



**DIRECTORATE GENERAL
FIRE SERVICES, HOME GUARDS & CIVIL DEFENCE,
ODISHA**

**TENDER CALL NOTICE
NO.-2/2020-21.**

1. Sealed tenders are invited from the original equipment manufacturer (OEM) or their authorized agent/ dealer for purchase of different types of equipment and vehicle during 2020-21. The details of equipments with requirement are as follows.

Sl No.	Name of the item	Approximate Quantity
1	Advance Rescue Tender	01 No.
2	Mechanical Power Saws.	---
	i) Mechanical Power Saws (Bar Length- 36")	100 Nos
	ii) Mechanical Power Saws (Bar Length- 24")	200 Nos
3	Fireman Helmet Fitted With Head Lamp	1700 Nos
4	Safety Gloves (Medan)	1700 Prs

2. The tender document with detail technical specification may be seen from the state website www.odisha.gov.in and Odisha Fire Service website www.odishafshgscd.gov.in. The tender document may be obtained by depositing `500/- (Rupees five hundred) only between 11.00 A.M to 5.30 P.M each working days from the office of the undersigned at the address given below or downloading from state website and should be submitted duly signed in each page of the tender document with seal in token of having read understood and accepted the terms and conditions of the contract in the address given below. The tender should be submitted in prescribed format along with a Demand Draft Non-A/C payee of `500/- (Rupees five hundred) only payable at SBI, Main Branch, Cuttack (Code No-0059) in favour of D.D.O, Directorate General of Fire Service, Odisha, Cuttack, towards the cost of tender paper in case of firms submitted tender by downloading the tender document from website. However, the authorities shall not be responsible for postal or any other delay.
3. The bidder has right to quote any one of the item and it is not mandatory to quote all items mentioned in the tender.
4. Bids submitted other than the manner prescribed in the tender document shall be rejected.

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

Page 2 of 2

5. The Tender Calling Authority has right to accept or reject the tender(s) without assigning any reason thereof. The bidder should drop the sealed tender packet in the "Tender Box" available in the office of the undersigned by the stipulated date and time at his own risk and responsibilities.
6. Sale of tender document w. e. f. dt.17-12-2020.
7. Last date for sale of tender document dt. 06-01-2021, 5.30 P.M.
8. Last date for receipt of tender document dt.06-01-2021, 5.30 P.M.
9. Date for opening of tenders/Technical Bids dt. 07-01-2021, 11.30 AM. onward.
10. The bidders are required to depute their representatives to remain present during opening of Tender/ Technical Bid as per dates mentioned above.
11. The tenders received after the stipulated date shall not be taken in to consideration and liable for rejection.
12. The tender calling authority has the right to cancel or alter quantity of any of above item without assigning any reason thereof.
13. Address.
Directorate General of F.S, H.Gs & C.D,
At-3rd Floor of Vigilance Directorate,
Nuapatna, Cuttack, Pin-753001
FAX-0671-2300201/ 2303387.



**I.G of Police, Fire Service,
Home Guards & Civil Defence,
Odisha, Cuttack.**

Address - 3rd Floor, Vigilance Building, Nuapatna, Buxibazar, Cuttack-753001
Tel. - 0671-2300317, Fax : 0671-2300201,
E-mail : dfoprov-ofs@gov.in, afoprov-ofs@gov.in

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**



**DIRECTORATE GENERAL
FIRE SERVICES, HOME GUARDS & CIVIL DEFENCE,
ODISHA**

Letter No. _____/Prov., Dated. - -202 .

To

M/s

TENDER CALL NOTICE NO.-2/2020-21.

**DIFFERENT TYPES OF EQUIPMENTS AND VEHICLE FOR
ODISHA FIRE SERVICE ORGANIZATION DURING THE
FINANCIAL YEAR 2020-21.**

**DIRECTORATE GENERAL
FIRE SERVICES, HOME GUARDS & CIVIL DEFENCE,
ODISHA**

Certified that the book contains Page- 1 to 55.

1. Sale of tender document w.e.f - dt. 17-12-2020
2. Last date for sale of tender document - dt. 06-01-2021, 5.30 p.m
3. Last date for receipt of tender document - dt. 06-01-2021, 5.30 p.m
4. Date of opening of sealed Tender/
Technical Bids. - dt. 07-01-2021, 11.30 a.m

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

TENDER CALL NOTICE NO.-2/2020-21.

TENDER DOCUMENT NO-(I)

GENERAL CONDITIONS OF THE CONTRACT.

1. The bidder/supplier should either be an Original Equipment Manufacturer (OEM) or their agent /dealers authorized to sell, supply and service their products. The latest authenticated documentary proof of this shall be submitted. The proof submitted earlier in some other context shall not be treated as valid and sufficient.
2. All the information as called for in the tender document should be submitted truly, clearly, legibly, transparently, unambiguously and without the use of abbreviations. It shall be submitted in English.
3. All the crucial figures, like, rates and amount should written in figures followed by words in a bracket.
4. There shall be no over writing in the tender document and other papers submitted.
All the addition, alterations, deletions and cuttings should be initialed with rubber stamp (or seal) by the same person, who signs the tender document. Failing so, the tender may be rejected.
5. The tenders (also call bids) not submitted in prescribed format or in the prescribed manner, shall be rejected at the risk and responsibility of the bidder.
6. All the rates and amounts shall be quoted in Indian Rupees (IR) and shall be presumed to be in Indian Rupees unless specifically permitted to be quoted otherwise in these tender documents.
7. The rates quoted shall be valid for a period of one year counted from last date of receipt of bids/ tenders.
8. Each page of this tender document should be signed by the bidder with seal in token of having read, understood and accepted the terms and conditions of this contract.
9. For the Companies and Corporation making the bids, the tender document shall be signed by the Managing Director. If it is otherwise, the authority to sign the tender papers on behalf of the Company/Corporation shall be enclosed. In case of partnership Firm, it shall be signed by the active partner. In case of a Proprietary Firm, the tender document shall be signed by the proprietor.
10. "Legal Status" of a bidder shall mean either proprietorship or partnership of private/Public limited Company or otherwise (to be specified) as the case may be.
11. All the documents and papers submitted with the bid should either be in English or in Oriya and shall be authenticated under the seal and signature of the bidder unless specified otherwise in this tender document. If the documents are in any other language, a true translation in English, duly certified by an independent person of repute, shall be submitted.

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

12. All the promotional and technical literature of the products intended to be supplied should be submitted for proper appreciation of the bid, whether or not specifically call for in this tender document. This literature should also be in English.
13. Submission of more than one competitive bid by the same firm in response to the tender call notice is prohibited. All such bids, except one, will be cancelled at the discretion of the authority calling the bids. A bidder may, however, offer in his bid more than one product of the same Original Equipment Manufacturer (OEM) if in his opinion, all such products meet the prescribed technical specifications. In that case, he should submit "Technical Bid" of all such products separately but in the same prescribed format, in the same sealed single cover. Separate "Financial Bids" should also be submitted similarly in the same sealed single cover (see below for the meaning of sealed cover).

NOTE

- i) A bidder can not bid the same item for more than one OEM firm.
14. The bidder may use separate piece of paper, where the space provided in the formats in this tender document for submission of information, is not sufficient. The information in the separate sheet of paper shall be prescribed format and each page should be serial numbered and duly authenticated.
15. All the information submitted or supplied in the formats in this tender document shall be presumed to be true to the best of knowledge of the bidder.
16. No firm/Company without valid Value **GST Registration number** and PAN shall be eligible for submitting bids. Firms blacklisted shall also not be eligible for participating in the bid.
17. Copy of Valid Registration Certificate issued by competent Authorities under the **GST Act** and copy of PAN shall be enclosed to the Tender document. In no case other certificates issued by authorities in lieu of such certificates shall be accepted.
18. Copies of income Tax return and Annual VAT and CST returns of previous year along with copies of Audited Balance Sheets, P/L a/c and Trading a/c of previous year where ever applicable need also be enclosed to the Tender document by the Original Equipment Manufacturer / Authorised Agent of OEM.
19. At the time of opening of Tender/Financial bid the bidder will have to satisfy the competent authority that he is not only authorised as per his Registration Certificates to deal in the tendered item but he has also a running business in such items and he has the ability to supply the tendered quantity in prescribed time limit and to meet the warrantee conditions of the product.
20. The Bid Security/ Earnest Money Deposit (EMD) shall either be in the form of Demand Draft/Banker's Cheque of a scheduled Bank payable at Cuttack or by pledging of NSC/FDR/Postal Saving Pass Book all in favour of D.D.O, Directorate General of Fire Service & Home Guards & Civil Defence, Odisha, Cuttack. EMD shall be returned immediately after the rejection of a Bid. The DD/Banker's

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

Cheque/NSC/FDR/Postal Saving Pass Book etc. shall be returned in original with or without reverse endorsement as required for the refund. EMD of the successful bidders shall be retained till the supplied materials/articles are successfully delivered as ordered or adjusted against performance security. After that it shall be returned in the same manner as in the case of unsuccessful bidders.

21. This tender document has prescribed a two bid format for submitting the offers. It contains the "TECHNICAL" and 'FINANCIAL' bid formats. Both the bids shall be submitted in separate sealed cover identified as 'TEHCNICAL' or 'FINANCIAL' bid after detaching their formats from this tender document. Both the sealed covers, the remaining part of this tender document and all the other papers/documents should be put inside a bigger sealed cover and shall be delivered as per conditions published in the tender call notice. All the sealed covers shall have boldly written with the name of the supplier/bidder, the tender call notice number and the last date for submission.
22. The tenders or the bids can be sent by Regd. Post or courier as well. However, the authorities shall not be responsible for the postal and other delays in receipt of bids. The Tenders/ Bids can also be dropped in the sealed "Tender Box" kept in the office of the Tender Calling Authority.
23. If the last date for submission of the tender/bid turns out to be a holiday, it will automatically be extended to next working day.
24. The tender calling authority shall make arrangements in his office for issuing a written acknowledgement, under proper seal and signature of the filled in tenders, provided those are submitted on or before the due date. The acknowledgement shall be issued even if the tenders are required to be dropped in a sealed box. The acknowledgement receipt shall mention, among others, the tender call notice number.
25. A bid submitted can not be withdrawn. The bidder or his authorized representative (one person only) will be allowed to be present at the time of opening of tenders. They will not participate in the discussions. Clarifications sought, if any, may be provided by them.
26. All or any of the tenders (or bid) submitted can be rejected without assigning any reason thereof. No claim, whatsoever, shall be admissible for; the alleged loss/damage suffered by the bidders on account of such rejections.
27. The sealed Tenders and Technical Bids shall be opened by the Technical Committee in 1st stage. The documents like EMDs, GST Regd. No. etc shall be verified to ensure that the bidders have been found to have fulfilled all the prescribed criteria and conditions of this tender document other than technical specifications of the products.
28. All the products, failing to fulfill the prescribed technical specifications, will be rejected. Decision of the Technical Committee in this respect shall be final and binding. A bidder can improve the technical specifications of the product offered

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

before the opening of 'Financial Bid'. Decision of the Technical Committee on, whether or not, the revised specification is an improvement, shall be final. Improvement in the technical specifications offered as above, may be accepted or rejected at the discretion of the Tender Calling Authority.

29. Notwithstanding an offered product meeting the prescribed technical specifications, it may be rejected, if it has not been tried and tested or used in Orissa Fire Service with satisfaction. It may also be rejected if the bidder fails to successful demonstration before the Technical Committee.
30. 'Financial Bids' shall be opened only in those cases, where one or more of the offered products have fulfilled the prescribed technical specifications. No preference or extra payment shall be admissible for the superior technical specifications or quality of the like if any. All the financial documents like Registration Certificate issued under GST Act and IT Acts, IT, S.T returns, Audit Balance Sheet, Trading Account and P/L Account shall be verified at the time of opening of Financial Bids.
31. All the prices quoted shall be FOR Cuttack, Odisha. This means that the prices shall include the cost of delivery at Cuttack.
32. The authorities are not bound to accept the lowest Financial Bid.
33. The order for supply may be placed on the successful bidders but the technical specifications (or quality requirements) for the purpose of supply shall be those, which were offered and accepted by the Technical Committee and not those specified in the tender document.
34. On delivery, the supplies or products shall be inspected to verify the quantity and to see whether those are in accordance with the technical specifications (or quality requirements) for which the order was placed. If it turns out to be otherwise the acceptance of delivery shall be refused at the risk and responsibility of the supplier. Further, the articles found damaged shall not be counted as accepted until repaired or replaced to the satisfaction of the authority.
35. Short deliveries may not be accepted. All the items ordered must be supplied in full for claiming even the part payment.
36. All the transit risks shall be the responsibility of the supplier.
37. User manuals of the product shall be supplied without being asked for or even if it is not mentioned in the supply order. Moreover, it should be in English.
38. Failure to supply the order in full within the stipulated period or supply of substandard goods may lead to forfeiture of EMD and blacklisting of the suppliers. If at all the delivery is allowed to be accepted after the due date, Liquidated Damages (LD) @ 0.5% of the total amount of order (excluding taxes) per week or part thereof shall be charged from the bidder, however, that the L.D. shall not exceed 5% of the amount of order.

