is to achieve specified smooth functioning under tropical conditions.

SR.	CONDITION	NORMAL	REQUIRED
1.	Temperature		
	Ambient Air	5 to 45 °C	Up to 55 °C
	Engine Room	up to 45 °C	
	Sea Water	2 to 35 °C	
2.	Relative Humidity at 38 °C	Up to 100%	Up to 100%
3.	Time	Continuous	Up to 48Hrs.

- b) Limited Environmental Tests to be performed as per testing requirement cl no 16.
- c) All PCBs and Electronic modules fitted in the ALH to be subjected to **Environmental Stress Screening (ESS)** test as per **MIL STD 2164**.
- d) The equipment should:
- Withstand air contamination through salt, oil and other contaminants associated with the marine environment.
 - Be water drip proof as a minimum requirement.

17 Testing and inspection

Inspection and testing of ALH shall be performed as per BHEL and Indian Navy approved Quality Plans.

All the components and completely assembled equipment shall be tested as per the latest edition of standards.

All the specified type and routine tests shall be carried out to verify the rating and performance of the equipment.

Functional testing shall be carried out on complete assembly of ALH, as per approved procedure. Vendor has to submit the procedure for the approval.



Testing requirement

ALH	Reference document
Routine Test	
Dimensional and weight check	As per approved GA drg
Earth bonding test – at all points where equipment is earthed.	NES 629
Operation of relays and protection devices.	NES629
Self-generated Noise & vibration test	NES629
Operation of Push button	--
Checking for wiring routing, connections & assembly – visual	As per approved drg
Check for make & type of instruments / component- visual	As per approved drg and BOM.
Check auto/manual & electrical operation (Hand / auto control test)	As per approved drg
Check for LED indications	-
IR before and after HV test	-
Protection and logic test	-
Overspeed test	-
ESS for PCB's.	
Earth fault indications	Vendor standard
Excessive speed test	As per approved drg
Brake operative check and Electromagnetic Brake Efficiency using Dynamometric Spanner 0 to 20 Kgm	As per approved drg
Fault isolation test	As per approved drg
Wiring & connections check for complete assembly, every control panel	As per approved drg
Overload protection test	As per approved drg
Chain Alignment Check	As per drg
Main Circuit Breaker (4CB1) Check	
Proximity Switch Check	As per approved drg
Servo system test or any other option opted in design	As per approved drg
Type test	
Environmental Vibration Test (test no. 28)	JSS55555 By calculation, ratification will be certified by NSTL/any approved agency
High temperature test (as per test no 17)	JSS55555
Damp heat test (test no 10)	JSS55555
Drip proof test (test no. 11)	JSS55555
Mould growth test (test no. 21)	JSS55555



	Lab –samples only.
Bump test(test no.5)	JSS55555 By calculation,
Shock / impact test (test no. 24)	ratification will be certified by NSTL/any approved agency
EMC test	MIL-STD-461E/F, Apprd. Drg. & Spec.
Tilt / inclination	EED-Q-267, Apprd. Drg. & Spec.

Main Distribution cabinet & control panel

Routine test 1. Conformity with drawing as per approved drg. (dimensional & visual) 2. Dielectric voltage withstands voltage test for 1 minute as per NES511,629. 3. Insulation test as per NES511,629. 4. Multi-volt drop test as per NES511,629. 5. Operation test as per specification/ approved drg. 6. Checking for wiring routing, connections & assembly as per BHEL approved drg.- visual 7. Check for LED indications as per BHEL approved drg.- visual	As per approved documentation
Type test 1. IP56 test as per standard to ensure water tightness. (Effectiveness of enclosure test)	Compliance certificate from OEM as applicable.

Motor

Routine test 1. Dimensional check 2. No Load Test 3. RPM Test 4. Overload test 5. Open circuit test 6. Short circuit test 7. Load/brake test 8. Direction of Rotation	<u>EED-57-09, NES 629 and NES 632 and applicable standards.</u>
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9. No load, copper loss tests and efficiency. 10. Insulation resistance test (before and after HV)	
Type Test 1. Temperature rise test 2. IP56 test for water tightness.	<u>EED-57-09, NES 629 and NES 632</u> 1. Report 2. Compliance certificate from OEM as applicable.

Transformers as per MIL-T-27B	
Routine test 1. Measurement of winding resistance 2. Measurement of impedance. 3. Measurement of voltage ratio and check of phase displacement 4. Measurement of short-circuit impedance and load loss 5. Measurement of no-load loss and current 6. Measurement of IR 7. Efficiency test and voltage regulation test 8. HV withstand test 9. IR before and after HV test	As per IS/IEC/MIL as applicable.
Type Test 1. Temperature rise test 2. IP56 test for water tightness.	As per IS/IEC/MIL as applicable.

PCB'S / Electronic card
ESS tests 1. Thermal cycling stress test-ON and OFF condition 2. Random vibration stress test.

Note:

In case any item (list as mentioned below) supplied by OEM's having certification for similar tests, then above-mentioned tests are not required. OEM certificate to be submitted.

- 1) Motor
- 2) Transformer
- 3) PCB's / electronic card

The vendor shall be bound to ensure that the ALH successfully undergoes the type tests and routine tests specified herein, in addition to any other tests as required or specified by the Indian Navy and shipyard.

18 Product Support

- A) The supplier should undertake to ensure continuous and guaranteed product support for



period of 25 years from the date of commissioning as per BHEL requirement, by way of the following: -

- (ii) Supply of spare parts and materials.
 - (iii) Timely (with at-least 12 months' notice) offering of alternative solutions in the event of obsolescence of components/technologies, including those bought out or sub-contracted by the OEM.
 - (iv) Technical support as requested by IN.
 - (v) Life extension and in-service surveillance methodology/procedure and the equipment/spares required for the life extension.
 - (vi) Training as and when requested by Indian Navy.
 - (vii) Continuous upgradation program of both hardware and software and life cycle support for software maintenance.
 - (viii) Continuous supply of amendments to the documentation.
 - (ix) Software support in the event of detection of bugs/malfunctioning.
 - (x) Upgrading of System. The manufacturer shall make available all future upgrades to the system software and hardware. As far as possible, such upgrades should be possible, with minimal change of system configuration. The OEM should also undertake upgradation of the system and modifications to the system software should it be necessary to interface additional/alternate systems at a later date.
- B) Any hardware or software latent defect observed on the equipment which is attributed to the design deficiency, then the OEM should be liable to rectify the same without any additional cost.
- C) Firm to submit configuration control document (CCD) for the system, clearly specifying the hardware and software configuration of system units along with the system documentation.
- D) Include information w.r.t special equipment for onboard and shore-based repairs, spares and services of specialists.
- E) Maintenance Envelope drawings are to be produced in the technical manual.

19 Installation and Commissioning

Complete installation, testing, and commissioning on board Indian Naval vessels shall be entirely within the scope of the supplier and shall be carried out on BHEL's call basis. The vendor shall be fully responsible for conducting all necessary tests, as required by the shipyard and the Indian Navy, during commissioning of the ALH. Spares required during this activity if any, shall be arranged/supplied by the vendor.

20 Acceptance / Rejection

BHEL reserves the right under conditions of purchase to reject any consignment, which does not confirm to the specifications.

21 Technical Documentation

Following documents to be supplied with ALH along with softcopy in CD:



DOCUMENT	FOR BHEL	FOR CUSTOMER
a) Technical and Operating Instruction Manual	03	02
b) On-Board Maintenance Manual	03	02
c) Field and Depot Maintenance Manual	03	02
d) Installation and Testing Manual	03	02
e) Installation and As fitted Drawings	03	02
f) Certified Test Reports	05	N.A.
g) Soft copy of above in CD	01	01

22 Packaging/Preservation/Transportation/Special provisions for storage.

22.1 PACKING:

i. The items supplied shall be suitably packed for storage in tropical conditions and to avoid damages during transport. The following details shall be marked on them for easy identification:

- Purchase order number
- Ship No.
- Item Description
- Model number
- Material Code etc.
- Consignee address
- Net weight
- Gross weight

ii. Each consignment shall have a packing list which clearly indicates the contents of the corresponding consignment with the part no. and quantities.

22.2 PRESERVATION: As per commercial terms and conditions

22.3 Packing list to be kept inside the case as well as secured & pasted outside, duly protected by plastic sheet. Items not listed in the packing list would be deemed as not supplied. In case of pipes/conduits/cables, size wise bundles should be made for easy handling and identification for proper storage.

22.4 The supplier shall comply the following:

- The packing material should be ecofriendly.
- The supplier should follow the statutory requirements of the products offered.



- Products supplied shall be nontoxic and harmless to health. In case of toxic material, material safety data sheet may be furnished along with the material.

SELLER should not use Restricted Hazardous banned substance (RHBs). If any such substance is detected, the supplier/Vendor should replace the RHBs and should bear the cost incurred for disposal of the RHBs.

23 Approval of drawings

BHEL and BHEL customer shall approve minimum the following drawing but not limited to,

- 1) Main cabinet General Arrangement drg
- 2) Control Panel General Arrangement drg (fitted on upper station)
- 3) Upper station General Arrangement drg
- 4) Lower station General Arrangement drg
- 5) Intermediate duct General Arrangement drg

The sole responsibility is with vendor to ensure the completeness of the system for smooth and safe operation.

24 Applicable Documents and standards

The ALH to be manufactured and supplied to meet the requirements specified in this specification.

The documents and standards applicable are listed at Appendix-A for reference only.

25 Project Monitoring Schedule

All activities design, manufacturing, testing inspection supply and commissioning shall be completed as per the delivery schedule mentioned in the PO.

Vendor to provide project schedule along with bid.

26 Documentation to be furnished along with the Bid

Bidder shall furnish following drawings/ documents/ information for ALH and its associated accessories along with bid.

- Technical data sheets of major items like cabinet, control panel, motor, transformers and complete ALH as applicable.
- Submission of General Arrangement drawings along with material of construction of complete ALH, upper station, intermediate duct and lower station.
- Clause wise acceptance of this technical specification.
- Design and control philosophy along with flow chart diagram.

