OIL INDIA LIMITED

(A Govt. of India Enterprise)
4, India Exchange Place,
Kolkata – 700 001.

OIL INDIA LIMITED invites indigenous competitive bid through its e-procurement portal – https://etender.srm.oilindia.in/sap/bc/gui/sap/its/bbpstart/! for the following e-Tenders :-

Srl. No.	E-tender	Bid Closing Date	Materials Description
1	SKI2912P14	06-05-2014	DCP Fire Tender (Composite Bid)
2	SKI2913P14	06-05-2014 (Technical Bid)	Foam Tender (Single Stage Two Bid System)
3	SKI2928P14	27-05-2014 (Technical Bid)	Process Monitoring & Control System (Single Stage Two Bid System with Pre-bid Conference)

2.0 Application showing full address / e-mail address with Tender fee (non-refundable) of **₹ 1000.00** per tender (excepting PSU and SSI units registered with NSIC) by Demand Draft in favour of M/s. Oil India Limited payable at Kolkata and to be sent to **Head-Calcutta Branch**, Oil India Limited, 4, India Exchange Place, Kolkata – 700 001 only and shall be accepted upto 29.04.2014. The envelope containing the application for participation should clearly indicate **"REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E-TENDER NO."** for easy identification and timely issue of authorisation. On receipt of requisite tender fee, USER_ID and initial PASSWORD will be communicated to the bidder (through-e-mail) and will be allowed to participate in the tender through OIL's e-Procurement portal. No physical tender documents will be provided. **Details of NIT can be viewed using "Guest Login" provided in the e-Procurement portal. The link to e-Procurement portal has also been provided through OIL's web site www.oil-india.com.**

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OIL INDIA LIMITED
(A Government of India Enterprises)
4, India Exchange Place
Kolkata -1

TELEPHONE NO. (033) 222301657
FAX NO: (033) 22302596
Email: oilcalmn@dataone.in;oilcalmn@oilindia.in

FORWARDING LETTER

Tender No & Date : SKI2912 P14 DATE: 18.03.2014

Tender Fee : Rs 1,000.00

Bid Security Amount : Rs 40,000.00

Bidding Type : SINGLE STAGE COMPOSITE BID SYSTEM

Bid Closing on : As mentioned in the Basic Data of e-portal

Bid Opening on : As mentioned in the Basic Data of e-portal

Performance Guarantee : Applicable

Integrity Pact : Not Applicable

Delivery Required: At DULIAJAN, ASSAM

OIL invites Bids for Fabrication, Supply, installation and commissioning of DCP FIRE TENDER ON BRAND NEW 4X2 DRIVE TRUCK CHASSIS at Duliajan **as per Annexure II** through its E-Procurement site. The bidding documents and other terms and conditions are available at Booklet No. MM/CALCUTTA/E-01/2010. The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.

The general details of tender can be viewed by opening the RFx [Tender] under RFx and Auctions. The details of items tendered can be found in the Item Data and details uploaded under Technical RFX.

The tender will be governed by:

a) "General Terms & Conditions" for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2010 for E-procurement (LCB Tenders).

b) Technical specifications with BEC/BRC and Qty. as per **ANNEXURE II** .

c) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.

d) In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.

e) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited).

f) Bidder are advised to fill up the Technical bid **CHECK LIST** and **RESPONSE SHEET** given in MS excel format in Technical RFx -> External Area - > Tender Documents. The above filled up document to be uploaded in the Technical RFX Response.

g) The Price along with price related conditions should be submitted online as per **PRICE BID FORMAT**. All other technical documents to be submitted as per tender requirement in the '**Technical RFx response**. Price bid as per price bid format to be **uploaded as Attachment in the attachment link under "Notes & Attachments" Tab.**

Special Note:

1.0 General Qualification Criteria:

In addition to the general BRC/BEC, following criteria on Bidders' Experience and their financial capabilities shall be considered (documentary evidence to be provided along with the bid in Technical RFx -> External Area - > Tender Documents as on the Bid Closing Date:

a) Bidder should have experience of successfully executing Similar order for at least Rs 11.90 Lakhs during last 3 years as on the Bid Closing Date.

b) Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than Rs 40.00 Lakhs.

2.0 Application showing full address / e-mail address with Tender fee (non-refundable) of ₹ 1000.00 per tender (excepting PSU and SSI units registered with NSIC) by Demand Draft in favour of M/s. Oil India Limited payable at Kolkata and to be sent to Head-Calcutta Branch, Oil India Limited, 4, India Exchange Place, Kolkata – 700 001. Application shall be accepted only upto one week prior to Bid Closing date. The envelope containing the application for participation should clearly indicate ""REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO **SKI2912P14** for easy identification and timely issue of authorisation. On receipt of requisite tender fee USER_ID and initial PASSWORD will be communicated to the bidder (through-e-mail) and will be allowed to participate in the tender through OIL's e-Procurement portal. No physical tender documents will be provided. USER_ID AND INITIAL PASSWORD WILL BE ISSUED TILL ONE WEEK PRIOR TO THE BID CLOSING DATE.

3.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with Tender no. and Due date to **Head-Calcutta Branch, Oil India Limited, 4, India Exchange Place, Kolkata – 700 001** only on or before the Bid Closing Date and Time mentioned in the Tender.
a) Original Bid Security
b) Detailed Catalogue (if any)
c) Any other document required to be submitted in original as per tender requirement
All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate

4.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.
5.0 All the Bids must be Digitally Signed using "Class 3" digital certificate (e-commerce application) with organisation name as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India.
6.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time failing which the offer shall be rejected.
7.0 Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.
8.0 The tender shall be governed by the Bid Rejection & Bid Evaluation Criteria given in enclosed Annexure-II. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria contradict the Clauses of the tender and / or "General Terms & Conditions" as per Booklet No. MM/CALCUTTA/E-01/2010 for E procurement (LCB Tenders) to General Terms and Conditions for Indigenous E-Tender elsewhere, those in the BEC / BRC shall prevail.