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

39. The supplier shall submit an undertaking given by him or the OEM committing to supply spare parts for the maintenance of the supplied items for a period at least 18 months from the date of supply.
40. The supplier shall give a "Performance Warranty" for a minimum period mentioned in the special condition or one year of the contract. 5% of the amount of the order (excluding taxes) as mentioned in the special conditions of the contract shall be deposited in shape of FDR/Irrevocable Bank Guarantee duly pledged in favour of Tender Calling Authority and shall be returned after the performance warranty period is over. The said amount may be forfeited partially or fully for failure to fulfill the terms and condition of supply and post sales commitment/obligations. The Bank Guarantee should be enforceable and payable at Cuttack. The Performance Security should remain valid for a period of 60 days beyond the date of completion of the obligation of the supplier including warranty obligations.
41. The bidder must submit in a separate paper mentioning "complied or not complied" against each column of the Tender Specification given in the Tender document.
42. Terms and conditions of this tender document can not be negotiated for variation without obtaining the prior approval of the Govt.
43. All the clarifications sought from the bidders/suppliers on technical specifications of the products or otherwise shall be promptly submitted in a transparent and unambiguous manner.
44. Entire tender document duly filled in shall be treated as part or the contract agreement for supplies in case of the successful bidders.
45. All the disputes shall be subject to jurisdiction of Civil Courts situated at Cuttack.
46. The bidder shall submit all required documents along with tender. Under no circumstances a bidder would be allowed to make any addition/ alteration if any, related to tender or to submit required documents after receipt of the tender by the tender calling authority.

Seal & Signature of the Bidder



**I.G of Police, Fire Service
Home Guards & Civil Defence,
Odisha, Cuttack.**

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

TECHNICAL BID

SL.NO.	NAME OF THE ITEMS.	WHETHER OFFERED PRODUCTS FULFILLS THE DETAILED TECHNICAL SPECIFICATIONS KINDLY ANSWER YES OR NO ONLY.	OFFERED SPECIFICATIONS AND DETAILS OF VARIATIONS IF ANY.
1	2	3	4

Signature & Seal of the Bidder.

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

FINANCIAL BID

TENDER CALL NOTICE NO.-2/2020-21.

NAME OF THE ITEMS..... PER UNIT IN INDIAN RUPEES

1. Price including all the duties & levies :
2. Basic Unit Price :
3. IGST @ - % - :
4. CGST @ - % - :
5. OGST @ - % - :
6. Other Charges (To be specified)
7. Total Unit price of the Item :
8. Total amount payable for supply of
entire quantity of the item mentioned
in the tender document. :
9. Name of the Original Manufacturers and
The brand name or trademark of the item :

Signature & Seal of the Bidder.


TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

GENERAL BID FORM

(TENDER CALL NOTICE NO.-2/2020-21)

1. Name, Full Address, Fax No.
Telephone No. & E-Mail of the firm. :
2. Legal status of the firm :
3. Items for which you have submitted
the Bid :
4. For which of the items above you are the
ORIGINAL EQUIPMENT MANUFACTURER
(OEM) :
5. Give the location and Address of your
Factory. :
6. For the items listed at (3) above and
where you have submitted the bid but
you are not the O.E.M. indicate against
each the names of the O.E.M :
7. Kindly confirm by writing 'yes' or 'no' only
that you have been authorized by the
respective O.E.Ms either as dealer or as
sale, supply and servicing agent in respect
of the items you are not the (OEM) :
8. Which of the items, you have submitted
the bids for, will be fully or substantially
imported. Indicate the country to be
imported from. :
9. Have you enclosed the EMD? If yes,
mention the amount and its identifying
details.
10. Have you enclosed all the documents
and papers called for in this tender
document? Kindly enclose a list(use
a separate sheet of paper) :
11. If the answer to (10) above is 'No' which
is the documents/document have not been
enclosed.(Kindly enclose a list of such
documents/papers).Use a separate sheet
of paper if necessary. :
12. Do you have a post sales servicing,
center in Odisha? If yes, give its name,
full address, Fax and Telephone numbers.

Seal & Signature of the Bidder


**I.G of Police, Fire Service,
Home Guards & Civil Defence,
Odisha, Cuttack.**

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

SPECIAL CONDITION OF THE CONTRACT.

TENDER CALL NOTICE NO.-2/2020-21.

TENDER DOCUMENT NO. (II)

1. The Special Conditions given here shall prevail over the General Conditions.
2. **Bid Security:** - The tender document shall accompany with Earnest Money Deposit (EMD) at the rate quoted at Col-5, Para-3 without which tender shall be rejected. The EMD deposited instrument should be available outside the sealed covers of "Technical" and "Financial" Bid. (EMDs available in the Technical Bid also be accepted). However the MSEs registered in Odisha with respective DICs, Khadi Village, Cottage and Handi craft Industries, OSIC and NSIC shall pay 25% of the prescribed security deposit while participating in tender.
3. **Quantity:** - Sealed Bids in this tender document have been invited for the supply of the items listed below. The approximate quantity required has been mentioned against each. The detailed technical specifications of each item are available in the **Annexure-'A'** to "Special Conditions of the contract" identified against each.

Sl No.	Name of the item	Approximate Quantity	Technical Specification	E.M.D Value
1	2	3	4	5
1	Advance Rescue Tender	01 No.	Technical Specification as Annexure-A	1,80,000/-
2	Mechanical Power Saws.	---	---	---
	i) Mechanical Power Saws (Bar Length- 36")	100 Nos	-- do --	1,20,000/-
	ii) Mechanical Power Saws (Bar Length- 24")	200 Nos	-- do --	2,40,000/-
3	Fireman Helmet Fitted With Head Lamp	1700 Nos	-- do --	6,80,000/-
4	Safety Gloves (Medan)	1700 Prs	-- do --	1,70,000/-

4. The quantities mentioned above are subject to variations. The rates quoted per Unit shall continue to be valid even if the quantities of items mentioned above are varied. Further, the bidder should certify that the rates quoted by it or any item listed above shall remain valid subject to variation in any Govt.

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

Tax Structure on the same (i.e. base price of the item quoted shall remain valid irrespective of variation in the Tax Structure) for a period of one year from the date of finalization of the rate by the Purchase Committee.

5. It shall not be necessary to bid for all the items above.
6. The bidder shall submit along with this tender document a list of names, complete address, Telephone/FAX number of the customers to whom, the item, for which the bid has been submitted, have been supplied and installed in last three year, if any. A clear, unambiguous statement shall be made if an item has not been sold anywhere in India so far.
7. The supplies shall be delivered at Cuttack.
8. Working of the equipment shall also be demonstrated and the expenditure incurred thereof shall be borne by the supplier.
9. The supplier shall train at their cost our employees.
10. **Performance Security:** - The successful bidder shall have to enter into an agreement with the Tender Calling Authority for successful completion of supply/ installation of the tendered items after proper inspection within the stipulated period and also for performance warrantee of the items from the date of supply/ installation up to a period of one year. In this regard the selected firm shall have to deposit 5% of the cost of stores excluding taxes as security deposit called as Performance Security in shape of FDR/ irrevocable Bank Guarantee duly pledged to the Tender Calling Authority which will be returned back after performance warrantee period is over. The Performance Security should remain valid for a period of 60 days beyond the date of completion of the obligation of the supplier including warranty obligations.
11. All the supplies made shall be subject to a minimum period of one year warrantee for all items.
12. OEMs/ Authorized vendors should mention the price of the quoted tender items including respective period of AMC cost as mentioned in the specification. The basic price of quoted items mentioned in the Financial Bids of OEM/ Authorized Vender should be treated along with the AMC Cost.
13. Other things being equal, preference shall be given to a bidder, who has opened his sale and service center in Odisha.
14. If an equipment or supply goes out of order within the warranty period and the supplier is informed above it, It must be attended to within 48 hours counted from the time the service call is placed.
15. **Payment:** - No advance shall be paid. 100% of the payment will be made on delivery of supplies after successful installation and demonstration.

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

16. The firms located outside the State of Odisha should include their transportation charges with the basic price.
17. Entry Taxes, if any should be clearly indicated in the tender. The amount if paid by the party should be supported with documentary evidence, failing which the said amount shall be deposited by way of Treasury challan.
18. The bidder must attend the Technical Committee with samples for evaluation/ demonstration purpose. Without sample the offer will be not taken into consideration.
19. Before under taking the final contract the successful tenders will have to enter into an agreement with the department at their own cost in Govt. stamp paper.
20. **Sample:** - The tender shall accompany samples of the items quoted. No rate shall be quoted without furnishing the sample. In case the rates are quoted without samples, the tender is liable for rejection. The parcel containing samples should be freight paid. A label with seal and the details of manufacturing unit/ company with trademark of the articles so tendered, if any should be affixed to the sample. The label should contain a reference to the serial number of the articles quoted/ indicated in the tender. In respect of all ISI products mentioned in the tender the relevant ISI mark shall be printed on the sample. For each item not more than 2 (two) variety of samples shall be submitted by a vender.
21. As regards ISI marked, the attested copies relating to valid Registration of IS number of the item, if obtained from Indian Standard Bureau, New Delhi are to be enclosed.

Seal & Signature of the Bidder



**I.G of Police, Fire Service,
Home Guards & Civil Defence,
Odisha, Cuttack.**

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

Annexure-A.

**TECHNICAL SPECIFICATION OF DIFFERENT TYPES OF EQUIPMENTS
AND VEHICLE FOR ODISHA FIRE SERVICE ORGANIZATION VIDE
TENDER CALL NOTICE NO.-2/2020-21.**

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1. ADVANCE RESCUE TENDER.

1. General Requirement:-

- 1.1 The rescue tender shall be designed on 16 Ton 1801 BHP, 4300 WB, ANY SUITABLE MAKE, BHARAT STAGE VI (EURO VI) COWL CHASSIS specifically for the purpose of use at fires, rescue and other special service calls such as:
- 1.2 To respond different disasters, large fires, major rescue calls and industrial fires which require the use of Breathing Apparatus, Special equipments like rescue tools, cutting tools, Hydraulic tools, Pneumatic tools, Illumination equipments etc.
- 1.3 Major electrical fires in electrical installations or transformers, Road accident, Aircraft fires, Lift, goods transport, railway or machine accidents for which special equipment is required and also major leakages of toxic or dangerous liquids or gases.
- 1.4 To fulfill the above duties, the Rescue tender shall be comprehensively equipped with an electric generator, lifting, cutting, breaking, pulling, pushing gears, oxy-acetylene cutting equipments, portable electrical tools, hydraulic rescue tools, lighting equipment and power driven winch.
- 1.5 The Rescue Tender shall be fast on road and easily maneuverable in crowded streets and normal sharp corners. The overall dimensions shall not exceed the limit specified herein.
- 1.6 The Rescue Tender shall consisting of following main features.
- 1.7 The Rescue Tender shall be designed to carry the equipments in Annexure 'A' & 'B'. The equipment shall be arranged in such a manner so as to allow the crew members to get ready in vehicle itself.
- 1.8 Enclosed driver cabin suitable to accommodate driver, officer and firemen.
- 1.9 Body for stowing all the rescue equipments mentioned in Annexure 'A' & 'B'. The stowing system shall preferably swing out- swing in shelve type with proper fastening arrangement to all the equipment.
- 1.10 Hydraulic operated pulling winch with rated capacity of 6 tonnes.
- 1.11 Hydraulic driven generator having rated capacity of 20 KVA (approx.)

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

1.12 Light mast, extendable up to 4.5 meters with 4 flood light of 1000 watt capacity each.

1.13 Specification and standards:- **As per IS:949-2000 (Latest revision)**

2. Dimensions of Appliance.

The Rescue Tender shall confirm the following dimensions.

2.1 Overall length : 8.40 meters approx

2.2 Overall width : 2.50 meters approx

2.3 Overall height : 2.90 meters approx

3. Driver Cum Crew Cabin.

3.1 The driver and crew cabin shall be as per SMART CAB concept used for fire fighting trucks worldwide as per NFPA recommendations.

3.2 Arrangement shall be engineered such a way that functionality, drivability and roominess of a custom chassis with the serviceability of a commercial chassis shall be maintained.

3.3 The crew seating area shall be at least 90-91"width and 70" headroom. Custom-built operator console shall be provided for instant accessibility to all warning system controls and radios for both driver and officer.

3.4 Large opening shall be provided between cabs for good communication and visibility for all crew. Windshield glasses shall have full curved glass at corners to have greater visibility, Night vision lighting shall be with 2 upper and 2 beams each side.

3.5 Front entry door shall be full opening and low floor steps.

3.6 The shape of the body shall be well designed aerodynamic to decrease air resistance during travel.

3.7 Separate two doors shall be provided for crew members with winding type glass.

3.8 All the interior panels made of moulded FRP or GRP material finished with modular car / coach interior type. Suitable pockets / door pads equipped with bottle holder etc shall be provided.

3.9 The approx. dimensions of driver cum crew cabin shall be as follows:

- Length of cabin - 2400 mm
- Width of cabin - 2400 mm (depending upon chassis width)
- Internal height - 1550 mm

3.10 The driver cum crew cabin shall be fabricated in continuation and in line. The under frame cross members shall be fabricated and made out of rolled M.S. channel of 100 x 50 x 50 mm.

3.11 Each cross member shall be secured to the chassis frame by "U" clamps or

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

any other suitable means.

- 3.12 The super structure of the cabin shall be constructed from various types of GI of suitable size, which are joined together by means of solid and riveting or nuts and bolts.
- 3.13 The super structure shall be strengthened specifically on the members where the doors and windows frames are to be fitted, by providing brackets and gussets.
- 3.14 The details of the super structure i.e. size and type etc. shall be given in the quotation.
- 3.15 All the super structural members and under frame cross members shall be painted with two coats of rust preventive paint.
- 3.16 The complete external paneling of driver cum crew cabin including doors shall be of 16 SWG aluminum sheet with all the joints riveted and braided except the roof top paneling, which shall be of 2 mm thick aluminum sheet.
- 3.17 The domes and corners shall be as small as possible and shall be of 16 SWG aluminum sheet with all joints riveted to the super structural members.
- 3.18 The roof top plates shall be overlapped by 10 mm and riveted in a double row with solid rivets.
- 3.19 The complete internal paneling of driver cum crew cabin shall be of 18 SWG aluminum sheet properly riveted and bedded to the super structural members.
- 3.20 The complete flooring of the driver cum crew cabin shall be fabricated from 10 SWG (3.15 mm) aluminum chequered plates properly fixed to the under frame cross members by means of nut and bolts or riveting. Trap doors for topping up wherever necessary.
- 3.21 The driver cum crew cabin shall be equipped with full four doors, two in front for driver and an officer and two at the rear for crew members.
- 3.22 All the doors shall be fitted on the super structural members, each hung up on three numbers coach type hinges and fitted with best quality N.P. handles.
- 3.23 The windows on all the doors shall be of full lift type and shall be controlled by winding mechanism.
- 3.24 A peep window of 10" x 10" shall be provided at the officers side bottom panel above the floor level for the use of driver to see clearly at the off side.
- 3.25 The glass used for all windows and doors shall be 5 mm thick toughened

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

safety glasses.