27 Documentation to be furnished after award of contract



The successful bidder shall furnish the following drawings, documents, and information for ALH and its associated accessories after award of the contract:

- Detail dimensional drawings of various equipment, components / sub-assemblies.
- Interconnection block schematics diagram, flow chart and logic control diagram.
- GA drawings of complete ALH, main cabinet, upper station, lower station and intermediate duct along with material of construction.
- Interconnection & wiring schematics between main cabinet, upper station, lower station and intermediate duct.
- Flow chart for automatic control and manual control operations.
- Safety provisions for smooth operation of ALH.
- Weight details of major assemblies: main cabinet, upper station, upper station control panel, lower station, and intermediate duct.
- Quality Assurance Plan (QAP) & Inspection and Test Procedure.
- List of on-board spares (OBS) for 2 years and Base & Depot spares (BDS) for 5 years.
- Installation, Commissioning, and Operation & Maintenance (O&M) manuals with illustrated part list.

Note : The vendor shall bear full and unconditional responsibility for ensuring total system completeness and compliance with all BHEL technical specifications, standards, and requirements. The vendor shall also be solely responsible for the smooth, safe, and reliable operation of the ALH under all specified operating conditions, including the integration of all subsystems, whether or not explicitly mentioned in the scope of supply.

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Annexure A – as per existing ALH for reference

1) For major cables


- Cable W001 – ship mains to cabinet (voltage and frequency mentioned for in-service imported ALH)
The cable is a 3-pole, suitable for 415V-50 Hz, 3-phase, voltage and power consumption of 8 KWA. The cable is provided with a connector type CA06EA-22-2SF80-A95, which is connected to J1.
- Cable W002 provides power for the control panel, as per MIL grade.
- Cable W003 is connected to the motor, as per MIL grade.
- Cable W004 provides power for the Electromagnetic Brake, as per MIL grade.
- Cable W005 supplies the stator of the control transformer 2CT1 and picks up the error signal from the control transformer rotor, as per MIL grade.
- Cable W006 picks up the signal generated by the tachometer to produce the servo-system velocity feedback, as per MIL grade.
- Cable W007 transmits the presetting information to the Lower Station, as per MIL grade.
- cable W008 - The Junction Box gathers presetting information for ascent and descent which are sent by means of cable W008, to the Light indicator, as per MIL grade.
- Cable W009, W011 and W012 gather information relating to the condition of the Upper Station interlocks, as per MIL grade.

2) General Standard (in existing ALH)

Soldering techniques	MIL-S-440
Inspection standards	ANS-C99.1-1966
Wiring materials	QQ-W-343, type S
Connectors, contacts, crimping	MIL-T-22520 Class I
Connections inspecting standard	MIL-HDBK-217B-2
Connector and cables general specification	MIL-C-7192 (Navy)
Multipolar connectors general requirements	MIL-C-38300, Supp. 1A
Environmental requirements	MIL-E-16400F
Bonding requirements	MIL-STD-1310C

3) All electrical items like resistors, capacitors, inductances, wires etc. shall be as per MIL grade.

Below is the list of existing ALH for reference.

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DPE-DABG	TECHNICAL SPECIFICATIONS	Dated: 17/10/2025 Page: 49
<div> <ul style="list-style-type: none"> • Inductance - MIL-T-27-B • Wires - MIL-W-16878 • Seal -o ring - MIL-P-25732 • TERMINAL, INSULATED BY NYLON - MIL-T-928 • Fuse holder - MIL-F-19-207B • Fuse -MIL-F-15160 • Transformer - NIFE SE095C • CLAMP, CABLE RETAINING - NYLON MIL-M20693 • RESISTOR - MIL-R-39007B • HOSE - MIL C-6136 T • PLUG, STRAIGHT, ASSY - MIL-C-5015 D <p>4) The transformer consists of a watertight metallic enclosure in compliance with the MIL-T-27B Standards for continuous duty with air cooling and electrostatic screen between primary and secondary windings</p> <p>5) Reduction Gear Drive Box fill with MIL-G-6086B oil.</p> <p>6) Lubricate the chain with grease type MIL-G-21164.</p> <p>7) Primer - MIL-P-8585, MIL-C-15328</p> <p>8) Spray Solvent- MIL-C-16173D</p> <p>9) Install the Main Cabinet and connect it to ground according to MIL-STD-1310C.</p> <p>10) Standards or commercial data and manufacturers description are in accordance with MIL-STD-12C.</p> <p>11) Available drawings of Existing ALH</p> <div style="margin-left: 40px;"> <p>11.1) Drawings for GENRAL ASLY 3STEP- 07820028208 REV00 (REFPN102600208REV02)</p> <p>11.2) Drawings for upper station:</p> <div style="margin-left: 20px;"> <p>a) Upper Station Asly - 07820028105 REV00 (REF PN102600105REV00)</p> <p>b) Upper station GA drg -07820128002 REV00 (REF PN102601002REV01)</p> </div> </div> </div>		



- c) Upper station structure: 07820128100 REV00 (REF PN102601100REV11)
- d) control panel
- cover: 07821128101REV00(REF PN102611101REV00)
 - BOX BODY, COMPLETE – 37821128011 rev00 (ref pn102611011 rev01)
 - Box body – 07821128100 rev00 (ref pn102611100 rev00)
 - Cover subasly – 07821128012 REV00 (REFPN102611012rev00)
 - Junction box, upper station asly – 07821128004 rev00 (ref pn102611004 rev01) for ref.

11.3) Drawings for lower station:

- a) Closure door asly – 07820428005 rev00
- b) Structure – 07820428100 rev00
- c) Closure door – 07820428150 rev00
- d) Support structure – 07820528100 rev00
- e) Electrical installation asly -07821228003 rev00 (for ref purpose only)
- f) Electrical junction box body – 27821228009 rev00

11.4) Drawings for intermediate station:

- a) Chain asly - 17820328030 REV00
- b) CHAIN ROLLER - INTERMEDIATE ASLY- 07820328108REV00
- c) CHAIN, ROLLER(3LINKS)- INTERMEDIATE ASLY - 47820328112 REV00
- d) INTERMEDIATE ASLY - 07820328000 REV00 (REF PN102603000REV02)
- e) DUCT – 17820328104(ref pn102603104rev04)

11.5) Drawings for main cabinet:

- a) MAIN CABINET ASSY – 17821428003 rev00 (ref PN102614003 REV00) (For ref)
- b) COVER FRONT ASLY - CABINET – 17821428010 REV00
- c) HANDLE- CABINET -17821912011 rev00
- d) COVER REMOVALBLE - CABINET -27821428100 REV00
- e) Frame : BHEL DRG NO. 07821428170 REV00(REF PN102614170REV05)
- f) COVER FRONT -CABINET – 17821428130 rev00

12) Hoist interconnecting cables for reference



Hoist Connecting Cables - Summary

CABLE	FROM			TO			FUNCTION
	CONN.	UNIT	REF DES.	CONN.	UNIT	REF DES.	
W001		Main Power Distribution Panel 440V 60 Hz		J1	Main Cabinet	2A1	Hoist Power Supply, 440V 60 Hz
W002	J3	Main Cabinet	2A1	J4	Control Panel	2JB1	Power Supply voltage for: auxiliary circuits, controls, interlocks, indicators
W003	J2	Main Cabinet	2A1	J13	Motor Drive	2M1	Electrical motor drive power supply
W004		Control Panel	2JB1	J12	Electromagnetic Brake	2L1	Magnetic brake 28V voltage power supply
W005		Control Panel	2JB1	J11	Synchro Control Transformer	2CT1	Synchro Control Transformer signal
W006		Control Panel	2JB1	J10	Tachometer	2TH1	Feedback Tachometer Signal
W007	J5	Control Box	2JB1		Junction Box	1JB2	Interlocks and Indicators of Lower Station
W008		Light Indicator Panel	1JB1		Junction Box	1JB2	Indicators of Lower Station (Light Indicator Panel)
W009	J9	Control Panel	2JB1		Interlock, Cartridge in the Upper Station (descent)	4A1	Interlock 4A1, Power supply and control

CABLE	FROM			TO			FUNCTION
	CONN.	UNIT	REF DES.	CONN.	UNIT	REF DES.	
W011	J7	Control Box	2JB1		Interlock, Cartridge in the Upper Station (ascent)	4A3	Interlock 4A3, power supply and control
W012	J6	Control Box	2JB1		Interlock, Upper Station Cover Open	4A4	Interlock 4A4, power supply and control
W013		Junction Box	1JB2		Interlock, Lower Station Cover Open	1A1	Interlock 1A1 power supply and control
W014		Junction Box	1JB2		Interlock, Cartridge retaining Shutters closed	1A2	Interlock 1A2, power supply and control