- 3.26 The wind screen glass shall be provided in the two halves, if not supported the chassis with front end structure with wind screen glasses.
- 3.27 The windscreen glasses shall be of approved type by the chassis manufacturers. Each glass shall be fitted in E.P.D.M. rubber bedding.
- 3.28 Two fixed type quarter glasses shall be provided between the wind screen glasses and front doors of cabin.
- 3.29 The rubber bedding used for fitting glasses and window frames etc. shall be E.P.D.M. rubber.

4. Seats.

- 4.1 The driver & officer seat shall be provided by the OEM of chassis and the crew shall have individual seating, with each seat fitted with brackets for placement of Breathing Apparatus in an upright position.
- 4.2 The seats shall be of the wear & walk away type so that when the crew dis-embarks from the vehicle, the BA sets should easily come off the seats with them.
- 4.3 The seat bottom will be theatre type, which will automatically flip up when the fireman gets up, thereby freeing up space for easy embarking & disembarking.
- 4.4 The seats shall have integrated seat cushioning to isolate shock while in motion.
- 4.5 They shall have a fixed type, seat-back recline, to improve rider comfort & an auto-pivot & return headrest for rapid egress.
- 4.6 The seats shall accommodate all types of B.A Sets. If there is space available, the seats shall be fitted with flip-up armrests.
- 4.7 The seats shall be of HO Bostrom (Tanker Series), Seats Inc (Battalion SCBA Crew Flip Seat) or equivalent make only.

5. Body & Stowage.

- 5.1 The equipment body shall be mounted on the chassis in such a way that no alteration or modification shall be done to the chassis.
- 5.2 No torsional force should act on the frame even operating on bad roads. Roller shutter and equipment storage should not be subjected to stresses.
- 5.3 The lockers shall be expediently sub divided carefully for storing the equipments.
- 5.4 The dimension of the rear body i.e. length, width and height of the body shall be constructed depending upon the number of equipment to be kept in

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

the locker, hydraulic winch, generator etc.

- 5.5 The rear body shall be fabricated in continuation and in line.
- 5.6 The under frame cross members shall be fabricated from the rolled M.S. channel of 100 x 50 x 50 mm.
- 5.7 The cross members shall be secured to the chassis by "U" clamps or any other suitable means.
- 5.8 The super structure of rear equipment shall be constructed from various types of GI of suitable size, which are joined together by means of solid riveting or nuts and bolts.
- 5.9 The super Structure shall be strengthened specifically on the members where the doors and window frames are to be fitted by providing brackets and gussets.
- 5.10 The details of the super structure i.e. size and type etc. shall be given in the quotation.
- 5.11 All the super structural member and under frame cross member shall be painted with two coats of rust preventive paint.
- 5.12 The complete internal and external paneling of the rear body, doors shall be of 16 SWG aluminum sheet with all the joints riveted and bedded.
- 5.13 The complete flooring of rear equipment body shall be covered with 10 SWG (3.15 mm) aluminum chequered plates rigidly fixed to under frame cross members by means of riveting or by nuts and bolts.
- 5.14 The complete top deck of the rear equipment body shall be made with 10 SWG (3.15 mm) aluminum chequered plates rigidly fixed to super structural members by means of solid riveting.
- 5.15 All the joints are properly bedded and over lapped to avoid leakage of water inside.
- 5.16 Aluminum piped railing shall be provided over the top deck with suitable brackets.
- 5.17 All the main locker shall be provided with aluminum rolling shutters, which should be water and dust proof & shall be of MCD.
- 5.18 Sufficient lighting shall be provided in all the lockers with an automatic switches which will operate as soon as the shutter is open position.
- 5.19 Under the equipment body, small lockers shall be provided with flap door, opening down ward, which can be used as steps in open position.
- 5.20 Suitable steps shall be provided wherever necessary to reach all the equipment without difficulties.

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

- 5.21 The storing facility shall be provided for keeping all the equipments and gears mentioned at Annexure 'A' & 'B', which shall be as per the latest international standards.
- 5.22 The storing rack shall be "ROLL IN ROLL OUT" type drawers giving easy and immediate access to all the equipments.
- 5.23 All the equipments shall be stowed very scientifically and systematically in the drawers and each piece of equipment with its designated location so that at the time of emergency, the required equipment can be easily located and removed for use.
- 5.24 Location of equipments (labels) shall be provided on each drawer for immediate identification.
- 5.25 Proper fastening arrangement i.e. with the help of belt or by clamps shall be provided in each drawers for each equipment to prevent shifting of the equipments while the vehicle is in motion.
- 5.26 All the drawers, racks shall be fabricated from 10 SWG aluminum sheets and will have self locking system to prevent accidental opening while the vehicle is in motion.
- 5.27 The drawers should be made to the required size of the equipment that is to be stowed.
- 5.28 The lockers shall be covered with "PUSH - PULL TYPE" ALUMINIUM ROLLER SHUTTERS.
- 5.29 The aluminum shutters shall be made of extruded aluminum sections.
- 5.30 The shutters shall be roller type and not sliding type, preferably the imported shutter MCD shall be used for better performance and long life.

6. Built In Hydraulic Cable Winch.

- 6.1 A reputed make built in cable winch shall be provided which will driven hydraulically. The cable winch assembly shall be fully imported unit.
- 6.2 The capacity of the cable winch shall not be less than 6 ton with minimum 30 meters cable rope length.
- 6.3 The cable rope shall be provided with anti corrosive treatment (galvanized).
- 6.4 The cable winch assembly shall be mounted inside the chassis frame at suitable place with strong mounting brackets.
- 6.5 The pulling direction shall be in the front and the winch controlling mechanism shall be provided in the driver's cabin. Four wheel chokes shall also be provided.

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

7. Built In Hydraulic Generator.

- 7.1 Heavy duty AC power generator of reputed make shall be mounted at suitable place inside the vehicle to provide continuous power source to operate different rescue gear as well as for lighting purpose.
- 7.2 The system will be very compact light weight and noiseless.
- 7.3 The output capacity of generator shall be 20 KVA, 1/3phase, Power factor 0.8, Approx size- 924 x 350 x 462, weight not more than 120 Kg.
- 7.4 Suitable drive arrangement shall be made through on board PTO.
- 7.5 **Authorization letter and catalogue from System manufacturer shall be attached with bid document.**
- 7.6 The generator shall have 230/400 AC single / three phase power supply lines 50 Hz frequency, 0.8 power factor.
- 7.7 The generator shall have extended shaft on either side for driving the hydraulic pump for cable winch if hydraulically operated winch is offered.
- 7.8 The generator shall be brushless design.
- 7.9 The built in generator shall be provided with fully integrated control panel housed at convenient place in one of the locker and fully protected from rain water, dust and humid atmosphere.
- 7.10 The control panel shall have the following controls, gauges, meters and supply lapping points.
- | | |
|---|----------|
| i) AC volt meter | : 01 No. |
| ii) AC ammeter | : 01 No. |
| iii) Frequency meter | : 01 No. |
| iv) Operating hour counter | : 01 No. |
| v) MCB for light mast | : 01 No. |
| vi) MCB for 230 volts, 15 Amp/5 Amp socket outlet | : 03 Nos |
| vii) MCB for 3 nos. 440 volt socket outlet | : 03 Nos |
| viii) MCB for control panel illumination | : 01 No. |
| ix) Throttle control for engine speed adjustment | : 01 No. |
| x) 12/24 volt DC socket outlet | : 01 No. |

8. Telescopic Light Mast.

- 8.1 A compact, low profile, roof mounted folding type, lighting mast preferably **FIRECO/ TEKLITE MAKE**, fitted with 4 × 1500 watts waterproof halogen lamps.
- 8.2 The mast shall be elevated and vertically extended up to 4.5m pneumatically from the rooftop.

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

- 8.3 The mast shall be installed on the roof of the vehicle at a suitable location.
- 8.4 The light mast shall operate in temperatures of -40 deg. C up to 60 deg C, with anti-twist lock, with safety valve and drainage outlet valve.
- 8.5 The mast will be equipped with an internal spiraled electrical cable with 9 wires with a section each of 1.5 mm² and 13 wires with a section each of 0.22 mm², the group of 13 wires will be screened.
- 8.6 Each section of the mast should have a thickness of not less than 3.5 mm².
- 8.7 The telescopic mast should be extremely wind resistant and designed with a minimum of 4 sections and it will be equipped with an internal spiraled electrical cable with 9 wires with a section each of 1.5 mm² and 13 wires with a section each of 0.22 mm², the group of 13 wires will be screened.
- 8.8 Each section of the mast should have a thickness of not less than 3.5 mm².
- 8.9 Each section of the mast should have a water drainage outlet.
- 8.10 The folded and stowed height should not be more than 1800 mm.
- 8.11 The Light mast will have Halogen flood light and reflectors in weatherproof casing.
- 8.12 The floodlights on the top should have a minimum electrical rotation of 360° and a tilt of 310° Suitable connections for taking permanent Power Supply from generator set through an internal spiral wire mounted inside the mast should be provided.
- 8.13 A safety device must be added, by means of an infrared sensor that will stop the movement of the mast when tilting to the parking position in case any obstacle is detected on the way down.
- 8.14 All the functions of the mast, including extension and return to the original position, lights on/off, automatic restore should be capable of being done through a wired remote control.
- 8.15 The same remote control must work without wire (wireless mode) through a male/ female connector IP68 which keeps the battery under charge, whenever the remote is plugged and there is tension on the power circuit.
- 8.16 Every single input given by the user, no matter which, will be confirmed by a visual led and an additional led will confirm the battery status; every single group of 2 lights when switched on will have a corresponding led a light on the remote control that will go off only when the lights will be switched off.
- 8.17 Every single input given by the user on the remote control will make the whole remote keyboard alight for not less than 15 seconds.

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

9. Led Light Bar.

- 9.1 GRAND/ SOLPHIN make LED light bar along with two tone hooter with PA system shall be provided and fitted on the roof of the drivers cabin.
- 9.2 It should be elegant low energy consumption and should have maximum light dispensing and audio warning.
- 9.3 Each rotary light should be independently powered by a rugged motor and a friction pulley drive with following approx. specifications.
 - Length - 1020 mm
 - Width - 260 mm
 - Height - 110 mm
- 9.4 Grab rails and non-slip steps shall be provided to give access to the roof of the appliance and for easy and speedy removal and mounting of equipment including ladder.
- 9.5 Pull-out sliding steps shall be provided for easy removal of equipment from stowage tray.

10. Ladder Gallows:

- 10.1 Ladder Gallows shall be provided to carry aluminum extension ladder of 10.5 meters height and maximum weight shall not exceed 48 Kg.
- 10.2 The design of the gallows shall be such that the ladder can be released without difficulty from a reasonably accessible position.
- 10.3 The gallows roller rods types (gantries) shall be fabricated. Suitable means shall be provided for locking the ladder when stowed.

11. Ladder.

- 11.1 Trussed Type Aluminum extension ladder of 10.5 meter height conforming to IS 4571-1977 shall be provided with the appliances.

12. Stretcher Ladder.

- 12.1 In addition, two aluminum stretchers shall be mounted separately on the appliance in such a way that they would be easily, quickly and independently removed, when required.
- 12.2 The stretcher ladder shall have the following dimensions:
 - Length- 2 Mtrs.
 - Width- 600 mm
 - Rung Space- 210 mm
- 12.3 It must be Scoop type.

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

13. Stability.

13.1 The stability of the appliance shall be such that when under fully equipped and loaded condition (equivalent weight of crew to be loaded in lieu of crew) if the surface on which the appliance stands tilted to either side, the point at which over turning occurs is beyond angle of 27 degree from the horizontal.

14. Workmanship and Finish.

14.1 The standard workmanship and finish of all mechanical and other parts shall be such that the parts normally required to be replaced can be supplied and shall fit in correctly. Equipment as per Annexure-I shall be supplied stowed in ERT at suitable location in compartment and lockers.

14.2 The emergency rescue tender shall be painted with FIRE RED as per IS:536.

14.3 The paint shall conform to IS 2932 - 1993.

14.4 The words "Odisha Fire Service" in English & Odia with Logo of Odisha Fire Service shall be painted on both side of vehicle.

14.5 The driving compartment, crew's compartment and inside of lockers shall be painted cream.

14.6 All other parts except engine shall be painted in black.

14.7 Necessary anti-corrosion and priming coats shall be applied before painting.

14.8 The choice of materials to be used in the construction of the appliance shall be made with a view to combining lightness with strength and durability.

14.9 Timber shall not be used in the body construction.

14.10 The appliance shall be required for use in conditions with constant high humidity and heat. This shall be given full consideration while selecting the materials.

14.11 All metal parts exposed to atmosphere shall either be of corrosion resisting material or treated to resist corrosion.

14.12 Ferrous metal shall not be used for nickel or chromium plated fittings and the plating of all such fittings shall be of extra heavy quality.

15. Miscellaneous.

15.1 A suitable bumper shall be provided at the rear rigidly fixed to the super structural members by means of nuts and bolts which is supplied along with the chassis.

15.2 Two folding ladders made out of S.S. round or square pipe of 11 diameter shall be provided at the rear of the vehicle to facilitate access to the rear

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

deck.

- 15.3 2 numbers of 111 diameter aluminum pipe railing with sufficient number of aluminum double socket brackets shall be provided to the rear body over the deck.
- 15.4 A heavy-duty towing hook shall be provided and fitted the rear bumper by means of nuts and bolts.
- 15.5 Quick removable type wire mesh guard made from 111 X 111 size MS wire mesh of 16 SWG covered in MS angle frame shall be provided to all the glasses of driver-cum-crew cabin.
- 15.6 A 10.5 m aluminum Trussed type extension ladder shall be mounted on suitable gallows fitted with rollers and designed to facilitate easy and quick removal of the ladder from the rear of the appliance.

16. Instruction Book: -

- 16.1 6 Sets of illustrated books for the guidance of the user, including both operating and normal maintenance procedures, for the appliance, machinery, equipment and gadgets shall be supplied with the appliance.
- 16.2 The books shall include itemized and illustrated spare parts list giving reference to all wearing parts.
- 16.3 **Marking:-** Shall be done as per our choice/ norms.
- 16.4 **Drawing for approval:** - Dimension general arrangement drawing of views, cross sections, layout of various main equipment/ accessories, technical parameters shall be submitted with tender.

17. Scope for supply, Work and Training: -

- 17.1 All necessary working tools and set of special tools required for maintenance of the appliance and equipment as mentioned in Annexure-I shall be supplied.
- 17.2 Spare parts catalogue and test certificate shall be provided with appliance.
- 17.3 Necessary training shall be imparted by the bidder for safe operation and maintenance of the appliance and all equipments provided by the supplier.

18. Acceptance Tests: -

- 18.1 Road test/ stability test shall be carried out as per standard practice.
- 18.2 Practice demonstration of all rescue tools, machinery's gadgets, equipments etc. shall be imported.
- 18.3 Test certificate shall be submitted for all imported safety/ personal protective equipments.
- 18.4 Inspection: Three stage wise inspection shall be carried at your workshop.

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

19. Accessories:

19.1 The following accessories shall be provided in addition to those normally fitted on the chassis.

- | | | | |
|-------|--|---|---|
| i) | Fire Bell | : | 01 No. (as per sample) |
| ii) | Electric siren (1 KM range, Kheraj make) | : | 01 No. |
| iii) | Fog Lamps (halogen) | : | 02 Nos |
| iv) | Reversing Light | : | 01 Pair |
| v) | Illuminated Trafficators | : | 01 No. |
| | Search light with 30 M cable reel | | |
| vi) | Spot light | : | 01 No. |
| vii) | Red blinker light | : | 01 No. |
| viii) | Revolving beacon light | : | 02 Nos |
| ix) | Wind screen wiper set | : | 01 Set |
| x) | LED light bar with PA system | : | 01 Set (GRAND/ SOLPHIN) |
| xi) | Tool Box | : | 01 Set (With all required standard tools) |
| xii) | Locker Lights | : | As per NMMC's requirement |
| xiii) | Tail Lamps | : | 02 Nos |
| xiv) | Rear reflectors | : | 02 Nos |
| xv) | Connection for trailer lighting 10V - DC | : | 01 No. |
| xvi) | Inspection lamp with socket | : | 02 Nos |
| xvii) | Led work light 03 nos on each side of the vehicle and 02 nos on rear side of the vehicle | | |

List of the Equipments to be supplied with the Advance Rescue Tender

Sl. No.	Item	Quantity
1	<p><u>Self- Contained Breathing Apparatus: -</u></p> <ul style="list-style-type: none"> • The set shall be self-contained open circuit type compressed air breathing Apparatus set fully confirming to EN 137:2006 (type-2) or equivalent standard. Each Breathing Apparatus set shall be supplied inside a carrying box/ case. • Materials: The material used for the construction of BA set shall have adequate mechanical strength, durability, and resistance to deterioration. The material used for the construction of various parts of the set shall be as far as possible anti-static in nature. • Mass: The mass of the ready to use set with facemask back plate & fully charged compressed air cylinder shall not exceed 13.00 kg. • Back plate (body harness): Anti-static back plate made from glass-filled polyamide material for resilience and impact resistance, with carbon fibre for strength fitted with a rubber shocker at the base. It shall be ergonomically designed with minimum two integrated moulded carrying handles. • Face mask: Full mask assembly shall be with reverted edge seal and made of Ethylene Propylene Dine M-rubber (EPDM)/silicone material with flame resistance requirement meeting EN 136:1998 clause III. • Air cylinder: The air cylinder shall have a minimum water capacity of 6.8 liters and free air capacity of min 2040 liters when filled at a pressure of 300 bar. • Valve to be in line type & complied in accordance to EN/ISO/BIS standard. • The cylinder shall be aluminum lined, fully wrapped carbon composite materials. • The weight of the cylinder when fully charged shall not be more than 7 kg. • The cylinder shall be approved by PESO, India.(Petroleum & explosive safety organization) • Pressure reducer: The set shall be supplied with a small, light, sturdy and encapsulated, high air delivery pressure reducer valve which directly be fitted to the cylinder valve assembly. • The pressure reducer valve shall have a high-pressure outlet and low-pressure outlet with a warning whistle. • The reducer shall be capable of supplying peak air flow at the rate 1400 lit/ min. & 1000 lit/min at normal condition. The reducer shall be of the "balanced" type, ensuring that output pressure to the demand valve is stable and constant with varying input pressure down to 20 bars. • LUNG DEMAND VALVE (LDV): The set shall be provided with plug-in 	04 Sets

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

	<p>quick removable type lung demand valve (LDV) with a rubber hose having a quick connect coupling connected to the low-pressure side of pressure reducing valve.</p> <ul style="list-style-type: none"> • Pressure gauge: The mechanical/ digital pressure gauge should be provided to check the pressure on the Cylinders. The mechanical/ digital pressure gauge should be self-luminescent and it should rotate 360 degree. • Hoses: The Single Line hose should combine Medium pressure supply for lung governed demand valve, High pressure supply for the gauge, Warning signal and 2nd man connection. • It should have accessories like mechanical pressure gauge, hoses, rescue hood and smoke hood. • DSU- The set shall have the provision of Distress Signal Unit and the duration time should be 20 to 40 second. 	
2	<p><u>Chemical Protective suits 'A' Type Chemical Suit.</u></p> <ul style="list-style-type: none"> • Fully encapsulated, vapor-protective suit (Level A), expanded back, sealed seams inside and out, 48'' zipper, double storm flap with Velcro®, 2 layer face shield (10 mil Teflon®/40mil PVC), 3 layer glove combination of Butyl®, North® Silver shield® and outer knit Kevlar®, 2 Pirelli® valves, attached sock boots with boot flaps, 1.5'' waist belt with 3 belt loops sewn (inside) and sealed. Storage bag included. This garment offers Level A protection. • Tychem® TK/ Honey well or equivalent reputed firm is the best protection you can wear in hazardous chemical environments. This line of chemical protective clothing is especially suited for protection against toxic, corrosive gases, liquids and solid chemicals. • It must be extremely durable and puncture resistant. The chemical barrier properties of TK have been tested against 260 challenge chemicals. Permeation data proves the excellent protective capabilities of Tychem® TK. Tychem® TK garments are all lime-yellow in color, highly visible in both bright and dim light. Easily seen in hazy or smoky environments, this line-up of chemical protective clothing is the first line of defence. 	04 Set
3	Chemical Protective Suits 'B' Type	04 Nos
4	<p><u>Fire Entry Suit:-</u></p> <p>"Fire Entry Suit" shall be designed for the purpose of safety extinguishing fires that occurs during hazardous situation with a capacity to handle fire up to 1093° C temperatures. The suit consist of a coat with long sleeves, a double storm fly front, a pouch to carry the cylinder for the breathing apparatus, pants, a hood, boots and gloves, all constructed with multiple layers the garments that make of the fire entry suit are all stitched using superior quality DuPont 4-ply Kevlar thread. It shall be usually provided with adjustable strap while the pant hood can be kept in</p>	02 Nos

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

	<p>the built-in shell. In order to provide thermal protection to the eyes, the fiber glass helmet has tempered glass and two gold plated lenses. The boots that accompany the suit are fitted with oil and hit resistant soles thus providing a fire fighter with complete security from any kind of fire related danger.</p> <ul style="list-style-type: none"> • The visor of the hood is made from mica and tinted polycarbonate. The helmet is manufactured using IS-2745 standard fiberglass helmet and attached with two elasticized straps for a better grip. • The material technology, design, construction and workmanship should be certify to EN 1486. • The suits outer material has a special aluminization technology called Dual Mirror which enables a much better radiant heat reflection compared to conventional aluminized fabrics. The base fabric is a knitted vergin, para-aramide that is extremely light in weight. • The second layer is a moisture barrier which prevents water penetration. • The third layer, i.e. the thermal barrier, consists of an Aramid/ Viscose FR inner lining quilted to two layers of inherently flame retardant felt. This to-layers felt enables more air to the trapped between the layers causing much better insulation against heat. • Weight: - It should be 9 Kg to 10 Kg with boots (without SCBA and carrying case.) • Garment layer:- <ul style="list-style-type: none"> • Outer shell - Dual mirror Aluminized knitted KEVLAR fabric. • Moisture Barrier - FR non woven with PU membrane. • Heat Barrier - 2 layers of FR felt. • Inner lining - Aramide/ Viscose FR. • Sewing thread - 100% Kevlar dual mirror. 	
5	<p><u>Fire Proximity Suits</u> -</p> <p>The suit should be a two piece design (Jacket & Trouser) garment and should have an outer layer made of Inherent FR material followed by a Moisture Barrier and Thermal Liner (three layers minimum). It should have FR reflective tape on both garments for reflection in dark/ smoky environment. Should be CE marked and certified to EN-469 standard. Should be supplied complete with a Multi Layer Fire Fighter Gloves CE marked and certified to EN659 standard; a Balclava Style Hood made of Inherent FR material - CE marked and certified to EN-13911 standard; A pair of Fire Fighter Gum Boots made of FR Rubber or Leather with pull-up loops, Steel Toe, Mid-Steel Sole. Boots should be CE marked and Certified to EN-345-2 standard; A Fire Fighter Helmet with visor and Neck Protector, CE marked and Certified to EN-443 standard.</p>	02 Sets

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

6	Oxy-acetylene cutting set	1 Set
	i) Oxy-acetylene cutting set, complete with 5 l cylinders or equivalent and 10 m lengths of tubing, portable or trolley mounted	
	ii) Oxygen cylinder, spare	01 Set
	iii) Gauges for oxy-acetylene cutting plant	01 Set
	iv) Leather gloves Hand Gloves (Ordinary working) The shell should be made of 10-gauge poly cotton coating material should be natural. Rubber latex finishing should be palm coated. Cuff Style should be knit wrist Length should be 220-260 mm colour of the shell should be grey and the coating should be in blue size availability: 7-10.It should be washable.	02 Pairs
	v) Dark Glass Goggles	04 Pairs
7	Chain tackle 2 tons (Chain pulley block)	01 Set
8	Tarpaulin 12 ft X 12 ft:- a) Size :-12 meter x 12 meter, b) Material:- Made of water proof canvas cloth, its edges should be secured by stitching a strip of similar cloth or otherwise of 1" width along the periphery of Tarpaulin. c) Colour - Green/ Navy blue, <u>BIS Specification - 1.</u> Basic fabric: shall be made from cotton duck or cotton canvas. Common proofing shall be prepared with the ingredients consisting essentially of paraffin wax, a suitable pigment and aluminium serrate. Resistance to microbial treating with suitable rot-proofing agent. 4. Sweating test- The common proofed canvas/ duck shall not stain the blotting paper when tested as prescribed Braking strength not less than 90% of specified value prescribed for the basic fabric. (IS: 2089-1977)	02 Nos
9	Pulling and lifting machine shall be capable of lifting 3 tonnes or pulling 5 tones with hook facilities.	01 Set
10	Portable, electrically operated, circular saws, 220 - 250V, single phase min 2500 W, 4500 RPM, with Disc Diameter max - 300 mm [12"], Arbor size - 22.2 mm, Weight - not more than 12kg, With soft start technology built in within electronic control box, Diamond Tip Blade of 12" dia, 5000 RPM, Arbor size - 22.2 mm, Thickness - 3.5mm - 2 Nos and Composite Blade of 12" dia 5000 RPM, Arbor size - 22.2 mm, Thickness - 3.5mm with a set of 5 blades having capability of cutting various material such as Rails, Aircraft alloys, vehicle panels, metal roller doors, wooden frames, etc.	04 Nos
11	Portable, electric drill with different size drill bits Electric Drill Machine: <ul style="list-style-type: none"> • Input power: - 450 W, No load speed: variable 0-3000 RPM. Light Weight • Shock proof body with different sizes of bits for both metal & wood. • Electric drill bit Set (Complete set of 19 bits) Bits used for wood & 	01 set

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

	<p>metal cutting, Bit Diameter: 1mm-10 mm, compatible with drill machine, Material, High speed steel, Hardness: 760 HV Min. 900 HV Max, Hand of cutting specified Right, Each center drill shall be covered with a suitable rust proofing material.</p> <p>Accessories-</p> <ul style="list-style-type: none"> • Drill bit for metal & wood 2 sets • Drill reversible 2 sets 	
12	Engineer's tools kit	01 set
13	100 ft long 16 mm dia BOB rope	02 Lengths
14	40 ft long 12 mm dia BOB lashing lines	02 Lengths
15	20 ft long 10 mm dia BOB rope	01 Length
16	100ft long 5/8 inch dia wire rope	01 Length
17	Hardwood blocks, assorted from 75 to 225 mm thick and 300 mm	06 Nos
18	<p>Spades:- Spade should be rectangular shape with provision to incorporate wooden handle. The material used for fabrication should be iron of suitable grade (Reputed Make).</p>	02 Nos
19	Shovels (see IS 274 (part 1 and 2): 1981	04 Nos
20	Mattock, handle	02 Nos
21	Pick Axe with handle see IS 273:1973)	06 Nos
22	<p>Crow bars: -</p> <ul style="list-style-type: none"> • Size/ length- 36" • Diameter of rod- 1" • Material- made of tempered steel • Attachment- claw attachment for removing • The bar shall be heat treated to obtain a minimum hardness. • Material shall be suitable quality steel such as wrought steel. • The bars shall be forged clean and in one piece. • Cutting ends of the bar may be rounded off and finished ground. <p>The item must be from reputed make</p>	04 Nos
23	Sledge hammer 10 kg (see IS 841:1968)	02 Nos
24	Hammer, 5 kg (see IS 841:1968)	02 Nos
25	Rake, 3 prong (see IS 5991:1971)	02 Nos
26	Rubber, gloves tested to 25,000 volts (see IS 4770:1968)	02 Pairs
27	Shears, bolt cropper, large with handle, 900 mm	02 Pairs
28	Shears, bolt cropper, small with handle 600 mm	02 Pairs
29	Fire mans Axe with carrying pouch	02 Nos
30	Electric drill with spare bits Battery operated 2 mm to 10mm (rechargeable)	01 No.