COMMERCIAL & QUALITY CHECKLIST		
SL. NO.	TERMS & CONDITION	VENDOR's CONFIRMATION /REMARKS / REPLY
TENDER DETAILS		
1	COMPANY / FIRM NAME OF BIDDER	
2	GEM BID NO	
TECHNICAL REQUIREMENTS		
3	SCOPE OF WORK/SUPPLY SHALL BE AS PER TECHNICAL SPECIFICATION OF ALH DPE/TS/ALH/3STEP REV01	
4	WARRANTEE SHALL BE 24 MONTHS FROM THE DATE OF RECEIPT OF MATERIAL	
5	VENDOR TO ACCEPT THE TECHNICAL SPECIFICATION OF ALH DPE/TS/ALH/3STEP REV01 AND SUBMIT THE DULY SIGNED AND STAMPED COPY OF EACH PAGE ALONGWITH THE BID	
	VENDOR TO SUBMIT DULY SIGNED AND STAMPED COPY OF PRE-QUALIFYING CONDITIONS (HW/DPE/PQR2025-26-094 REV00).	
7	VENDOR TO SUBMIT THE PROJECT MOINTORING SCHEDULE AS PER CLAUSE 25 OF TECHNICAL SPECIFICATION OF ALH DPE/TS/ALH/3STEP REV01	
8	VENDOR TO SUBMIT THE DOCUMENTS ALONG WITH THE BID AS PER CLAUSE 26 OF TECHNICAL SPECIFICATION OF ALH DPE/TS/ALH/3STEP REV01.	
9	VENDOR TO SUBMIT DULY SIGNED AND STAMPED COPY OF EACH PAGE OF TECHNICAL SPECIFICATIONS	
QUALITY REQUIREMENTS		
10	VENDORS TO CONFIRM FOR INSPECTION BY BHEL/BHEL TPIA AND INDIAN NAVY AS PER BHEL AND INDIAN NAVY APPROVED QUALITY PLAN	
11	VENDOR TO SUBMIT DETAILED QULAITY PLAN COVERING RAW MATERIAL CHECKS, IN PROCESS AND FINAL STAGE CHECKS FOR BHEL AND INDIAN NAVY APPROVAL AS PER ATTACHED BHEL FORMAT IN-LINE WITH ENQUIRY DRAWING AND SPECIFICATION	
12	IN CASE OF ORDERING, VENDORS TO FOLLOW INSPECTION TERMS AND CONDITION AS PER APPROVED QUALITY PLAN ONLY REPORTS	
COMMERICAL REMARKS		
13	VENDOR TO SUBMIT MAKE IN INDIA CERTIFICATE AS PER ATTACHED FORMAT ONLY	
14	BREACH OF CONTRACT CLAUSE: VENDOR TO AGREE AS PER CLAUSE NO 14 OF ATC	
15	CONFLICT OF INTEREST AMONG BIDDERS/ AGENTS: VENDOR TO AGREE AS PER CLAUSE NO 32 OF ATC	
16	ACTION AGAINST BIDDERS / VENDOR / SUPPLIER / CONTRACTOR IN CASE OF DEFAULT SHALL BE AS PER CLAUSE 27 OF ATC	
17	EMD SUBMITTED (YES / NO)	
18	VENDOR TO CONFIM TO SUBMIT PERFORMANCE SECURITY AS PER FORMAT GIVEN IN THE ENQUIRY & AS PER CLAUSE 13 OF ATC	
19	VENDOR TO SUBMIT INTEGRITY PACT DULY FILLED AS PER FORAMT GIVEN IN THE ENQUIRY	
20	Vendor to confirm regarding Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017 as below: I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I certify that OUR COMPANY / FIRM is not from such a country/ has been registered with the Competent Authority (attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT).	
21	Vendor to confirm the following: We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.	
22	Vendor to confirm the following: We confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions	
23	REST TERMS AND CONDITIONS SHALL BE as per GEM (Latest Version- applicable at the time of issuance of enquiry) and Enquiry ATC (ADDITIONAL TERMS & CONDITIONS)	

VENDOR'S SIGN & STAMP

MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN					TO BE FILLED BY BHEL		TO BE FILLED BY BHEL				
BHEL	VENDOR'S NAME	ITEM			QP NO.									
				REV										
		DRG. NO.	AS PER PO											
		SPEC.	AS PER PO											
		REV				Page 1 of 1								
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS		CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY			REMARKS
											M	B	N	
1	2	3		4	5	6	7	8	9	D	10			11

MANUFACTURER/SUBCONTRACTOR		LEGEND:	FOR CUSTOMER USE	APPROVED BY
		! RECORDS IDENTIFIED WITH ‘TICK’ SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.		
		M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER INDICATE ‘P’ PERFORM ‘W’ WITNESS AND ‘V’ VERIFICATION ALL ‘W’ INDICATED IN COLUMN ‘N’ SHALL BE ‘CHP’ OF CUSTOMER		

Buyer Added Bid Specific Additional Terms & Conditions (ATC)	
1.	PRE QUALIFICATION CRITERIA: AS PER ENCLOSED PQR CHECKLIST
2.	SCOPE OF SUPPLY: AS PER ANNEXURE - A
3.	PRICE BASIS: Price in INR should be quoted for FOR BHEL SITE BASIS
4.	<p>TAXES & DUTIES:</p> <p>4.1 The Supplier/Vendor shall pay all (save the specific exclusions as enumerated in this clause) taxes, fees, license, charges, deposits, duties, tools, royalty, commissions, other charges, etc. which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes/duties, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit along with the applicable overheads @5% and interest on the total value (i. e. amount paid by BHEL + overhead)</p> <p>However, provisions regarding GST on output supply (goods/service) and TDS/TCS as per Income Tax Act shall be as per following clauses.</p> <p>4.2 GST (Goods and Services Tax)</p> <p>4.2.1 Reimbursement of GST is subject to compliance of following terms and conditions. BHEL shall have the right to deny payment of GST and to recover any loss to BHEL on account of tax, interest, penalty etc. for non-compliance of any of the following condition.</p> <p>4.2.2 The admissibility of GST, taxes and duties referred in this chapter or elsewhere in the contract shall be limited to direct transactions between BHEL & its Supplier/Vendor. BHEL shall not consider GST on any transaction other than the direct transaction between BHEL & its Supplier/Vendor.</p> <p>4.2.3 Supplier/Vendor shall obtain prior written consent of BHEL before billing the amount towards such taxes. Where the GST laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL shall have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Supplier/Vendor.</p> <p>4.2.4 Supplier/Vendor has to submit GST registration certificate of the concerned state. Supplier/Vendor also needs to ensure that the submitted GST registration certificate should be in active status during the entire contract period.</p> <p>4.2.5 Supplier/Vendor has to issue Invoice/Debit Note/Credit Note indicating HSN/SAC code, Description, Value, Rate, applicable tax and other particulars in compliance with the provisions of relevant GST Act and Rules made thereunder.</p> <p>4.2.6 Supplier/Vendor has to submit GST compliant invoice within the due date of invoice as per GST Law. In case of delay, BHEL reserves the right of denial of GST payment if there occurs any hardship to BHEL in claiming the input thereof. In case of goods, Supplier/Vendor has to provide scan copy of invoice & GR/LR/RR to BHEL before movement of goods starts to enable BHEL to meet its GST related compliances. Special care should be taken in case of month end transactions.</p>

4.2.7 Supplier/Vendor has to ensure that invoice in respect of such services which have been provided/completed on or before end of the month should not bear the date later than last working day of the month in which services are performed.

4.2.8 Subject to other provisions of the contract, GST amount claimed in the invoice shall be released on fulfilment of all the following conditions by the Supplier/Vendor: -

- a) Supply of goods and/or services have been received by BHEL.
- b) Original Tax Invoice has been submitted to BHEL.
- c) Supplier/Vendor has submitted all the documents required for processing of bill as per contract/ purchase order/ work order.
- d) In cases where e-invoicing provision is applicable, Supplier/Vendor is required to submit invoice in compliance with e-invoicing provisions of GST Act and Rules made thereunder.
- e) Supplier/Vendor has filed all the relevant GST return (e.g. GSTR-1, GSTR-3B, etc.) pertaining to the invoice submitted and submit the proof of such return along with immediate subsequent invoice. In case of final invoice/ bill, contractor has to submit proof of such return within fifteen days from the due date of relevant return.
- f) Respective invoice has appeared in BHEL's GSTR - 2A for the month corresponding to the month of invoice and in GSTR-2B of the month in which such invoices has been reported by the contractor along with status of ITC availability as "YES" in GSTR-2B. Alternatively, BG of appropriate value may be furnished which shall be valid at least one month beyond the due date of confirmation of relevant payment of GST on GSTN portal or sufficient security is available to adjust the financial impact in case of any default by the Supplier/Vendor.
- g) Supplier/Vendor has to submit an undertaking confirming the payment of all due GST in respect of invoices pertaining to BHEL.

4.2.9 Any financial loss arises to BHEL on account of failure or delay in submission of any document as per contract/purchase order/work order at the time of submission of Tax invoice to BHEL, shall be deducted from Supplier/Vendor's bill or otherwise as deemed fit.

4.2.10 TDS as applicable under GST law shall be deducted from Supplier/Vendor's bill.

4.2.11 Supplier/Vendor shall comply with the provisions of e-way bill wherever applicable. Further wherever provisions of GST Act permits, all the e-way bills, road permits etc. required for transportation of goods needs to be arranged by the contractor.

4.2.12 Supplier/Vendor shall be solely responsible for discharging his GST liability according to the provisions of GST Law and BHEL will not entertain any claim of GST/interest/penalty or any other liability on account of failure of Supplier/Vendor in complying the provisions of GST Law or discharging the GST liability in a manner laid down thereunder.

4.2.13 In case declaration of any invoice is delayed by the vendor in his GST return or any invoice is subsequently amended/alterd/deleted on GSTN portal which results in any adverse financial implication on BHEL, the financial impact thereof including interest/penalty shall be recovered from the Supplier/Vendor's due payment.

4.2.14 Any denial of input credit to BHEL or arising of any tax liability on BHEL due to noncompliance of GST Law by the Supplier/Vendor in any manner, will be recovered along with liability on account of interest and penalty (if any) from the payments due to the Supplier/Vendor.