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

31	<p>Circular saw with diamond blade</p> <p><u>Circular saw:</u></p> <ul style="list-style-type: none"> • Electrically powered motor operating in 100 to 250 volts with power consumption between 1600 to 2500 watts. 15 ampere three core electrical cord of 5 meter length with three pin plug will be provided. • Idling speed of motor up to 2000 to 3000 rpm with a maximum load rpm of 1200 to 1500 rpm. The motor should have a minimum endurance for continuous operation up to 60 minutes • Should incorporate easily locatable push button start and an electric brake for quick stoppage. • Size of blade: More than 12 inches diameter with an arbor not exceeding 3.2cm (1,25inches) the blade provided will be carbide tipped blade with minimum 32 teeth. • The cutting capacity of the blade should exceed 125mm at 90 degrees and 82mm at 45 degrees. The saw should enable stable blade rotation and depth adjustment lever. A shaft lock will be provided for effecting blade changes. • The weight of the saw with blade should not more than 17kg. • Rubberized wrap around saw and support handles with protection arrangement for shielding operator from debris and kickbacks will be provided. • Noise level during operation at full load should not exceed 100 Db at a distance of one meter. <p>Accessories The following accessories will be provided with each set:-</p> <ul style="list-style-type: none"> • Two Spare carbide tipped blades • Tool kit. • Carrying case. • Operation and Maintenance Manual. 	01 No.
32	<p>Chipping Hammer impact rate - 0-1400per/Min, Single impact force -38 - 42 J min, Power input -1240 Watt, single phase 230 volts, Light in weight , shock proof body with required accessories, Less than weight 18 kg, With pointed and flat bit.</p>	01 No.
33	<p>Smoke blower & exhauster Exhaust pipe - 300 mm dia, flexible of 5 meter long. Motor 0.75 HP 2200 RPM, single phase, 230 volt. It should work on both side one for throwing Air out & other is for sucking the Air in from out side. Flexible pipe should be foldable type with wire core made from abrasion resistant material. The close size 1 meter max. and the extended size shall not be less than 5 meter. preferable yellow or any other bright colour.</p>	01 No.
34	<p>Electrically Operated Chain Saw Electric Chain Saw: 2 Nos</p>	06 Nos

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

	<p>Chain saw wood cutting (Electrical) single phase AC/DC Voltage 220-250</p> <ul style="list-style-type: none"> • Guide Bar Length: 16" • Chain Speed : more than 2,900 FRM • Chain pitch: 3/8" • Power Type: coded • Light weight Accessories • Replacement chain 2 nos. 	
35	<p>Petrol operated chain saw (one man operated):</p> <ul style="list-style-type: none"> • Petrol driven portable power saw having 2 stroke petrol engine displacement minimum 75cc & engine power minimum 6.3hp. RPM-13500(Max.), 24"/610 mm guide bar, a high performance low vibration chain with square corner chisel cutters having pitch of chain to be 3/8". Dry weight of Power saw without Guide bar and chain should not be more than 7.5kg, vibration at front and rear handle should not be more than 7.0 m/second square, it should designed to absorb less dust at air filters for avoiding frequent clogging, semi- automatic pull cord type start, with all control and safety device of reputed make. It should be light weight (it should be easy to carry/ transport, handle and operate by a person).The spares of the chain saw including chain and guide bar shall be new and unused and manufactured by OEM. • The item to be new, unused and suiting to latest designed and specification and may have certification of ISI/ISO/or any recognized international standard/ national standard of quality test certificate. • Accessories-Sturdy gloves-1 set, gum boots-1 set, Apron-1 no., Ear plug-1 set, Goggles-1 set, Helment-1 No. extra guide bar and spare chain-2 nos. 	01 No.
36	<p>Concrete Breaker having power input of not more than 1400 W, Impact rate 42 joules, full load impact 1400 / min, bit shank size 30 mm hexagonal, weight not more than 17 Kgs with accessories like carrying case, bull point and hexagn bar wrench m8 size.</p>	01 No.
37	<p>Diesel engine operated Portable Generator 5 KVA: -</p> <ul style="list-style-type: none"> • Engine: Direct injection naturally aspirated, Air-cooled engine, Single cylinder, 4 stroke diesel engine, confirming to ISO 3046 / BS 5514 has the following specifications: • BHP: 8 (Min.) • Governing System: Mechanical • Starting System: 12V DC, 32Ah (min.) battery to start the 12 V DC electrical starter motor. • Noise Level: <75 dBA • Alternator: Confirming to the standard BS-5000/ IS-4722 or equivalent standard. • Power Rating at rated RPM-3000: 5 KVA/ 4 KW Power factor (Lagging): 0.8 	01 No.

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

	<ul style="list-style-type: none"> • Frequency: 50 Hz • Voltage: 230-240V AC, 1Phase Class of Insulation: H • Acoustic enclosure- Powder coated, weather proof Canopy. Engine alternator assembly mounted on AVM with Silencer and S.S exhaust bellow suitably optimized to meet stringent sound emission standards as laid down by MOEF / CPCB. 	
38	<p>High Pressure Pneumatic Lifting Bags</p> <p>Lifting Bag:</p> <ol style="list-style-type: none"> 1. The Pneumatic Lifting Bags should be portable and lightweight, and should be in set form, consisting of bags, hose assemblies, Pressure gauges, pressure reducers, safety valve, Air bottle connector, and controller. 2. Each set of high pressure airlift bags will an air-jacking system comprising two bags each on 5 sizes in term of maximum lift capacities, i.e. a total of 10 bags, with accessories. The totaled maximum lift capacity of one bag from each size should be in the range of 350 to 370 metric tons. The individual sizes should range between the maximum lifting capacities indicated below. <ul style="list-style-type: none"> • 20 to 22 tons • 35 to 38 tons • 52 to 55 tons • 85 to 88 tons • 95 to 98 tons 3. Each set will be provided with the following accessories to operate all bags at a time:- <ul style="list-style-type: none"> • 10 inflation hoses 5 m long in five different colours (two each) with push lock couplers. • 10 inflation hoses 10 m long in five different colours (two each) with push lock couplers. • 5 dual control box/unit (Plastic Box), 12 bar, deadman • 5 single control units, 12 bar • 5 pressure reducers for air cylinders 200/300 bars. • 10 shut of houses with safety valve and 0.3 m hose • 5 compressed air cylinder 300 bar, 5 to 6 liters • 4 connection pieces for air cylinders 4. The bags should be of multiple layers of Kevlar. Aramid construction. Bags should be square/ rectangular in shape. The insertion height of the bags should not exceed 25mm. The set of bags should provide lifting options from a minimum of 7 cm for the smallest size to more than 50 cm for the highest size. 5. They should have anti-slip surfaces to provide good grip and high traction between the bag and surface of object to be lifted as well as 	01 Set

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

	<p>when stacked on top of each other. Markings for centering should be provided along with fluorescent labels at corners for recognition in the night. Each bag should have its own storage bag.</p> <p>6. Operating pressure 12.0 bars. Bursting pressure should not be lower than 48 bars. Testing pressure to be flowed will be 1.5 times the operating pressure.</p> <p>7. Operating temperature - 20 to 50 degrees centigrade. Standards:- Equipment must conform to DIN EN 13731 standards for LIFTING BAGS and certifications will be submitted with tender.</p>																											
39	<p>Jumping Air cushions type as per specs given below The jumping rescue cushions should have high reliability and shall be easy to handle and shall be capable of being fully erected by 4 to 6 persons. The possible jumping height shall not be less than 30 mtrs. It shall have illumination for night operations and shall be capable of being used in dusty conditions. The detailed technical specifications are as under:-</p> <table border="1" data-bbox="167 869 1300 2000"> <tr> <td>Shape</td> <td>8 corner shape (octagonal)</td> </tr> <tr> <td>Outer Dimensions</td> <td>Not less than 5.50 X 5.50 mtrs</td> </tr> <tr> <td>Usable jumping area</td> <td>Not Less than 4.50 X 4.50 mtrs</td> </tr> <tr> <td>Jumping angle (30m height)</td> <td>9.74°</td> </tr> <tr> <td>Tube diameter of the inflatable frame</td> <td>22 cm (0,22 meters)</td> </tr> <tr> <td>Material of frame</td> <td>Natural rubber reinforced with polyester fabric 940 dtex, black</td> </tr> <tr> <td>Material of outer cover</td> <td>Fire retardant special PVC- coated polyester fabric, orange</td> </tr> <tr> <td>Material of jumping area</td> <td>Fire retardant special PVC- coated polyester fabric, white with black markings</td> </tr> <tr> <td>Compressed air cylinders</td> <td>4 x 6.8 ltrs./300bar or equivalent steel/ Carbon composite cylinders</td> </tr> <tr> <td>Erection time</td> <td>Not more than 75 sec. (depending on the used cylinders)</td> </tr> <tr> <td>Re-erection after a jump</td> <td>Not more than 10 sec.</td> </tr> <tr> <td>Weight of the complete device (with charged cylinders)</td> <td>Not more than 150 kg</td> </tr> <tr> <td>Packing</td> <td>It Shall be packed in special PVC bag which will be housed into a good quality galvanized box.</td> </tr> </table>	Shape	8 corner shape (octagonal)	Outer Dimensions	Not less than 5.50 X 5.50 mtrs	Usable jumping area	Not Less than 4.50 X 4.50 mtrs	Jumping angle (30m height)	9.74°	Tube diameter of the inflatable frame	22 cm (0,22 meters)	Material of frame	Natural rubber reinforced with polyester fabric 940 dtex, black	Material of outer cover	Fire retardant special PVC- coated polyester fabric, orange	Material of jumping area	Fire retardant special PVC- coated polyester fabric, white with black markings	Compressed air cylinders	4 x 6.8 ltrs./300bar or equivalent steel/ Carbon composite cylinders	Erection time	Not more than 75 sec. (depending on the used cylinders)	Re-erection after a jump	Not more than 10 sec.	Weight of the complete device (with charged cylinders)	Not more than 150 kg	Packing	It Shall be packed in special PVC bag which will be housed into a good quality galvanized box.	
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Weight of the complete device (with charged cylinders)	Not more than 150 kg																											
Packing	It Shall be packed in special PVC bag which will be housed into a good quality galvanized box.																											
40	Leak Sealing Bags	01 Set																										

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

41	<p>Hydraulic Spreader</p> <p>The spreader shall be operated by an electrical cable with back- up of incorporated rechargeable battery as power pack. No separate hoses or external hydraulic power units are acceptable. Tools with external/ separate batteries are not accepted. The energy pack shall integrated itself with tools. This heavy duty electro-hydraulic rescue spreader of minimum spreading opening shall be not less than 600 mm. Maximum spreading force shall not be less than 150 KN, minimum pulling force shall not be less than 45 KN, the pulling chain set shall be quick adjusting without the need and special tips for pulling. The pulling chain shall be equipped with safety hooks in order to mount the chains easy to any object of whatever size or shape. The operational weight of the spreader shall not be more than 23 KG. The spreader shall be operated by an electrical cable and incorporated rechargeable battery. The spreader shall be as per EN 13204 / NFPA certified or equivalent. The certificate should be enclosed with the offer.</p> <ul style="list-style-type: none"> ● Accessories: 1. spare tip - 1 sets, rechargeable battery with charger-one no- LI-Ion with spare battery which provide constant power to the tool without affecting its performances, the operation time not less than 30 min. 3. Electric power supply cables can be connected any AC power outlet. The cables can be connected any AC power outlet. The cable has to be equipped with electric power equalizing filter to hold the voltage constant even in the event of power fluctuation. High efficient electric rectifier from 110/ 230 V AC compatible to DC battery protected by an impact resistance click in adopter fixed on the tool. The control cable shall be protected and highly insulated to withstand rough handling during rescue operation. ● Pulling chain set- 1set ● Standard: Required necessary certification must be provided with offer. 	01 No.
42	<p>Hydraulic Cutter</p> <p>Equipment shall be tested for safety according to EN 13204 (European standard) / NFPA 1936 (US standard). Certificates shall be provided with the offer. This specification defines the technical and functional requirements for an electro/ hydraulic rescue set operated only by integrated internal hydraulic power supply to be used for rescue operation by fire brigades and special rescue teams in case of traffic accidents, building collapse and natural disasters confined space rescue, high raise building rescue etc.</p> <ul style="list-style-type: none"> • The equipment shall be able to work without failure in heavy dust, high humidity, heavy tropical rain conditions and temperatures from -25°C to +55°C. • The equipment shall be completely independent from any external 	02 Nos

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

hydraulic power unit or hoses and shall be operated independently from each other by an electric power cable with tool adapter with back up of a rechargeable high capacity LI / Ion Battery.

- The cutter shall be operated by an electrical cable with back up of incorporated rechargeable battery only. No separate hoses or external hydraulic power units are acceptable. Tools with outside (external) separate batteries are not accepted.
- The cutter shall have curved design blades with the highest cutting performance in the effective cutting range and shall be able to cut round steel bars up to a diameter of not less than 30mm. Working pressure: minimum 700 bars.
- The blades shall be designed to set the material to be cut in the optimal cutting position and the material cutting process shall be as smooth as possible w/o mechanical impact. Straight blades are not permitted The blades shall be dropped-forged of high tensile tool steel, well grinded for optimum grip, high-pressure glass-pearl blasted, fully hardened, surface treated, regrind able and easily replaceable.
- The blade opening shall be not less than 150 mm.
- Operational weight: not more than 20 kg
- Classification according to EN 13204. BC Cutter G Cutting class (1G,2G,3G,4G,5G)
- Classification according to NFPA " A7 / B7 / C7 / D 7 / E 7
- Certificates must be provided with the offer.

Accessories Rechargeable Battery

- Each individual electro/ hydraulic tool shall be supplied with a back up rechargeable high capacity LI / Ion - Battery w/o memory effect which provides a constant power to the tool for an Intermediary Rescue Scene operation time of not less than 30 Minutes. In addition spare battery to be supplied with each tool.
- LED - Light on the Battery shall indicate the charging state.
- The recharging time of the Battery shall no longer than 70 minutes.
- The self discharge of the battery shall be as less as possible
- The battery shall be fixed on the tool by a clip mechanism which must withstand rough handling and cutting impacts.

Electric Power supply cable

The electric power supply cable shall be equipped with :

- An electric power equalizing filter to hold the voltage constant even in the event of power fluctuation
- A high efficient electric rectifier from 110 / 230 Volts AC to 26 Volts DC protected by an impact resistant click in adapter fixed on the tool.
- The rectifier adapter shall be replaced easy and fast by the rechargeable battery w/o the use of special tool but only by click

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

	<p>mechanism.</p> <ul style="list-style-type: none"> • The control cable shall be protected and highly insulated to withstand rough handling during rescue operation. • The electric power supply cable shall be connected to any AC power outlet 110 V / 230V. Either directly or through an electric reel no matter of which length. • Spare Blades - 1 pair 	
43	<p><u>Hydraulic Combi Tools</u></p> <p>Hydraulic Combi Tool shall be operated by an electrical cable with back-up of incorporated rechargeable battery as power pack. No separate hoses or external hydraulic power units are acceptable. Tools with outside (external) separate batteries are not accepted.</p> <p>This electro hydraulic combi tool shall have minimum working pressure 700 bar, minimum cutting force 360 KN., minimum cutting dia. 30 mm round, minimum spreading force 35 KN., minimum spreading distance 360 mm, minimum pulling force 41 KN., minimum pulling distance 360 mm. The EN 13204/ NFPA certificate should be provided with the offer. The certificate should be enclosed with the offer. The pulling chain set shall be quick adjusting without the need & special tips for pulling. The pulling chains shall be equipped with safety hooks in order to mount the chains easy to any object of whatever size or shape. The maximum weight shall not exceed 21 Kg.</p> <p>Accessories: rechargeable battery- one no- Li/Ion which provide constant power to the toll without affecting its performances. The operation time not less than 30 minutes. The charging time battery should not more than 70 minutes. 3 electric power supply cable- can be connected any AC power outlet. The cable has to be equipped with electric power equalizing filter to hold the voltage constant even in the event of power fluctuation. High efficient electric rectifier from 110/ 230 V AC to 26 V DC protected by an impact resistance click in adopter fixed on the tool. The control cable shall be protected and highly insulated to withstand rough handling during rescue operation. The equipment & accessories should be new, unused and should conform to latest design & specifications.</p> <p>Pulling chains and pulling adaptors should be supplied with the tool.</p> <p>Standard: Required necessary certification must be provided with offer.</p>	02 Nos
44	<p>Hydraulic Telescopic Ram as per the following specs Spreading force of 1st plunger - not less than 20 Ton Spreading force of 2nd plunger - not less than 8 Ton, Length retracted including cross head - less than 600 mm Total Length including cross head - not more than 1300 mm, Stroke of 1st plunger - not less than 375 mm Stroke of 2nd plunger - not less than 350 mm It should have rotating cross head for easy positioning & perfect grip in</p>	01 No.

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

	every positioning, accurate spring return to neutral position, maximum rotation to the right and to the left only 22 degree, full protection against overload, with all accessories like maintenance kit. The equipment & accessories should be new, unused and should conform to latest design and specifications. The tool should have only 1 quick coupler directly connected to the tool without hoses	
45	<ul style="list-style-type: none"> • Rescue Ram as per the following specifications :- Minimum spreading force - 16 Ton, • Minimum length retracted including cross head - less than 1000 mm, • Maximum length including cross head - less than 1750 mm Pulling force not less than- 5 tons, • Stroke - min 2 X 325 mm, No. of Plungers - 2 • It should have rotating cross head for easy positioning & perfect grip in every positioning, accurate spring return to neutral • Position, maximum rotation to the right and to the left only 22 degree, full protection against overload, with all accessories like a maintenance kit. The equipment & accessories should be new, unused and should conform to latest design and specifications. The tool should have only 1 quick coupler directly connected to the tool without hoses 	01 Set
46	Hydraulic light weight aluminum/ iron jack as per the following specifications :- Lifting Capacity - Not less than 50 tons Closed Height - Approx 150 mm Stroke - Approx 50 mm Weight - Not more than 7.5 kg	01 No.
47	Hydraulic light weight aluminum jack as per the following specifications :- Lifting Capacity - Not less than 50 tons Closed Height - Approx 200 mm Stroke - Approx 100 mm Weight - Not more than 9.5 kg	01 No.
48	Hydraulic TOE jack with accessories - It should be Single acting hydraulic tool suitable for lifting heavy vehicles; trams or machines to free victims or objects that are trapped after an accident. <ul style="list-style-type: none"> • Max. centric force on the saddle : not less than 11 tons • Max. force on toe : not less than 9 tons • Closed height : not less than 440 mm • Extended height : not less than 685 mm • Weight : not more than 21 Kg 	01 No.
49	Hydraulic door opener complete with a 2 stage hand pump. The spreading force shall not be less than 9 tons and the stroke shall not be less than 125 mm. A swiveling type connection with 30 cm long hose shall be provided.	01 No.
50	Hydraulic Pedal cutter shall have straight blades, one fixed and one moving, with a cutting force of at least 75 kN (7.7 ton). It shall be suitable to cut metal parts like car pedals, steering wheels, seat frames etc The	01 No.

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

	opening in the jaw shall be at least 40 mm, whilst the width of the jaw shall be no more than 40 mm to use the cutter in confined spaces. It shall have a 360° rotation elbow, 30 cm pigtail hose and quick coupler	
51	Hydraulic pump for 2 tools simultaneous operation with 15 mtrs long hose as per the following specifications :- <ul style="list-style-type: none"> • Engine - Petrol engine • Capacity oil tank (effective / usable) - Not less than 3.6 litres Pump type - 2 stage radial pump • Weight - Not more than 25 kgs • No. of tools connected - Two • No. of tools to be operated simultaneously - Two 	02 Nos
52	Hydraulic foot / hand operated pump mounted on suitable base plate with 10 mtrs long hose. The pump shall have two-stage operation and shall be capable of developing adequate pressure for operating all the tools including the telescopic ram up to their full capacity	01 No.
53	Coaxial hose having pressure line inside the return line for use with the hydraulic tools 10 mtrs long orange and blue color - 1 each	02 Nos
54	Hose reel with 25 mtrs long high pressure coaxial hose having pressure line inside the return line for use with the hydraulic tools	01 No.
55	<p><u>Power Shoring system</u></p> <p>Versatile and easy to assemble emergency shoring system providing quick and reliable stabilization for every rescue situation. Consisting of various lightweight, fully compatible components with snap-lock connection, enabling both shoring and lifting. Shoring at various angles possible.</p> <ul style="list-style-type: none"> • Retracted length mm:1092 • locking system: Auto Lock • Stroke mm: 252 • weight kg:13.0 • working pressure:720 bar • force at working pressure KN / t : 100/10.1 • oil content at max. stroke cc:400 • To be used in combination with struts with hydraulic cylinder hand pump, oil content 700 cc, weight ready for use 9.9 kg, pressure gauge 0-720 bar, rubber protection cover for pressure gauge, hose 3 metres with quick- coupler. <p>Heads & Other Accessories:</p> <ul style="list-style-type: none"> • Flat head - aluminum. For support against a flat surface: 0.3 kg; Ø 89 mm. • Pointed head. For use in e.g. narrow gaps; 1.2 kg; Ø 89 mm. • Flat head with nailing plate - aluminum. For support against a flat surface; with nailing holes; 0.8 kg. 150 x 150 mm. • Base support plate. Can support 3 swivel heads and is suitable for the use 	01 Set

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

	<ul style="list-style-type: none"> of up to 3 tensioning belts to create a stable triangle; 4.0 kg. • Tilting head - aluminum. For support on uneven or tilting surfaces. Max. Angle 45 degree in all directions; 1.7 kg, 95 x 95 mm. • Trench support plate - zinc plated steel. Can be nailed to wooden plates to support 2 swivel heads in e.g. a trench; 0.9 kg; 280 x 110 x 75 mm. • Tilting head with nailing plate - aluminum. For support on uneven or tilting surfaces; with nailing holes. Max. Angle 45 degree in all directions; 2.5 kg, 150 x 150 mm. • Tensioning belt. Length 4.0 m, width 35 mm, weight 1.4 kg, load 10 kN. • Beam support head. For use with beams up to 150 mm; with nailing holes; 1.7 kg. • Adjustable hook wrench. To create a preload with the MS 2 L 2+. Two pieces are advised. • Beam support head. For use with beams up to 100 mm; with nailing holes; 1.2 kg. • Rope with carbine hook. To lower struts, e.g. into a trench. • L-support head. For use with wide beams; with nailing holes; 1.0 kg. • Rubber anti-roll block. Prevents struts and extensions from rolling on uneven surfaces and protects against dirt and damage. • Swivel head - aluminum. Can be placed in almost any position and against each other for mutual support; 2.0 kg. • Storage / carrying bag for accessories. • V-block head small- aluminum. For support of pipes; 0.7kg; Ø 89mm. • Storage / carrying bag for struts and extensions. • V-block head large - aluminum. For support of pipes; 1.7 kg. Opening x width 141 x 100 mm. • 2-way block. To support 2 tilting heads. • Cone head. For support on concrete or steel surfaces; 0.5 kg; Ø 89 mm. • 3-way swivel head. Contains 3 integrated swivel heads for use with up to 3 shoring lines in various directions. • Cross head. For use on many kinds of surfaces; 1.1 kg. • No hand pump for operating sturts with hydraulic cylinder. • Extension pipe 125mm 1 no. • Extension pipe 250mm 1 no • Extension pipe 500mm 1 no • Extension pipe 1000mm 1 no • Connector 1no. 	
56	<p>Glass breaker (window punch)</p> <ul style="list-style-type: none"> • Short description- Glass Master • Weight, ready for use kg- 1.0 • Dimensions (LxWxH) mm- 420 x 245 x 35 	01 No.
57	Evacuation system (rope rescue with tripod and descenders etc)	01 Set

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

	<p>consisting of a Tripod with rope rescue modular evacuation device ratio 3:1. The weight of the Tripod should not be more than 15 Kgs and should have 4 point SS anchoring system on the top with Aluminum die cast locking system. All the three sides of the tripod should allow entry of the person without obstacles like chain etc. The load carrying capacity shall be 500 kg and the breaking strength of 1000daN. Their shall be 8 adjustable index positioning. A harness shall be provided consisting of 1 Dorsal attachment D ring / 1 Rescue D ring (rear), 2 Lateral attachment D rings, Positioning belt, Fully adjustable shoulder and thigh straps, net weight 1.6 Kg., and Rescue strap with hooks for 2nd person. It shall also have a ascending / descending device of 100 operating range with 400 mtrs braided rope of polyamide material of 9 mm dia. The breaking of descending load shall be by the friction of the rope on the drum, while a ratchet gear facilitates ascension Control and Descend Speed. The Permissible Load shall e 250 Kg with pulley reduction ratio of 3:1 The weight of this unit shall not be more than 1.75 kg. A ascending and locking handle made of light alloy shall also be provided with special gear belt for rope rescue and sit harness.</p> <p>A descend control device for rescue of trapped people from high rise buildings and public places consisting of 32 mtrs. Descend controller with all the accessories The features should include Automatic cable rewind, Self control speed of 1.20 per sec., Equipped with centrifugal brake, Load carrying capacity 150 kg. Metallic casing dully painted and shall have stainless steel cable of 5 mm dia and rescue strap. The weight of the unit shall be about 22 kg</p>	
58	<p><u>Search Camera -</u> <u>Purpose :</u> This victim location system is electronic equipment for location and rescue of trapped victims. With this equipment, light and easy to carry, it is possible to explore the ruins, collapsed structure caused by earthquake, explosions, landslides, construction cave-ins or mine disasters and to communicate with victims via the microphone incorporated in the camera. The system should comprise of a telescopic boom with a camera, able to turn through 360° fixed to the end and connected to a portable control box screen.</p> <p><u>Capabilities required:</u></p> <ul style="list-style-type: none"> • The systems primary configuration should be based on a video camera built at one end of a telescopic boom which can reach out into depths and void spaces up to a distance of 2m. This boom shall be extended telescopically and shall have 4 sections giving a total length of 2m and shall be fitted with minimum 5m of cable. Provision should also be made to manually lock the telescopic boom at the distance required. 	01 No.