	<p>4.2.15 In the event of any ambiguity in GST law with respect to availability of input credit of GST charged on the invoice raised by the contractor or with respect to any other matter having impact on BHEL, BHEL's decision shall be final and binding on the Supplier/Vendor.</p> <p>4.2.16 Variation in Taxes & Duties: Any upward variation in GST shall be considered for reimbursement provided supply of goods and services are made within schedule date stipulated in the contract or approved extended schedule for the reason solely attributable to BHEL. However downward variation shall be subject to adjustment as per actual GST applicability. In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its Supplier/Vendor only and within the contractual delivery period only.</p> <p>a) In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer but before opening of the price Bid, the Bidder/ Supplier/Vendor must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of price bid. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.</p> <p>4.3 Income Tax: TDS/TCS as applicable under Income Tax Act, 1961 or rules made thereunder shall be deducted/collected from Supplier/Vendor's bill.</p>
5.	MATERIAL DISPATCH CLEARANCE CERTIFICATE: AS PER ENQUIRY
6.	INSPECTION / INSPECTION & TESTING AT SUPPLIERS WORKS: AS PER QAP
7.	DELIVERY PERIOD: AS PER ANNEXURE - A
8.	TRANSIT INSURANCE: Transit Insurance of material is in Supplier/Vendor's scope. Supplier/Vendor shall insure the material at their cost for transportation.
9.	<p>a) PAYMENT TERMS:</p> <p>i. FOR NON-MSME BIDDERS: 100% PAYMENT ALONG WITH TAXES, FREIGHT & INSURANCE WILL BE MADE AFTER RECEIPT AND ACCEPTANCE OF MATERIAL AND WITHIN 90 DAYS FROM THE DATE OF RECEIPT SUBJECT TO SUBMISSION OF NON-DISCREPANT DOCUMENTS. (MSME MEANS MICRO, SMALL & MEDIUM ENTERPRISES) (THIS IS IN SUPERSESSION OF 10 DAYS' TIME AS PROVIDED IN CLAUSE 12 OF GEM GTC).</p> <p>ii. FOR MSE BIDDER: FOR MSES (COVERED UNDER MSME ACT), 100% PAYMENT ALONG WITH TAXES, FREIGHT & INSURANCE WILL BE MADE AFTER RECEIPT AND ACCEPTANCE OF MATERIAL AND WITHIN 45 DAYS FROM THE DATE OF RECEIPT SUBJECT TO SUBMISSION OF NON-DISCREPANT DOCUMENTS OR AS PRESCRIBED IN THE RELEVANT ACT. BENEFITS OF MSE (SUCH AS EMD WAIVER, TENDER FEE EXEMPTION, PRICE PREFERENCE, PAYMENT PREFERENCE ETC.) WILL BE GIVEN ONLY TO THOSE MSE VENDORS WHO ARE MANUFACTURERS OF OFFERED ITEMS AGAINST THE NIT. NO MSE BENEFITS SHALL BE PROVIDED TO AGENTS / STOCKISTS /DEALERS / TRADERS ETC. FOR THE ITEMS OFFERED BUT NOT MANUFACTURED BY THEMSELVES."</p> <p>iii. FOR MEDIUM ENTERPRISES: 100% PAYMENT ALONG WITH TAXES, FREIGHT & INSURANCE WILL BE MADE AFTER RECEIPT AND ACCEPTANCE OF MATERIAL AND WITHIN 60 DAYS FROM THE DATE OF RECEIPT SUBJECT TO SUBMISSION OF NON-DISCREPANT DOCUMENTS AS PER TERMS AND CONDITIONS OF PURCHASE ORDER.</p>

	<p>iv. PLEASE NOTE THAT VENDOR TO ADHERE TO THE PAYMENT TERMS AS PER ABOVE. NO DEVIATION IN PAYMENT TERMS SHALL BE ACCEPTED. VENDOR TO SUBMIT THEIR OFFER ACCORDINGLY.</p> <p>v. However, GST amount shall be reimbursed in line with compliance to Cl. No. 4 (Taxes & Duties) above.</p> <p>vi. IT MAY BE NOTED THAT STANDARD PAYMENT TIMELINE/TERMS AS MENTIONED/PRINTED IN THE GEM BID SHALL NOT BE APPLICABLE. PAYMENT TERMS SHALL BE AS PER ABOVE ONLY.</p> <p>b) NO INTEREST PAYABLE TO CONTRACTOR: No interest shall be payable on the security deposit or any other money due to the contractor”.</p>
10.	<p><u>DOCUMENTS REQUIRED ALONG WITH DISPATCH OF MATERIAL/BILLING DOCUMENTS:</u></p> <p>The following documents are required to be sent with material dispatch/Billing Documents:</p> <ul style="list-style-type: none"> • Original Tax Invoice (As per Cl. No. 4 above). • Copy of LR. • GST COMPLIANCE CERTIFICATE • Warranty / Guarantee Certificate. • Certificate of compliance • Test certificates • other documents as per enquiry/PO terms
11.	<p><u>BANK DETAILS FOR EMD & PERFORMANCE SECURITY SUBMISSION:</u></p> <p>For Electronic Fund Transfer the details are as below:</p> <p>a) Name of the Beneficiary: BHEL HEEP HARIDWAR</p> <p>b) Bank Particulars:</p> <p style="padding-left: 20px;">Name of the Company - BHARAT HEAVY ELECTRICALS LTD.</p> <p style="padding-left: 20px;">Address of the company - BHEL HEEP HARIDWAR</p> <p style="padding-left: 20px;">Name of the bank - STATE BANK OF INDIA</p> <p style="padding-left: 20px;">Bank branch - SECTOR-5 RANIPUR HARIDWAR BRANCH</p> <p style="padding-left: 20px;">City - HARIDWAR</p> <p style="padding-left: 20px;">Branch code - 000586</p> <p style="padding-left: 20px;">Account Number – 1 0 6 6 7 9 9 5 4 5 8</p> <p style="padding-left: 20px;">IFSC code - SBIN0000586</p>
12.	<p><u>EMD:</u> Applicable – EMD of Rs 40,00000.00 (Forty Lakhs)/- to be submitted.</p> <p>12.1 Every tender must be accompanied by the prescribed amount of Earnest Money Deposit (EMD) in the manner described herein.</p> <ol style="list-style-type: none"> i. EMD shall be furnished before tender opening / along with the offer in full as per the amount indicated in the NIT. ii. The EMD is to be paid only in the following forms (For EMD amount please refer bid): <ol style="list-style-type: none"> a) Electronic Fund Transfer credited in BHEL account (before tender opening). b) Banker's cheque/ Pay order/ Demand draft, in favour of 'Bharat Heavy Electricals Limited' and payable at Regional HQ issuing the tender (along with offer). c) Fixed Deposit Receipt (FDR) issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL marking lien in favour of BHEL) (along with offer). The Fixed Deposit in such cases shall be valid for a period of 45 (forty-five) days beyond the final bid validity period.

	<p>d) Bank Guarantee from any of the Scheduled Banks. In such cases shall be valid for a period of 45 (forty-five) days beyond the final bid validity period.</p> <p>e) Insurance Surety Bonds.</p> <p>f) In case the EMD is more than Rs. Two lakh and in case of foreign bidders, it may be in the form of a bank guarantee (in equivalent Foreign Exchange amount, in case of foreign bidders) issued/ confirmed from any of the scheduled commercial bank in India in the prescribed format. The EMD shall remain valid for a period of 45 (forty five) days beyond the final bid validity period.</p> <p>iii. No other form of EMD remittance shall be acceptable to BHEL.</p> <p>12.2 EMD by the Bidder will be forfeited as per NIT conditions, if:</p> <p>i. The bidder withdraws or amends its/his tender or impairs or derogates from the tender in any respect within the period of validity of the tender or if the successful bidder fails to furnish the required performance security within the specified period mentioned in the Tender.</p> <p>ii. EMD by the Bidder shall be withheld in case any action on the tenderer is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/ contractors" and shall be forfeited in case of suspension</p> <p>12.3 Subject to Clause 12.2 above, EMD of the unsuccessful bidders shall be returned at the earliest after expiry of the final bid validity period and latest by the 30th day after the award of the contract. However, in case of two packet or two stage bidding, EMD of unsuccessful bidders during first stage i.e., technical evaluation etc. shall be returned within 30 days of declaration of result of first stage i.e. technical evaluation etc.</p> <p>12.4 EMD of successful Bidder shall be refunded on conclusion of the order/ receipt of a performance security as mentioned in NIT.</p> <p>12.5 EMD shall not carry any interest.</p> <p>Micro and Small Enterprises (MSEs) or Startups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT) shall be exempted from payment of EMD.</p>
13.	<p><u>PERFORMANCE SECURITY:</u> Applicable.</p> <p>13.1 Successful bidder awarded the contract should deposit 5% of the contract value as performance security towards fulfilment of all contractual obligations, including warranty obligations.</p> <p>13.2 Performance Security is to be furnished within 14 days after issuance of Contract/PO and should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the Supplier/Vendor, including warranty obligations.</p> <p>13.3 Modes of deposit:</p> <p>a) Performance security may be furnished in the following forms:</p> <p>i. Local cheques of Scheduled Banks (subject to realization)/ Pay Order/Demand Draft/ Electronic Fund Transfer in favour of 'Bharat Heavy Electricals Limited' and payable at Regional HQ</p> <p>ii. Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee should be in the prescribed format of BHEL.</p>

	<p>iii. Fixed Deposit Receipt (FDR) issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL).</p> <p>iv. Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL). v. Insurance Surety Bond.</p> <p>Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.</p> <p>b) In case of GTE tenders, the performance security should be in the same currency as the contract and must conform to Uniform Rules for Demand Guarantees (URDG 758) - an international convention regulating international securities.</p> <p>13.4 The performance security will be forfeited and credited to BHEL's account in the event of a breach of contract by the Supplier/Vendor as provided herein or elsewhere in the Contract/PO.</p> <p>13.5 Performance Security shall be refunded to the Supplier/Vendor without interest, after the Supplier/Vendor duly performs and completes the contract in all respects but not later than 60(sixty) days of completion of all such obligations including the warranty under the contract.</p> <p>13.6 The Performance Security shall not carry any interest.</p> <p>13.7 There is no exemption of Performance security deposit submission for MSE Vendors.</p>
<p>14.</p>	<p><u>BREACH OF CONTRACT, REMEDIES AND TERMINATION:</u></p> <p>14.1 The following shall amount to breach of contract:</p> <ol style="list-style-type: none"> I. Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time. II. The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period. III. The Supplier/Vendor delivers equipment/ material not of the contracted quality. IV. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause. V. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract. VI. Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL. VII. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor. VIII. Any other reason(s) attributable to Vendor towards failure of performance of contract. In case of breach of contract, BHEL shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor.

- IX. Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise.
- X. Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall business of BHEL/ Owner.

Note- Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days.

In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract.

14.2 Remedies in case of Breach of Contract.

- i Wherein the period as stipulated in the notice issued under clause 14.1 has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to contractor.
- ii Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of encasing the security instruments like performance bank guarantee etc. available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued.
- iii wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be encashed. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners:
- iv In case the amount recovered under sub clause (a) above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor.
- v) If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount:
 - a) from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract.
 - b) If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered

	<p>from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD.</p> <p>vi) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor.</p> <p>vii) It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages.</p> <p>viii) In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.</p> <p>Note:</p> <ol style="list-style-type: none"> 1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting contractor shall mean and include: <ol style="list-style-type: none"> (a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor. (b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor. <p><u>LD against delay in executed supply in case of Termination of Contract:</u></p> <p>LD against delay in executed supply shall be calculated in line with LD clause no. 18.0 below, for the delay attributable to Supplier/Vendor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of supply till termination of contract.</p> <p>Method for calculation of "LD against delay in executed supply in case of termination of contract" is given below.</p> <ol style="list-style-type: none"> i. Let the time period from scheduled date of start of supply till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1 ii. Let the value of executed supply till the time of termination of contract = X iii. Let the Total Executable Value of supply for which inputs/fronts were made available to Supplier/Vendor and were planned for execution till termination of contract = Y iv. Delay in executed supply attributable to Supplier/Vendor i.e. $T2 = [1 - (X/Y)] \times T1$ v. LD shall be calculated in line with LD clause (clause 18.0) of the Contract for the delay attributable to Supplier/Vendor taking "X" as Contract Value and "T2" as period of delay attributable to Supplier/Vendor. 				
15.	<p><u>BILL TO/ SHIP TO ADDRESS:</u></p> <table border="1" data-bbox="282 1808 1500 1967"> <thead> <tr> <th data-bbox="282 1808 889 1850"><u>Shipping Address as below:</u></th><th data-bbox="889 1808 1500 1850"><u>Billing address as below:</u></th></tr> </thead> <tbody> <tr> <td data-bbox="282 1850 889 1967">GENERAL MANAGER (MATERIALS) COCHIN SHIPYARD LIMITED, COCHIN-682015, KERALA, INDIA</td><td data-bbox="889 1850 1500 1967">HEAVY ELECTRICALS EQUIPMENT PLANT, BHEL, RANIPUR, HARIDWAR, Haridwar, Uttarakhand, 249403</td></tr> </tbody> </table>	<u>Shipping Address as below:</u>	<u>Billing address as below:</u>	GENERAL MANAGER (MATERIALS) COCHIN SHIPYARD LIMITED, COCHIN-682015, KERALA, INDIA	HEAVY ELECTRICALS EQUIPMENT PLANT, BHEL, RANIPUR, HARIDWAR, Haridwar, Uttarakhand, 249403
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		GST No.: 05AAACB4146P1ZL	
16.	<u>GUARANTEE/WARRANTY:</u> WARRANTEE SHALL BE 24 MONTHS FROM THE DATE OF RECEIPT OF MATERIAL.		
17.	<u>MICRO AND SMALL ENTERPRISES (MSE):</u> Any Bidder falling under MSE category shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.		
	Type under MSE	SC/ST owned	Women owned
	Micro		
	Small		
	<u>Note:</u> If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.		
	a) MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) only if they submit along with the offer, attested copies of either UDYAM Registration. Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non-submission of supporting document in GeM portal will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the above required documents are not uploaded at the time of bid submission. Documents submitted by the bidder shall be verified by BHEL for rendering the applicable benefits.		
	<u>DIVISION BETWEEN MSE AND NON MSE L1 WILL BE AS BELOW:</u> If price quoted by MSE vendor is within the price band of L1+15%, then 25% quantity of the respective item (rounded off to nearest number) shall be offered to MSE vendor subject to matching the L1 prices. if the quantity required is 1 number (as such non-divisible), MSE quoting with in price preference of L1+15% shall be offered 100% quantity subject to matching the L1 prices.		
	MSE/MII: the supplier needs to submit/update MSE/MII credentials on gem portal during profile updation / offer submission stage. the MSE data submitted is cross verified by gem with govt. of INDIA UDYAM/NSIC database through API integration on real time basis and for mii, a self-declaration is being given and authenticated by AADHAR OTP. if the seller fails to claim MSE/MII provision on gem portal at profile updation / bid submission stage, the said seller will become ineligible for getting the MSE/MII benefits for that bid automatically. the vendor can always		
18.	<u>LIQUIDATED DAMAGE:</u> If the Seller/Service Provider fails to deliver any or all of the Goods/Services within the original/re-fixed delivery period(s) specified in the contract/PO, the Buyer/BHEL will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, @ 0.5% of the contract value of delayed quantity per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever.		

19.	<p><u>INTEGRITY PACT (IP):</u> Applicable</p> <p>a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Supplier/Vendor are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.</p> <table><tr><th>Sl. No.</th><th>IEM</th><th>Email</th></tr><tr><td>1.</td><td>Dr. Sarat Kumar Acharya, Ex-CMD, NLC</td><td>iem1@bhel.in</td></tr><tr><td>2.</td><td>Shri R. Mukundan, IRPS (Retd.)</td><td>iem2@bhel.in</td></tr><tr><td>3.</td><td>Shri Madan Lal Meena, IAS (Retd.)</td><td>iem3@bhel.in</td></tr></table> <p>b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.</p> <p>c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.</p> <p><u>Note:</u> <i>No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are as per Clause no. 21 below.</i></p>	Sl. No.	IEM	Email	1.	Dr. Sarat Kumar Acharya, Ex-CMD, NLC	iem1@bhel.in	2.	Shri R. Mukundan, IRPS (Retd.)	iem2@bhel.in	3.	Shri Madan Lal Meena, IAS (Retd.)	iem3@bhel.in
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3.	Shri Madan Lal Meena, IAS (Retd.)	iem3@bhel.in											
20.	<p><u>PREFERENCE TO MAKE IN INDIA:</u> Applicable</p> <p>For this procurement, the local content to categorize a Supplier/Vendor as a Class I local supplier/ Class II local Supplier/Non-Local Supplier and purchase preferences to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017" Dt. 19.07.2024 issued vide Order No. P-45021/2/2017-PP(BE-II)-Part (4)Vol.II. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the GeM Bid, the same shall be applicable even if issued after issue of this GeM Bid, but before opening of Part-II bids against this GeM Bid.</p> <p>Suppliers who have qualified and received incentive under PLI scheme will be deemed CLASS-II local suppliers unless they are already CLASS I local suppliers) to encourage indigenization.</p> <p>Kindly submit MAKE IN INDIA certificate as per attached format only.</p> <p><u>PENAL PROVISIONS FOR FALSE SELF DECLARATION OF MII, IN CASE OF CONTRACT MORE THAN RS 10 CRS.</u></p>												

For contracts valuing more than Rs. 10 crores, local content (in cases of self-certification submitted by bidders at the time of tendering) will be re-verified during execution of contract by cost/ chartered accountant, and in case of defaults, penalty upto 10% of the contract value shall be imposed.

For this procurement, the local content to categorize a supplier as a CLASS I local supplier/ CLASS II local supplier/ non-local supplier and purchase preference to class i local supplier, is as defined in public procurement (preference to MAKE IN INDIA), order 2017 dated 19.07.2024 issued by DPIIT. in case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the nit, the same shall be applicable even if issued after issue of this NIT, but before opening of PART-II bids against this NIT.

20.1 Compliance to Restrictions under Rule 144 (xi) of GFR 2017:

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Clause means: -
 - a. An entity incorporated established or registered in such a country; or
 - b. A subsidiary of an entity incorporated established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.
- IV. The beneficial owner for the purpose of (III) above will be as under:
 1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company.

	<p>b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.</p> <p>2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership or entitlement to more than fifteen percent of capital or profits of the partnership.</p> <p>In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to more than fifteen percent of the property or capital or profits of the such association or body of individuals.</p> <p>4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;</p> <p>5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.</p> <p>V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person. Note:</p> <p>(i) The bidder shall provide undertaking for their compliance to this Clause.</p> <p>Registration of the bidder with Competent Authority should be valid at the time of submission of bids and at the time of acceptance of the bids.</p>
<p>21.</p>	<p>Settlement of Dispute</p> <p>If any dispute or difference of any kind whatsoever shall arise between BHEL and the Supplier/Vendor, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Engineer for amicable resolution by the parties. Designated Engineer (to be nominated by BHEL for settlement of disputes arising out of the contract) who within 60 days after being requested shall give written notice of his decision to the contractor. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier/Vendor who shall proceed with the work with all due diligence, whether he or BHEL desires to resolve the dispute as hereinafter provided or not.</p> <p>If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier/Vendor being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the BHEL Conciliation Scheme 2018 as per Clause 21.1</p> <p>21.1 Conciliation:</p>

	<p>Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per BHEL Conciliation Scheme 2018. The proceedings of Conciliation shall broadly be governed by Part III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in - "Procedure for conduct of conciliation proceedings" (as available in www.bhel.com)).</p> <p>Note: Ministry of Finance has issued OM reference No. 1/2/24 dated 03.06.2024 regarding "Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurement. In the said OM it has been recommended that Government departments/ Entities/agencies are to encourage mediation under the Mediation Act. 2023. The said Act has not yet been notified by the Government. Therefore, the clause "Settlement of Disputes" shall be modified accordingly as and when the Mediation Act 2023 gets notified.</p> <p>21.2 ARBITRATION:</p> <p>21.2.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 21.1 herein above or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, refer the disputes to Arbitral Institution (to be identified by the contract issuing agency (eg. "IIAC" (India International Arbitration Centre) for Delhi/NCR offices) and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the Rules of said Arbitral Institution.</p> <p>21.2.2 A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice') before referring the matter to arbitral institution. The Notice shall be addressed to the Head of the Region, Power Sector/ Unit, BHEL, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any.</p> <p>21.2.3 After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to the Arbitral Institutions as identified by the contract issuing agency) and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd. Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change</p>
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	<p>thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.</p> <p>21.2.4 The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.</p> <p>21.2.5 The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be HARIDWAR.</p> <p>21.2.6 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at HARIDWAR.</p> <p>21.2.7 Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor.</p> <p>21.2.8 It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the value of the dispute is less than Rs. 10 Crores.</p> <p>21.2.9 In case the disputed amount (Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof as amended from time to time, shall apply to the arbitration proceedings under this clause.</p> <p>21.2.10 In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause 21.2.9. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.</p> <p>21.3 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:</p> <p>In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 05/0003/2019-FTS-10937 dated 14-122022 as amended from time to time.</p>
22.	<p>JURISDICTION</p> <p>Subject to clause 21 of this contract, the Civil Court having original Civil Jurisdiction HARIDWAR shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract.</p> <p>GOVERNING LAWS</p> <p>The contract shall be governed by the Law for the time being in force in the Republic of India.</p>