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

	<ul style="list-style-type: none"> • The video camera shall have a colour display with a sensitivity of 0.5 lux and shall have 6 white LED lights which will allow visibility in pitch dark conditions to a distance of 4 m. The camera head shall be able to rotate 360° without stop (infinitely). A speaker and a microphone shall be built into the body of the video camera, which will allow communication with the trapped person through a head-set. • The system shall have a control box for the operator which will be fitted with a minimum 7-inch, LCD colour screen, TFT active matrix, and shall be stored in a leather protective case with adjustable shoulder strap. • The system shall also be provided with mono headphones fitted with dynamic microphone with anti- disconnection plug which will allow the operator to communicate with the victims via the speaker and microphone built in the video camera. The cable length shall be minimum 1.5 mtrs • There should be provision for attachment of an additional headset for use by a third person like an interpreter or a doctor etc • The system design shall be such that it would not require more than 2 persons to operate, one operator to handle the probe, and the second for the control box: of the probe to see and search through the screen, communicate with victims. • The system shall have an inbuilt battery, 12V - 4.5 Ah battery, Ni-MH technology with an intelligent charger. The battery shall allow minimum 4.5 hours of continuous usage of the system and should be able to be fully charged in 4 hours. The system shall be equipped with an audible alarm which will warn the operator when the battery is low. A suitable Cigar-lighter adapter shall be provided to enable the charge the battery in a vehicle if necessary • An additional water proof camera capable of being used at a depth of 60 mtrs with 60 mtrs cable mounted on reel shall be provided. The camera shall be IP 67 compliant and shall give colour display. The camera should rotate 360 deg. and shall have integrated LED lights. Speaker and microphone shall be integrated in the body of the camera • The system shall be capable of being operated in temperature range -10° to +60°C 	
59	<p>Life Detector:- The life detector should be a hand held instrument designed to quickly locate leaving human being from behind barriers- trapped under debris of structural collapsed, from building in smoke or even stuck under water by detecting electric field generated by human heart or any other human property. The instrument should be able to detect leaving human beings from far off distances as long as at least 350 to 400 m in open air and at least from 150-200 m when behind barriers (any type of barriers</p>	01 No.

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

	including multiple layers of concrete slab debris, steel structures, mud and slides snow-avalanche, under water etc. The instrument should not need any power supply so that it can be used in disaster emergencies. The life detector should not detect any animals or creatures and should be such that its performance should not be affected by presence of other machinery/instrument.	
60	Oxygen Cylinder with 60 mtrs cable with control device.	2 sets
61	Karmental rope of $\frac{1}{2}$ " dia & 60mtrs length	2length
62	<p>Acoustic based victim location unit - The equipment is an acoustic listening device, light weight and easy to carry. Designed especially to detect and locate trapped, live victims in collapsed structure caused by earthquake, explosions, landslides, construction cave-ins or mine disasters. The slightest noise the victim makes should be detected by this device and so the sensitivity is exceptional. It is fitted with an adjustable filter to deaden the effect of dull noises like pneumatic drills, lorries passing...</p> <p>Capabilities required: Housing/Amplifiers & filters: IP66 housing with bar-graph for adjustment with IP 68 connectors. Two very high gain, low noise amplifiers. Two frequency filters "high pass and band pass" infinitely variable, filters activated by 2 keys (the chosen frequency is infinitely variable using the + and - keys) Filter 1: High pass filter" significantly reduces all frequencies below its adjustment point, which may be between 50Hz and 5 kHz which correspond respectively to the low and the high points on the liquid crystal scale. It will eliminate bass sounds such as lorry movements, dull noises... Filter 2: " "Band pass filter" significantly reduces low and high frequencies on either side of its turning point. It will filter an incoming signal.</p> <ul style="list-style-type: none"> • Sensors: Two ultra-high sensitivity black vibration sensors with 8m of cable - One sound sensor fitted with a microphone and a loud speaker with 8m of cable. • Headset: One stereo head-set with microphone • Batteries: One pack of 6 rechargeable Ni/Mh batteries type LR6/AA (operating life 30h) • One accumulator charger (usable at 50/60Hz 100v to 240v) • One cigarette lighter charger plug with wire to be use in a vehicle. • Specifications: Operating temperature: -10° to +60°C Storage temperature: -25°to +70°C • Total weight: 2kg (in use) / 8 kg (with carrying case) • Carrying case: One carrying strap and one shock proof carrying case 	1 set
63	Loud hailer battery operated	01 No.

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

64

EMERGENCY SPOT LIGHT

The equipment proposed is a Portable Telescopic Tower Light (LED Type) for emergency purpose.

General.

It should be made of High Strength anodized Aluminium of aero grade quality for light weight. The base frame should consists of 3Legs which are individually adjustable and rigidly integrated to the telescopic mast so as to withstand minimum of 20 m/s wind velocity and gives better stability during extended condition of telescope. It should be self-locking & release, less maintenance and self-lubricating type.

Generator

The engine should be 4 stroke Air Cooled Single Cylinder petrol driven Engine with pull cord re-coil start system. The Generator should produce an output of not less than 850VA, 230V, Single phase of unit power factor. The Genset should be confirming to BIS standard and approved from CPCB.

Integrated Telescopic mast with base frame

The base frame and telescopic mast with LED panels should be well designed to operate any weather conditions at a height of not less than 4.25mtr without any effect on operation at the fully extended length at a minimum of 20 m/s wind speed. The base frame should be integrated with wheel assembly made of hard plastic nylon/composite material mounted on stainless & corrosion resistant ball bearing for easy transportation. It should be portable, easy to handle during emergency operation and light weight.

- Dimension: 1. Extended Height - Not less than 4.25m
2. Closed - Not More than 32x32x120cm.
3. Weight - Not more than 40Kg.

LED Light Head

The LED Light Head should consists of minimum of 5 number of glare free LED armatures, each of 65 Watt minimum power to produce 40,000 Lumens or more. It should contain minimum of 5 no's armatures with total power consumption within 400-450w, which can be individually positioned from 180 to 3600 in vertically and horizontally depending on the task. Each armature should be fitted with an acrylic lens that shapes the light in an optimal way. A suitable heat sink should be provided to the LED light head for proper cooling of the Armature. Suitable Control gear should be designed and fitted with MCB, change over and on/off switches with energy saving dimmable option for lamps and should have a provision of multi-source input operation like Mains/ Battery/Solar Pack. It shall be dust and water resistant to IP65 and above.

Performance Requirement:

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

	<p>1). A minimum Lux value of 1 shall be achieved instantly on ground at:</p> <p>a) 130m or higher radius: during beam angle of 180° at min of 4.25m height.</p> <p>b) 95m or higher radius: during beam angle of 360° at min. of 4.25m height.</p> <p>2). Start up and repacking time shall be 2 minutes max.</p> <p>3).The portable telescopic light mast should confirm to BIS/CE/EN or any International equivalent standard for safety during emergency operation.</p> <p>Accessories: One set of following accessories /spares to be part of supply with the main equipment.</p> <p>a) Storage Box- suitable designed to accommodate the tower and other spares and easy to handle with proper locking arrangement.</p> <p>b) Rain Protection Cover- for generating set and control gear box made of water proof cloth with air vent arrangement.</p> <p>Supplier should furnish complete and satisfactory type test certificate as per above specification. The test report should be from NABL approved Govt. Lab or any other authorized national/ international lab confirming to the standard.</p>	
65	Pipe wrenches 12" & 24"	01 Each
66	Wrench adjustable 12"	01 No.
67	Slotted screw drivers	1 set
68	Orange paint can	01 No.
69	Plywood (Marine grade) 1.25 m X 2.5 m	01 No.
70	Wood wedges	04 Nos
71	<p><u>Search Light (Rechargeable).</u></p> <p>It must be one piece portable search light fitted with high powered LED lights.</p> <p>The search light should be fitted with Lithium ION battery.</p> <p>Minimum dia 115 mm (±) 5%. The search light should be provided with inbuilt charger for charging up 12V. battery.</p> <p>The maximum charging time should be 8 hours.</p> <p>There should be provision of single push type on/off switch. Its body should be made of super tough glass filled nylon or polycarbonate of minimum 3mm thickness.</p> <p>The spotlight shall have a attachable handle. It should be effective long range type.</p> <p>The firm shall provide warranty for one year on product and the battery.</p>	02 Nos
72	<p><u>Inflatable Rubber Boat with 40HP (2 stroke) OBM.</u></p> <p>Inflatable Rubber Boats made of Nylon / Polyester fabric coated with Hypalon rubber on the outside & polychloroprene inner side, meeting ISO 15372.</p>	01 No

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

- Material Density- 1500 GSM, 1670 Dtex- Hypalon / Neoprene coated fabric, as per latest ISO 6185-3 standard.
 - Dimension: Length overall: 4.70mtr. to 5.0 mtr.
Breadth Overall: 2.00M (Dimension variation \pm 0.5% maximum) Buoyancy Collar Diameter: 0.50 to 0.55 meter,
 - Boat Carrying capacity:- 10-12 persons or 1000kg Cargo
 - Buoyancy Chamber: Minimum 4+1 keel.
 - Floor Board: Marine Grade Aluminum Flood Board, Interlocking type, so as to form a rigid floor that does not vibrate/ chatter at higher speed. Joiners and Stringers to be of Marine Grade Imported Aluminum only.
 - Transom: Heavy duty rigid transom fitted with OBM mounting plate (SS-304).Height of transom should be 0.40 m suitably strengthen to fit 40 Hp (2 stroke) OBM.
 - Reinforcement: Heavy duty rubbing strakes underneath keel and all around the tube, Anti chafing strips on top buoyancy, OBM clamp plate in transom
 - Fittings: Life Line- Inside & Outside
 - Towing Hook- 2
 - Lifting Hook- 4
 - Carrying Handle- 6
 - Storage Pocket- 2
 - Drain Plug- 2
 - Accessories: Foot Pump (Heavy duty) 2
 - Anchor- 1
 - Anchor Rope- 30 mtr
 - Oars- 2
 - Boat Valise- 1
- (Made of tear resistant coated nylon fabric)
- Repair Kit- 1
 - Lifebuoy- 2
 - Life jacket- 10
- Approval: Drawing, design & building of the boat to be approved by IRS (Indian Register of Shipping), RINA or any other IACS member & certificate of Inspection by IRS to be provided for each boat at the time of delivery.

Out Board Motor (Two stroke)

- OBM Engine: 40 H.P.2 stroke Mercury/ Mariner/ Johnson/ Evinrude or Equivalent Make, petrol operated (two stroke), rope start, manual drive and fuel efficient with accessories two paddles system for emergency rowing.
- HP/ Kw: 40/29.8
- Displacement (CID/CC: 42.5/697

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

	<ul style="list-style-type: none"> • Cylinder Configuration:1-3 • Full Throttle RPM: 5000-5700 • Fuel Induction System: Loop-charged (3 carb) • Starting: Manual • Steering: Tiller • Shaft Length:15"381mm, 20"/508mm • Gear case Ratio: 1.85:1 • Dry Weight: 72-75 Kg • Bore and Stroke:68X64 • Trim System: Manual • Oil Injection: Pre Mix • Accessories: Fuel Tank - 1no • Fuel attachment - 1 Set • Repair Kit - 1no 	
73	<p><u>B. A Compressor:</u></p> <p>The COMPRESSOR will be a portable High Pressure breathing air compressor used to fill SCBA/SCUBA set cylinders with pure breathable air.</p> <ul style="list-style-type: none"> • The compressor will be a portable one with FAD of not less than 100 LPM \pm 5%. • The Operating Pressure should be suitable for SCBA and SCUBA Cylinder. Max working pressure should be 300 bar. • The delivery pressure will be achieved in three/four stages of compression. • Suitable 4 stroke petrol engine of reputed make with rope start • Breathing air quality should be confirming to EN 12021 - 2014. • V. Belt drive, Splash type lubrication • Two Filling hoses, both kink protected on compressor side. One filling hose for 200 Bar and other filling hose for 300 Bar or one meter long hose with filling adapter for 300 bar (DIN Type) with special provision/adaptor so that same can be used to refill 200 Bar cylinder. Both hoses should be of max one meter length, Have pressure gauge mounted on its respective filling valves. • Final stage safety relief valve fitted on compressor with CE Mark embossed on it. One set at pressure 225 & other set at pressure 330 bar. • Operating Temp should be 5 deg C to 45 deg C • Air Cooled Compressor Speed 2300 rpm • Material of construction of Protective Covers to protect from moving parts such as fan, pulley & belt should be Non Corrosive & non rusting UV resistant advance plastic material • Tool kit for compressor, operating instructions and compressor oil as well 	01 No

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

	<p>as engine oil with 2 final stage filter will be supplied with each machine. Required standard certification of National/ International of above equipment for safety shall be submitted with offer.</p>	
74	<p><u>Thermal Imaging Camera:</u> It should be capable of viewing object and persons in total darkness or more smoke filled conditions. It should also have integrated temperature measurement with digital display. The thermal imaging camera should be NFPA 1801 complaint and have following specifications:</p> <ul style="list-style-type: none"> • Detector Type Focal plane array (FPA), un-cooled micro bolometer (VOx) • IR Resolution- 320 × 240 • Pixels Pitch- 25 μm • Spectral Range- 8-14 μm • Zoom- 2× digital zoom <p>Compliance & Certifications Compliance NFPA1801/C.E/E.N:2018 •Ex-certified according to ANSI/ISA 12.12.01-2015 and meets Class I Division 2 Groups C and D •Class II Division 2 Groups F and G, Temperature Code T4/T135°C</p> <ul style="list-style-type: none"> • Humidity (Operating and Storage):- IEC 60068-2-30/24 h 95% relative humidity +25°C to +40°C(+77°F to +104°F)/ 2 cycles • Operating Temperature Range: -20°C to +85°C (-4°F to +185°F) +150°C (+302°F): 15 min. +260°C (+500°F): 5 min. • Relative Humidity :- 95% relative humidity +25°C to +40°C(+77°F to +104°F)non-condensing Storage Temperature Range -40°C to +85°C(-40°F to +185°F) Vibration 2 g (IEC 60068-2-6) • Camera size (L × W × H) 120 × 125 × 280 mm (4.7 × 4.9 × 11 in.) • Camera weight incl battery- 1.1 ±0.05 kg (2.4 ±0.1 lb.) • Depth of Field- 0.84 m to infinity (33 in. to infinity) • Display- 4 in. LCD, 320 × 240 pixels, backlit Focus Fixed • Image Frequency- 60 Hz • Image Modes :IR image TI Basic fire-fighting mode Black- and-white fire-fighting mode Fire mode Search-and-rescue mode Heat detection mode Thumbnail gallery • Non-radiometric IR video recording MPEG-4 to internal flash memory • Non-radiometric IR video streaming- Uncompressed colorized video using USB • Spatial resolution (IFOV)- 2.8 mrad • Storage Capacity:- 200 files in total, with a maximum duration of 5 minutes each. The total number of files is co-dependent on the number of saved images. • Automatic Hot Detection- Heat detection mode (the hottest 20% of the of scene is colorized) 	01 No.

**TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

	<ul style="list-style-type: none"> • Object Temperature Range- -20°C to +150°C (-4°F to +302°F) 0°C to +650°C (+32°F to +1202°F) • Spot Meter- 1.0 • Thermal Sensitivity/NETD- < 30 mK @ +30°C (+86°F) <p>POWER</p> <ul style="list-style-type: none"> • Battery capacity- 4.4 Ah, at +20°C to +25°C (+68°F to +77°F) • Battery operating time- Approx. 4 hours at +25°C (+77°F) ambient temperature and typical use. This operating time is independent of camera mode. • Battery type- Li Ion • Battery voltage- 3.6 V • Battery weight- 0.152 kg(0.3 lb.) • Charging system- Battery is charged inside the camera 2-bay charger Optional In-truck charger • Charging Temperature- 0°C to +45°C (+32°F to +113°F) • Charging Time- 2 h to 85% capacity, charging status indicated by LEDs • Power Management- Automatic shutdown and sleep mode 	
75	<p>Rescue rocket system with sling and line deployment consisting of one launcher, inflatable sling and line projectiles with charging hose & adaptor with 300 ft polypropylene rope and 500 ft Decron 3 mm rope with rope storage compartment to be used with the launcher along with accessories. The system should be intrinsically safe and should work on Air Thrust technology.</p> <ul style="list-style-type: none"> • Battery of the engine- 1 No. • Revolving beacon light- 2 No. • Side Flashing Square Lights- 4 Nos • Rear Amber Blinker Signal Light- 2 Nos. 	01 No.
76	<p>Hydraulic Dewatering Pump-2,5”:- For general purposes pumps clear and muddy water, with hydraulic gear motor- 2,5 NPT Female discharge mouth, water Flow max 1600 L/min- water height 40 mt- solid handling capacity 2cm, pump body in aluminum - Weight Kg 10, Oil flow 20- 38 L/min, Oil pressure 100- 210 Bar.</p>	01 No.
77	<p>SINGLE ACTING COMPACT HYDRAULIC DOOR OPENER: The door opener same company is essential and door opener shall be hydraulically operated with two toes, one fixed and one moving and it shall be suitable to force open doors of building that open to the inside and that can be re inforced or blocked</p>	1 No
78	<p><u>Instruction Books, Accessories And Equipment:</u> 6 sets of illustrated books for the guidance of the user, including both operating and normal maintenance procures, for the appliance, machinery, equipment and gadgets shall be supplied with the appliance. The books shall include itemized and illustrated spare parts list giving reference to all</p>	

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

wearing parts.

Equipments as per Annexure-1 shall be supplied and stowed in ERT at suitable location in compartments and lockers.

Marking: shall be done as per our choice / norms.

Drawing for Approval: dimensional general arrangement drawing of views, cross sections, layout of various main equipment / accessories, technical parameters shall be submitted with tender.

Scope For Supply. Work And Training:

- 1) All necessary working tools and set of special tools required for maintenance of the appliance shall be supplied.
- 2) Spare parts catalogue & test certificate shall be provided with appliance.
- 3) Necessary training shall be imparted for safe operation and maintenance of the appliance.

Acceptance Tests:

- 1) Road test / stability test shall be carried out as per standard practice.
- 2) Practical demonstration of all rescue tools, machinery's gadgets, equipment's etc. shall be imported.
- 3) Test certificate shall be submitted for all imported safety / personal protective equipment's.
- 4) INSPECTION: three -stage wise inspection shall be carried at your workshop.

Annexure - 1

List of Accessories/ Equipments to be carried on the Rescue Tender:-

All the equipments provided by the OEM/fabricator shall have to meet all safety standard of EN/BIS/NFPA/UL listed (as applicable). The equipment should have to meet latest regulation and standard. The bidder shall clearly mention the name of the manufacturer against each item.

N.B: -

The OEM/ Authorized Agent during supply shall submit the execution of agreement for the work "Supply, Testing and Commissioning" of Advance Rescue Tender including 5 (five) years comprehensive Annual Maintenance after expiry of initial 12 months warranty. The rate of AMC will be as per the approval of Technical Committee basing on the quotation submitted by the OEM. If there is any change in the rate of service tax by the Government the same will be added/ deducted from the quoted amount.

2. MECHANICAL POWER SAWS.

i) MECHANICAL POWER SAWS (BAR LENGTH- 36")

Standards

Conforming standards for the item	EN/DIN/US/Equivalent standards
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Performance Parameters

Mechanical Petrol Driven Chain Saw needs to be designed for cutting of wood and trimming of trees during any disasters and it must be manufactured by reputed firm.	Required
Type of Engine	2- Stroke Petrol Driven, Air Cooled
Displacement in CC	Minimum 115 CC
Output Power	Minimum 8 Hp
RPM	13500 maximum
Type of Blade	Steel Alloy
Full blade guard with adjustable depth limiter in inches	0-8" (minimum 1 cm adjustment)
Length of guide bar	36 inch
Type of Fuel used	Petrol
Fuel tank capacity (in litres)	1.2 L and above
Ignition system should be electronic with preferably one button start up	Required
Weight of chain saw in kg	Not more than 11 Kg.
Cutting chain detail	Steel Alloy Chain Saw
Fully automatic and adjustable chain lubrication system	Required
Automatic Chain Brake System for quick stoppage when required	Required
Availability of adjusting chain tension	Required
Technical manual, servicing details and instruction manual to be provided	Required
Warranty in years	1 Year

Additional Parameters

Extra Chain with Guide Bar	2 Nos each
Standard Tool Kit for maintenance and trouble shooting to be provided with Machine	Required
Operations Manual , Maintenance Manual and service details supplied with machine	Required
Protective carry case supplied with the machine	Required
Copies of test certificates and certifications as applicable to be furnished to buyer on demand at time of supplies	Required
Demonstration of equipment and training to be provided after completing supplies	Required

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

Availability of test reports from Central Govt. /NABL / ILAC accredited Lab covering all the parameters	Required
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Accessories to be supplied

Sturdy Gloves	01 Set
Gum Boot	01 Prs
Apron	01 No.
Ear Plug	01 Set
Goggles	01 No.
Helmet	01 No.

Authorization

Certificate- Authorization from OEM	Required to be attached in case of authorized agent
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Note

Before placing Supply Order the firm should be able to demonstrate the equipment/ item before the Committee/ buyer within the scheduled date for technical evaluation of the products.	Required
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N.B: -

The OEM/ Authorized Agent during supply shall submit the execution of agreement for the work "Supply, Testing and Commissioning" of Mechanical Power Saws (Bar Length- 36") including 3 (three) years comprehensive Annual Maintenance after expiry of initial 12 months warranty. The rate of Annual Maintenance Contract (AMC) will be as per the approval of Technical Committee basing on the quotation submitted by the OEM. If there is any change in the rate of service tax by the Government the same will be added/ deducted from the quoted amount.

ii) MECHANICAL POWER SAWS (BAR LENGTH- 24")

Standards

Conforming standards for the item	EN/DIN/US/Equivalent standards
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Performance Parameters

Mechanical Petrol Driven Chain Saw needs to be designed for cutting of wood and trimming of trees during any disasters and it must be manufactured by reputed firm.	Required
Type of Engine	2- Stroke Petrol Driven, Air Cooled
Displacement in CC	Minimum 75 CC
Output Power	Minimum 6.3 Hp
RPM	13500 maximum

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

Type of Blade	Steel Alloy
Full blade guard with adjustable depth limiter in inches	0-8" (minimum 1 cm adjustment)
Length of guide bar	24 inch
Type of Fuel used	Petrol
Fuel tank capacity (in litres)	0.70 L and above
Ignition system should be electronic with preferably one button start up	Required
Weight of chain saw in kg	Not more than 8 Kg.
Cutting chain detail	Steel Alloy Chain Saw
Fully automatic and adjustable chain lubrication system	Required
Automatic Chain Brake System for quick stoppage when required	Required
Availability of adjusting chain tension	Required
Technical manual, servicing details and instruction manual to be provided	Required
Warranty in years	1 Year

Additional Parameters

Extra Chain with Guide Bar	2 Nos each
Standard Tool Kit for maintenance and trouble shooting to be provided with Machine	Required
Operations Manual , Maintenance Manual and service details supplied with machine	Required
Protective carry case supplied with the machine	Required
Copies of test certificates and certifications as applicable to be furnished to buyer on demand at time of supplies	Required
Demonstration of equipment and training to be provided after completing supplies	Required
Availability of test reports from Central Govt. /NABL / ILAC /ENaccredited Lab covering all the parameters	Required

Accessories to be supplied

Sturdy Gloves	01 Set
Gum Boot	01 Prs
Apron	01 No.
Ear Plug	01 Set
Goggles	01 No.
Helmet	01 No.

Authorization

Certificate- Authorization from OEM	Required to be attached in case of authorized agent
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TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

Note

Before placing Supply Order the firm should be able to demonstrate the equipment/ item before the Committee/ buyer within the scheduled date for technical evaluation of the products.	Required
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N.B: -

The OEM/ Authorized Agent during supply shall submit the execution of agreement for the work "Supply, Testing and Commissioning" of Mechanical Power Saws (Bar Length- 24") including 3 (three) years comprehensive Annual Maintenance after expiry of initial 12 months warranty. The rate of Annual Maintenance Contract (AMC) will be as per the approval of Technical Committee basing on the quotation submitted by the OEM. If there is any change in the rate of service tax by the Government the same will be added/ deducted from the quoted amount.

TENDER CALL NOTICE NO.-2/2020-21.

DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

3. FIREMAN HELMET FITTED WITH HEAD LAMP.

Helmet required for head protection of employees to carryout rescue operation during any disaster.

1. Material-

1.1 The shell of the helmet shall be made of non metallic material. It should be made of Acrylonitrilie Butadiene Styrene, nylon, Polycarbonate, polyester, polyethylene conforming to CE, EN 397, EN 12492 (1), EN 53065.

2. Harness-

- 2.1 Anti concussion tape shall be used and it shall be sweat resistant non irritant and shall not cause skin disease. The metal parts used in helmet shall be inherently corrosion resistant.
- 2.2 The shell shall be dome-shaped. No metallic component shall pass through the shell. It shall be provided with a brim with or without a peak.
- 2.3 Head circumference 53-63 cm. Colour shall be fluorescent yellow.
- 2.4 The surface of the helmet shall be finished smooth free from burrs, sharp edges shall be removed to ensure proper surface contact of all fittings.
- 2.5 It should be comfortable to wear. The helmet shell should not have ventilation holes for protection against flames, electrically hazards and molten metal splash.
- 2.6 The mass of a complete helmet without attachment and with or without peak shall not exceed 500 Grams.
- 2.7 The helmet shall also be marked with the ISI Certification mark/ EN mark.
- 2.8 The word "FIRE" should be written in P.O Red in the front side of the helmet. It should be compatible with mounting head lamps even without head band.

3. Head Lamp.

- 3.1 The head lamp offering lighting that allows the user to work comfortably on task close at hand.
- 3.2 It shall be constant lighting technology.
- 3.3 Head lamp keeps hands free for work and it shall worn on the head with/ without the head band, attached to the helmet with a mounting plate of two lighting modes.

Sl. No.	Parameter	Lithium Ion Model
1	Light Source	LED
2	Primary & Secondary Beam	Dual Beam
3	Operating modes	Low & High
4	Backup time in high power mode	8 to 10 Hours
5	Approx distance of propagation	100 Meters or more
6	Lumens	300 Lumens or more
7	Battery Type	Lithium Ion/ LiPo Internal
8	Charging Type	External Electric charger
9	Charging Time	4 to 5 Hours

TENDER CALL NOTICE NO.-2/2020-21.
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

4. SAFETY GLOVES (MEDAN).

- Durable, double-layer goat leather protects palms fingerprints and the crotches between thumbs and index fingers.
- Stretchy, abrasion-resistant mesh backs enhance fit and breathability for comfort.
- Neoprene cuffs, with hook and loop with Velcro closures.
- It should have a carabineer holes to attached gloves .
- Articulated, anatomic cut provides natural fit.
- With the durability of work glove and dexterity of driving glove, the glove should used for all types of rope work.
- Fabric: Goat leather & stretch Nylon .
- Weight: Not more than 125 grams.
- Type: Full Finger.
- Size: Medium, Large and Extra-Large.
- The glove should be CE EN 420, CE EN 388(3133) or latest amendment thereon.

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