23.	<p><u>Force Majeure</u></p> <p>23.1 "Force Majeure" shall mean circumstance which is:</p> <ul style="list-style-type: none"> a) beyond control of either of the parties to contract, b) either of the parties could not reasonably have provided against the event before entering into the contract, c) having arisen, either of the parties could not reasonably have avoided or overcome, and d) is not substantially attributable to either of the parties <p>And</p> <p>Prevents the performance of the contract,</p> <p>Such circumstances include but shall not be limited to:</p> <ul style="list-style-type: none"> i. War, hostilities, invasion, act of foreign enemies. ii. Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war. iii. Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors. iv. Strike or lockout not solely involving the contractor's personnel and other employees of the contractor and sub-contractors. v. Encountering munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity. vi. Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc. vii. Epidemic, pandemic etc. <p>23.2 The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party: a) any strike, work-to-rule action, go-slow or similar labour difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.</p> <p>23.3 If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event.</p> <p>23.4 The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event.</p> <p>23.5 Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not</p> <ul style="list-style-type: none"> i. Constitute a default or breach of the Contract. ii. Give rise to any claim for damages or additional cost expense occasioned thereby, if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.
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	23.6 BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Supplier/Vendor cannot consider deemed short-closure after 1 year of imposition of Force Majeure.	
24.	Non-Disclosure Agreement: Applicable The bidders shall enter into the Non-disclosure agreement separately. (Format attached).	
25.	Cartel Formation The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines	
26.	Fraud Prevention Policy Bidder along with its associate /collaborators /sub-contractors /sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.	
27.	<u>Suspension of Business Dealings with Suppliers / Contractors:</u> The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms / principal / agents, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com . If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution stage indulges in any act, including but not limited to, malpractices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or tampers the tendering process or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 (Bhartiya Nyaya Samhita 2023) or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder / supplier / contractor as per extant guidelines of the company available on www.bhel.com and / or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage: https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors	
28.	Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection. In the event of any Technical or Commercial queries, the same may please be addressed to the following BHEL concerned before Part I opening-	
	Manager/PPX-DABG Email id- akshukla@bhel.in Ph. No. - +91-1334-285076	Add. Engineer-II/ PPX-DABG Email id- anupamk@bhel.in Ph. No.- +91-1334-285076
29.	Order of Precedence:	

	<p>In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:</p> <ol style="list-style-type: none"> Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL. Buyer Added Bid Specific ATC GeM Bid Technical Conditions of Contract (TCC) GeM GTC
30.	<p>NOTE:</p> <ol style="list-style-type: none"> In the event of our customer order covering this tender being cancelled /placed on hold /otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender at any stage of execution. BHEL may negotiate the L1 rate, if not meeting our budget / estimated cost. BHEL may re-float the tender opened, if L1 price is not acceptable to BHEL even after negotiation. Any deviation from the conditions specified in tender may lead to rejection of offer. Any change in applicable rates of Tax or any other statutory levies (Direct / Indirect) or any new introduction of any levy by means of statute and its corresponding liability for the deliveries beyond the agreed delivery date for reasons not attributable to BHEL will be to vendors account. BHEL will not reimburse the same and any subsequent claim in this respect will be summarily rejected. BHEL reserves its right to reject an offer due to unsatisfactory past performance by the respective Vendor in the execution of any contract to any BHEL project / Unit. The offers of the bidders who are under suspension and also the offers of the bidders, who engage the services of the banned firms /principal/agents, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com. Recovery / deduction as applicable as per Direct and Indirect taxes as notified by Govt. Of India from time to time will be made and information/certificate for such deduction/recoveries shall be provided by BHEL to the vendor. Rest Terms and Conditions shall be as per GEM (Latest version- applicable at the time of issuance of enquiry) and enquiry ATC (Additional terms & conditions). While generating invoice in GEM portal, the seller must upload scanned copy of GST invoice and the screenshot of GST portal confirming payment of GST. THE PRICE QUOTE BY BIDDER SHOULD BE INCLUSIVE OF GST. Vendor to upload/submit DIGITILY signed documents to BHEL B2B portal at the time of supply. The tender enquiry has been issued on GEM and BHEL portals for wider circulation. however, the offer is to be submitted through GEM portal only. also, all future corrigendum/corrigenda, addendum/addenda, amendments, time extensions, clarifications, etc. against the published gem bid shall be issued on gem portal only. Hence, the bidders are advised to check GEM portal only for latest updates/amendments/communications issued by BHEL against the current tender.

	<p>12. Vendor to offer best delivery schedule in line with BHEL tender requirement. Delivery is not sacrosanct. However, offer of vendors may not be considered whose quoted delivery does not match with BHEL requirement.</p> <p>13. Data sheet of the product(s) offered in the bid, are to be uploaded along with the bid documents. Buyers can match and verify the data sheet with the product specifications offered. In case of any unexplained mismatch of technical parameters, the bid is liable for rejection.</p> <p>14. In case vendor (The Proprieter, Partner(s), Director(s) of our Company/Firm) have any relation or relatives employed in BHEL, vendor to inform the same specifically in their offer.</p> <p>15. Bidder shall submit the following documents along with their bid for vendor code creation:</p> <ul style="list-style-type: none"> • COPY OF PAN CARD • COPY OF GSTIN • COPY OF MSE CERTIFICATE <p>16. The bids received from same IP address shall be outrightly rejected and shall not be considered for further evaluation.</p>
31.	<p>Grievance Redressal Mechanism</p> <p>To promote transparency and ensure fair treatment of all bidders, a structured Grievance Redressal Mechanism is in place to address any concerns or issues arising during the tendering process or in subsequent business dealings with the company.</p> <p>Suppliers/Contractors are requested to follow the below escalation process for grievance resolution:</p> <ol style="list-style-type: none"> 1. First Level: Any grievance should initially be addressed to the designated Dealing Officer, whose contact details are provided in the Notice Inviting Tender (NIT)/Contract. 2. Second Level: If the issue remains unresolved, it may be escalated by lodging a formal grievance through the SUVIDHA Portal: https://suvidha.bhel.in/suvidha/ <p>Responses will be provided in accordance with the defined escalation matrix."</p>
32.	<p>CONFLICT OF INTEREST AMONG BIDDERS/ AGENTS</p> <p>"A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of procuring entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:</p> <ol style="list-style-type: none"> a) They have controlling partner (s) in common; OR b) They receive or have received any direct or indirect subsidy/ financial stake from any of them; OR c) They have the same legal representative/agent for purposes of this bid; OR d) They have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another bidder; OR e) Bidder participates in more than one bid in this bidding process. participation by a bidder in more than one bid will result in the disqualification of all bids in which the parties are

involved. However, this does not limit the inclusion of the components/sub-assembly/ assemblies from one bidding manufacturer in more than one bid; OR

f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. one manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:

1. The principal manufacturer directly or through one INDIAN agent on his behalf;
AND

2. INDIAN/FOREIGN agent on behalf of only one principal;
OR

g) A bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the bid; OR

h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business."

Treatment of cases regarding conflict of interest:

The bidder notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations:

i. If its personnel have a close personal, financial, or business relationship with any personnel of BHEL who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BHEL directly or indirectly;

ii. The bidder (or his allied firm) provided services for the need assessment/ procurement planning of the Tender process in which it is participating;

iii. Procurement of goods directly from the manufacturers/suppliers shall be preferred. However, if the OEM/ Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorised distributor (with/ or without the OEM) from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate.

iv. A bidder participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as a partner/ JV member or sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-contractor in more than one bid if he is not bidding independently in his own name or as a member of a JV.

The Bidder declares that they have read and understood the above aspects, and the bidder confirms that such conflict of interest does not exist and undertakes that they will not enter into

	<p><u>any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s), in this regard. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.</u> In case, the Bidder is found having indulged in above activities, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by BHEL as per extant policies/ guidelines.</p>
33.	<p>For supply orders placed on Indian Suppliers: Irrespective of the value of the invoice amount, the bidder / vendor should necessarily upload the despatch & invoice details on BHEL SUVIDHA portal at https://suvidha.bhel.in/suvidha/ , prior to despatch. All documents as per PO checklist, along with additional documents (if any), must be uploaded on the portal. It is mandatory that tax invoices with a net amount (including taxes) exceeding Rs five lakhs uploaded on the portal are digitally signed using a Class 3 Digital Signature Certificate (DSC) issued by a licensed Certifying Authority. Submission of invoice document in hard copy is allowed for invoices with a net amount (including taxes) equal to and upto Rs. five lakhs, in case they were not digitally signed and uploaded on the portal.</p> <p>The material will not be accepted inside BHEL in absence of the above. "</p>
34.	<p>Enclosure:</p> <ul style="list-style-type: none"> • Annexure-A: ITEM DETAILS / SCOPE OF SUPPLY • PQR CHECKLIST • TECHNICAL SPECIFICATION DPE/TS/ALH/3STEP REV:01 • COMMERCIAL & QUALITY CHECKLIST • NO DEVIATION CERTIFICATE • Format for Declaration reg. minimum local content in line with revised public procurement • Format for Non-Disclosure Certificate • Format for Integrity Pact • Format for Proforma of Bank Guarantee for Earnest Money. • Format for Proforma of Bank Guarantee for Performance Security. • List of Consortium Bank.

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), Order 2017" Dt. 19.07.2024
issued vide Order No. P-45021/2/2017-PP(BE-II)-Part(4)Vol.II AND SUBSEQUENT ORDER(S)
(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)**

To,
Manager
PPX-DABG
BHEL-HEEP, HARIDWAR

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017" Dt. 19.07.2024 issued vide Order No. P-45021/2/2017-PP(BE-II)-Part(4) Vol.II and subsequent order(s).

Ref: 1) GeM Bid Specification No:
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... (*specify the name of the organization here*) has a local content of _____ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' (*Strike out whichever is not applicable*) as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- | | |
|----------|--------------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ ... |

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

Note:

1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

CERTIFICATE OF NO DEVIATION

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)

To,
MANGER
PPX-DABG
BHEL-HEEP, HARIDWAR

Dear Sir,

Subject: No Deviation Certificate

Ref: 1) GeM Bid No.,
2) All other pertinent issues till date

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred GeM Bid.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized representative of the bidder)

Date:

Place:

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART **and**

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -

1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.



Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.



Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/ Contractors / Sub-contractors

- 6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his subcontractors.
- 6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 -Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The

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Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non-disclosure agreement.

8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.

8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.

8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.

8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.

8.9 IEM should examine the process integrity; they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.

8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.12 The word 'Monitor' would include both singular and plural.

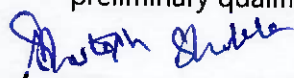
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Section 9 - Pact Duration

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.



ASHUTOSH SHUKLA/MGR/PPX-DABG

For & On behalf of the Principal

ASHUTOSH SHUKLA

(Office Seal)

MANAGER-PPX-DABG

BHEL-HEEP, HARIDWAR

Place HARIDWAR

Date 15/03/2025

For & On behalf of the Bidder/ Contractor

(Office Seal)

Witness:



(Name & Address)

ANUPAM KUSHWAHA

Asst. Engr. IT, BHEL HARIDWAR
PPX-DABG

Witness:

(Name & Address)

ONE SIDED

NON DISCLOSURE AGREEMENT

THIS NON DISCLOSURE AGREEMENT (this "**Agreement**") entered into on this day of June, 20.. (the "**Effective Date**")

By and Between

Bharat Heavy Electricals Limited (a Public Sector Undertaking of Government of India), a company incorporated under the Companies Act, 1956 and having its registered office at having its registered office at "BHEL House", Siri Fort, New Delhi - 110 049, India (hereinafter referred to as "**BHEL**" of which the expression shall unless repugnant to the context or the meaning thereof be deemed to include its successors and permitted assigns) (hereinafter referred to as "BHEL"),

And

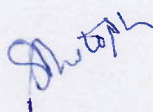
ABC, a Company incorporated under the laws of and having its registered office at (hereinafter referred to as "ABC").

The party who is receiving information would be referred as Receiving Party and the party who is disclosing information would be referred as Disclosing Party, as the context requires.

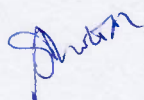
WHEREAS

- (A) The Disclosing Party and The Receiving Party wish to explore and discuss the potential of certain mutually advantageous business relationships for _____, for the purpose ofproducts in India ('the Purpose');
- (B) The Disclosing Party, in furtherance of such business relationship, will disclose certain information, including but not limited to, scientific, development, financial, marketing, sales or other proprietary information;
- (C) The Receiving Party and the Disclosing Party wish to protect and preserve the confidentiality of such information provided by the Disclosing Party to the Receiving Party by preventing its unauthorized disclosure and use, in accordance with the terms of this Agreement; and
- (D) The Receiving Party agrees to hold such information in strict confidence and not to disclose or to use, directly or indirectly, for any purpose other than the performance of this Agreement

NOW, THEREFORE and in consideration of the promises made herein, their mutual and individual interests, and other good and valuable consideration, the receipt and sufficiency of all of which is hereby acknowledged, the Parties agree as follows:



1. **PURPOSE:** Purpose to ne mentioned here.
2. **DISCLOSING PARTY.** means a Party that discloses the confidential information to the other party under this agreement.
3. **RECEIVING PARTY** means a Party that receives the confidential information from the other party under this agreement.
4. **Confidential Information**
 - (a) Subject to the provisions of this Agreement, all information disclosed by the Disclosing Party to the Receiving Party, shall be deemed to be "Confidential Information" for the purposes of this Agreement.
 - (b)
 - (i) It is clarified that Confidential Information shall include, but is not limited to, any trade secret, technique, strategy, component, concept, program, report, study, memorandum, correspondence, documentation, information, manual, record, data, technology, product, plan, design, procedure, method, invention, sample, notes, summaries, analyses, compilations and other writings, producing any such sample, medium, test data relating to any research project, work in progress, future development, engineering, manufacturing, marketing, pricing, billing, servicing, financing, personnel matter, its present or future products, sales, suppliers, clients, customers, employees, investors, or any other information which the Disclosing Party provides to the Receiving Party whether in oral, written, graphic or electronic form and whether or not such information is identified as such by an appropriate stamp or marking. The Confidential Information shall also include all reports, notes or other material prepared by the Receiving Party based on the Confidential Information and/ or any discussion thereon.
 - (ii) Confidential Information includes information disclosed by the Disclosing Party or by any individual, firm or corporation controlled by, controlling, or under the common control of the Disclosing Party.
 - (c) Confidential Information shall not include any information which the Receiving Party can demonstrate to the Disclosing Party:
 - (1) is now, or has become, through no act or failure to act on the part of the Receiving Party, generally known or available to the public;
 - (2) is known by the Receiving Party at the time of receiving such information as evidenced by its records;
 - (3) is discovered/independently developed by the Receiving Party independent of any disclosures by the Disclosing Party; or



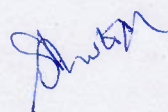
(4) is hereafter furnished to the Receiving Party by a third party, as a matter of right and without restriction on disclosure.

(d) Notwithstanding any other provision of this Agreement, the Receiving Party shall be permitted to disclose Confidential Information if such disclosure is in response to a valid order of a court or other governmental body, provided, however, that the Receiving Party shall be required to give prior notice in writing to the Disclosing Party so that the Disclosing Party may seek an appropriate protective order including that the Confidential Information so disclosed be used only for the purposes for which the order was issued;

5. Disclosure

In consideration of the disclosure of Confidential Information by, the Recipient hereby agrees to:

- (a) Shall treat as confidential and safeguard all information disclosed and/or its Affiliates in connection
- (b) to hold the Confidential Information in strict confidence and to take all necessary precautions to protect such Confidential Information (including, without limitation, all precautions the Recipient employs with respect to its own confidential materials);
- (c) limit disclosure of any Confidential Information to its concerned directors, officers and employees, (collectively "Representatives") strictly only to who have a need to know such Confidential Information in connection with the Transaction between the parties to which this Agreement relates, and only for that purpose;
- (d) advise its Representatives of the proprietary nature of the Confidential Information and of the obligations set forth 2 in this Agreement and require in writing such Representatives to keep the Confidential Information confidential;
- (e) shall keep all Confidential Information strictly confidential by using a reasonable degree of care, but not less than the degree of care used by it in safeguarding its own confidential information;
- (f) not disclose any Confidential Information received by it to any third party; and
- (g) not to copy or reverse engineer any such Confidential Information.
- (h) not to use the Confidential Information for any purpose other than the Transaction.
- (i) not use the information for any scientific research or any other research.
- (j) Confidential information does not include information:
 - a. Which is generally available to the public other than as a result of a breach of this Agreement; or
 - b. Which is already in the possession of Recipient without restriction prior to any disclosure hereunder; or

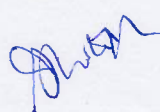


- c. Which is or has been lawfully disclosed to Recipient by someone who is free lawfully to disclose the same without confidentiality restrictions; or
 - d. Which is independently developed by Recipient or its Affiliates and no Confidential information disclosed hereunder has been used directly or indirectly in such development; or
 - e. Whose applicable period of confidentiality pursuant hereto, or such other period specifically agreed to in writing by the parties, has ended
- (k) This agreement is not intended to, and does not, oblige either party to enter into any further agreements or to proceed with the transaction, any possible relationship or other transaction. Recipient acknowledges that Discloser makes no representation or warranty whether express or implied, as to the accuracy or completeness of Confidential information, and Discloser disclaims any and all liability unless contained in any definitive agreement.

Each Party will comply with all applicable data protection laws and regulations. Where applicable in particular if one Party receives access to and processes personal data on behalf of the other party in connection with this Agreement and such processing agreement, the Parties will enter into any required data processing of other data protection agreement

6. Restriction on Use

- (a) The Receiving Party and its Representatives shall hold the Confidential Information received from the Disclosing Party in confidence, and shall not, directly or indirectly:
 - (i) disclose the Confidential Information to any third party; or
 - (ii) use the Confidential Information for any purpose other than the permitted Purpose.
- (b) The Receiving Party shall not use the Confidential Information for any purpose or in any manner, which would constitute a violation of any applicable laws or regulations, directly or indirectly.
- (c) The Confidential Information shall be the property of the Disclosing Party. No rights, licenses or interests including, but not limited to, trademarks, inventions, copyrights or patents are implied, transferred or granted in relation to the Confidential Information provided by the Disclosing Party to the Receiving Party under this Agreement.
- (d) The Receiving Party shall not reproduce the Confidential Information in any form except as needed for the Purpose of the Agreement as set out above or with the prior written consent of the Disclosing Party.



(e) All the title and rights in the Confidential Information shall be reserved with the respective Discloser and/or its licensors and no rights or obligations other than those expressly set out in this Agreement are granted or to be implied from this Agreement. In particular no license is granted to the Recipient, directly or indirectly, by this Agreement relating to any invention, discovery, patent, copyright or other industrial or intellectual property right now or in the future.

7. Protection of Confidential Information

- (a) The Receiving Party represents and warrants that it shall protect the Confidential Information received with utmost care and diligence.
- (b) All Confidential Information shall be promptly returned to the Disclosing Party after the Receiving Party's need for it has expired, or upon request of the Disclosing Party, and in any event, upon completion or termination of this Agreement.

8. No Further Warranties

The Confidential Information shall be disclosed on an "as is" basis only and without any warranties of any kind, including but not limited to, warranties of merchantability or fitness for a particular purpose.

9. No Further Business Arrangement

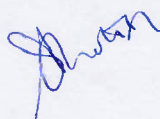
Nothing contained herein shall be construed to obligate either Party to enter into any further agreements with each other. This Agreement does not create any other business arrangement, including but not limited to any partnership, agency or joint venture, between the Parties.

10. Term

The term of this Agreement shall commence on the Effective Date and valid for the period of two (2) years. The Disclosing party shall have a right to terminate this Agreement by giving a written notice of 30 days to the Receiving Party. However, the Receiving Party obligation to protect and restrict the use of Confidential Information under this Agreement shall continue until such time as the Disclosing Party discloses it to the public or when it otherwise becomes part of the public domain through no action of the Receiving Party.

11. Injunctive remedy

The Recipient acknowledges that the Confidential Information to be disclosed hereunder is commercially sensitive of a unique and valuable character, and that the unauthorized dissemination of the Confidential Information would destroy or diminish the value of such information. The damages that would result from the unauthorized dissemination of the



Confidential Information would be impossible to calculate. Therefore, Recipient hereby agrees that the affected Discloser shall be entitled to injunctive relief preventing the dissemination of any Confidential Information in violation of the terms hereof. Such injunctive relief shall be in addition to any other remedies available hereunder, whether at law or in equity. The affected Discloser shall be entitled to recover all its damages, costs and fees, including reasonable attorneys' fees, incurred in obtaining any such relief. Further, in the event of litigation relating to this Agreement, the prevailing party shall be entitled to recover its reasonable attorney's fees and expenses.

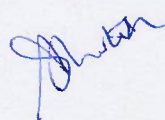
12. Return of Confidential Information

Recipient shall immediately return and redeliver to the respective Discloser all tangible material embodying the Confidential Information provided hereunder and all notes, summaries, memoranda, drawings, manuals, records, excerpts or derivative information deriving there from and all other documents or materials ("Notes") (and all copies of any of the foregoing, including "copies" that have been converted to computerized media in the form of image, data or word processing files either manually or by image capture) based on or including any Confidential Information, in whatever form of storage or retrieval, upon the earlier of (i) the completion or termination of the dealings between the parties contemplated hereunder; (ii) the termination of this Agreement; or (iii) any breach of this agreement, in which case the party in breach shall also be liable towards the Disclosers under the law and this Agreement or (iv) at such time as the respective Discloser may so request; provided however that the Recipient may retain such of its documents as is necessary to enable it to comply with its document retention policies. Alternatively, the Recipient, with the written consent of the respective Discloser may immediately destroy any of the foregoing embodying Confidential Information (or the reasonably non-recoverable data erasure of computerized data) and, upon request, certify in writing such destruction by an authorized officer of the Recipient supervising the destruction).

13. Notice of Breach

Recipient shall notify the Disclosers immediately upon discovery of any unauthorized use or disclosure of Confidential Information by Recipient or its Representatives, or any other breach of this Agreement by Recipient or its Representatives, and will cooperate with efforts by the Discloser to regain possession of Confidential Information and prevent its further unauthorized use.

14. Survival



The provisions of Clauses 8, 9 & 10 of this Agreement, and the rights and obligations contained there under shall not terminate upon termination of this Agreement.

15. Governing Law & Dispute Resolution

The contract shall be governed by the Law for the time being in force in the Republic of India. Civil Court having original Civil Jurisdiction at (name of Place) ^{HARIDWAR} shall alone have exclusive jurisdiction in regard to all matters in respect of this agreement.

Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to arbitration. The arbitration shall be conducted by three arbitrators, one to be appointed by each of the Parties and a third arbitrator to be appointed by the mutual consent of the two arbitrators so appointed by the Parties.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties. Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be HARIDWAR (the place from where the contract is issued)

16. No Publication

Neither Party shall disclose, publicise or advertise in any manner the discussions or negotiations contemplated by the Agreement without the prior written consent of the other Party, except as may be required by law.

17. Miscellaneous

- (a) This Agreement constitutes the entire understanding between the parties and supersedes any and all prior or contemporaneous understandings and agreements, whether oral or written, between the parties, with respect to the subject matter hereof. This Agreement can only be modified by a written amendment signed by the party against whom enforcement of such modification is sought.
- (b) Any failure by a Discloser to enforce the Recipient's strict performance of any provision of this Agreement will not constitute a waiver of its right to subsequently enforce such provision or any other provision of this Agreement.

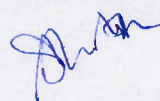


- (c) Although the restrictions contained in this Agreement are considered by the parties to be reasonable for the purpose of protecting the Confidential Information, if any such restriction is found by a court of competent jurisdiction to be unenforceable, such provision will be modified, rewritten or interpreted to include as much of its nature and scope as will render it enforceable. If it cannot be so modified, rewritten or interpreted to be enforceable in any respect, it will not be given effect, and the remainder of the Agreement will be enforced as if such provision was not included.
- (d) Any notices or communications required or permitted to be given hereunder may be delivered by hand, deposited with a nationally recognized overnight carrier, electronic-mail, or mailed by certified mail, return receipt requested, postage prepaid, in each case, to the address of the other party first indicated above (or such other addressee as may be furnished by a party in accordance with this paragraph). All such notices or communications shall be deemed to have been given and received (a) in the case of personal delivery or electronic-mail, on the date of such delivery, and (b) in the case of delivery by a nationally recognized overnight carrier, on the third business day following dispatch.
- (e) Parties shall not directly or indirectly assign or transfer it by operation of law or otherwise without the prior written consent of the Disclosers, which consent will not be unreasonably withheld. All obligations contained in this Agreement shall extend to and be binding upon the parties to this Agreement and their respective successors, assigns and designees.
- (f) Paragraph headings used in this Agreement are for reference only and shall not be used or relied upon in the interpretation of this Agreement.

18. **Notices**

All notices, documents, consents, approvals or other communications (a 'Notice') to be given hereunder shall be in writing and shall be transmitted by first class registered or recorded delivery mail to the person at the address specified herein below, or by telex, facsimile or other electronic means in a form generating a record copy to the party being served at the relevant address for that party shown herein below. Any Notice sent by mail shall be deemed to have been duly served on receipt of delivery confirmation. Any Notice sent by telex facsimile or other electronic means shall be deemed to have been duly served at the time of transmission.

Notice if to:



BHEL, then to,

Phone :

Fax :

E-mail :

ABC, then to,

(Name)_____

(Designation)_____

Phone :

Fax :

E-mail :

19. Counterparts, Telefax Signatures

This Agreement may be signed in two counterparts, each of which is to be considered an original, and taken together as one and the same document.

IN WITNESS WHEREOF, of their Agreement to the terms and conditions contained herein, the undersigned have caused this Agreement to be executed by their duly authorized representatives:

For Bharat Heavy Electricals Limited	For ABC
Signature: Name: ASHUTOSH KR. SHUKLA Designation: Mgr / DABH-PPA	Signature: Name: Designation:
Signature: Name: ANUPAM KUSHWAHA Designation: DY. ENGR.	Signature: Name: Designation:

BOTH SIDED

PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY

(On non-Judicial paper of appropriate value)

Bank Guarantee No.....

Date.....

To

(Employer's Name and Address)

.....

Dear Sirs,

In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender No.....(Tender Conditions), M/s. having its registered office at(hereinafter referred to as the 'Tenderer'), is submitting its bid for the work of.....invited by(name of the Employer) through its Unit at(The Tender Conditions provide that the Tenderer shall pay a sum of Rs as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,

we, the[Name & address of the Bank] having our Registered Office at(hereinafter referred to as the Bank) being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs.....(in words Rupees.....) without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor/Contractor/Vendors in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force upto and including..... and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the we shall be discharged from all liabilities under this Guarantee.

We, Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....
- b) This Guarantee shall be valid up to
- c) Unless the Bank is served a written claim or demand on or before _____ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of

(Name of the Bank)

Date.....

Place of Issue.....

¹ *Details of the Invitation to Bid/Notice Inviting Tender*

² *Name and Address of the Tenderer*

³ *Details of the Work*

⁴ *Name of the Employer*

⁵ *BG Amount in words and Figures*

⁶ *Validity Date*

⁷ *Date of Expiry of Claim Period*

Notes:

1. Units are advised that expiry of claim period may be kept 3-6 months after validity date. It may be ensured that the same is in line with the agreement/ contract entered with the Vendor.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Contractor/sub-contractor /vendor/ Bank issuing the guarantee.
3. In line with the GCC, SCC or contractual terms, Unit may carry out minor modifications in the Standard BG Formats. If required, such modifications may be carried out after taking up appropriately with the Unit/Region's Law Deptt.

4. In Case of Bank Guarantees submitted by Foreign Vendors-

a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)

can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)

- b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
- b.2** In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
- b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.

BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) with its registered office at _____ hereinafter referred to as the 'Vendor / Contractor / Supplier ', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated valued at Rs..... (Rupees -----)/FC.....(in words.....) for (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs ----- (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.

We thebank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

WeBANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier 's liabilities.

This Guarantee shall remain in force upto and including..... and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before thewe shall be discharged from all liabilities under this guarantee thereafter.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

We, BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....
- b) This Guarantee shall be valid up to
- c) Unless the Bank is served a written claim or demand on or before _____ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ DATE OF EXPIRY OF CLAIM PERIOD

Note:

1. Units are advised that expiry of claim period may be kept 3-6 months after validity date. It may be ensured that the same is in line with the agreement/ contract entered with the Vendor.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Vendor/Contractor/Supplier /Bank issuing the guarantee.

3. In line with the GCC, SCC or contractual terms, Unit may carry out minor modifications in the Standard BG Formats. If required, such modifications may be carried out after taking up appropriately with the Unit/Region's Law Deptt.
4. **In Case of Bank Guarantees submitted by Foreign Vendors-**
 - a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
 - b. **From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
 - b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
 - b.2 **In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank** (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
 - b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.

ANNEXURE – 18**LIST OF CONSORTIUM BANK**

Sl. No.	NAME OF THE BANK
1	State Bank of India
2	Canara Bank
3	IDBI Bank Limited
4	ICICI Bank Limited
5	HDFC Bank Limited
6	Axis Bank
7	IndusInd Bank Limited
8	Bank of Baroda
9	Exim Bank
10	Indian Bank
11	Punjab National Bank
12	Union Bank of India
13	Yes Bank Limited
14	RBL Bank Ltd.
15	Standard Chartered Bank
16	Indian Overseas Bank
17	Kotak Mahindra Bank Limited
18	Federal Bank Limited
19	Hongkong and Shanghai Banking Corporation Ltd