9.0 To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

10. Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.

Yours Faithfully
Sd-
D BHATTACHARJEE
Senior Manager Materials
For Chief Manager- Materials
For Head-Calcutta Branch

OIL INDIA LIMITED
(A Government of India Enterprise)
4, India Exchange Place, 4th floor,
Kolkata 700001,
West Bengal (India)

TELEPHONE NO. (033) 2230 1657 / 58 / 59
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ANNEXURE-II

Tender No& Date : SKI 2912 P14 DATED 18.03.2014

Tender Fee : 1000.00 INR

Bid Security Amount : 40000.00 INR

Bidding Type : Single Bid (Composite Bid)

Bid Closing on : As mentioned in the Basic Data of e-portal
Bid Opening on : As mentioned in the Basic Data of e-portal

Performance Guarantee : Applicable

OIL INDIA LIMITED invites Indigenous tenders for items detailed below:

TECHNICAL SPECIFICATIONS WITH QUANTITY

SLNO & MATERIAL CODE NO.	MATERIAL DESCRIPTION.	QUANTITY	UNIT
10 ---------- **OC000198**	CHASSIS FOR DCP FIRE TENDER Details Specification as given in Annexure 1 – Part - A ----------	1	NO.
20 **0X000198**	FABRICATION OF DCP FIRE TENDER ON ABOVE CHASSIS Details Specification as given in Annexure 1 – Part - B ----------	1	NO.
30 ---------- ----	TRAINING, INSTALLATION AND COMMISSIONING OF DCP FIRE TENDER AT CENTRAL FIRE STATION,DULIAJAN, ASSAM BY THE SUPPLIER'S REPRESENTATIVE.	1	AU

Annexure-1

Part – A. CHASSIS FOR "DCP FIRE TENDER"

Brand new 4x2 drive Truck chassis of TATA, Ashok Leyland, EICHER, VOLVO, Mahindra Navistar or Equivalent make manufactured not prior to six months from the date of issuance of Letter of Intent (LOI). The bidder shall take special care in selecting and designing the DCP Fire Tender considering the unit's application in rough terrain and typical oilfield roads. The offered model shall be latest and conforming to international quality standard norms, having specifications, fittings, accessories, etc. as under –

(A) CHASSIS–

a	Drive &Cowl	- 4 x 2 Drive & Full Forward Control Cowl
b	Engine	-Min. 6 cylinder Water-cooled diesel engine
c	Max. Output Power	-Not less than 130 HP at rated rpm
d	Max. Output Torque	- Not less than 400NM at rated rpm
e	Emission	- Minimum EURO- III/BS-III compliant.
f	Steering	-Hydraulic Power Assisted Steering (Right Hand Steering).
g	Gearbox	- Minimum 5 forward speed & 1 reverse speed.
h	PTO(as applicable)	-as per design
i	Wheelbase	- In the range of 4800 mm. to 5200mm.
j	GVW	-16000 Kg. (approx.).
k	Brake	- Full air or Hydraulic power assisted Dual Circuit Service Brake and suitable Parking Brake.
l	Axles	- Front - 1, Rear - 1(Drive axles)
m	Suspension	-Semi elliptical leaf spring suspension with shock absorbers.
n	Wheels & Tyres	Front- 2, Rear - 4 & Spare - 1, Tyre .Size - preferably 10.00 x 20 of adequate ply rating

(B) Driver's Cabin
Suitable factory built cab for Fire tender.

(C) DIMENSIONS

Full Unit
Overall Length - Approx. 8500mm.
Max. Width - 2500mm.
Max. Height - Not more than 3000mm (Unladen).

(E) ADDITIONAL/OTHER FITMENTS & ACCESSORIES

a. All standard gauges and meters, Horn, Reversing Alarm, Lightings, Reflectors, Roof Lamps, Windscreen wipers, Sun shed, Glove box, Lockable fuel tank, Standard Tool Kit, 30T Capacity Hydraulic Jack with handle & wheel wrench, Mud flaps/guards, etc.
b. Rear View Mirror- 2 Nos..
c. Well-covered Battery Box, Tool box. Suitable storage box at suitable location.
d. Suitable Jaw & Pint type rear Towing Hook, mounting arrangement for spare wheel.
e. First Aid Box, Fire Extinguisher, Licence Holder at suitable locations and other fittings required as per MV Act.

3.0 DOCUMENTATION

A. The following documents/literatures are to be submitted along with the bid:

a. Technical leaflet, to support the specifications provided in the bid. (All specifications, as desired, as well as MODEL NAME/CODE of the offered Truck shall clearly be defined in the bid. Submission of Technical Leaflet is not sufficient).
b. A detailed Dimensional Drawing of the fire tender, showing among others overhang, seat size, leg space & sitting arrangement etc. as applicable.

B. The following documents /literatures are to be submitted along with the supply-

a. Temporary Registration, Insurance, Road Tax, Sale Letter in Form 21 & 22/22(A), etc. in the name of M/s OIL INDIA LIMITED, Duliajan as required under MV act for onward registration of the Trucks in Assam.
b. 3(three) sets of Spare Parts Catalogue, Workshop & Service Manual.

4.0 Technical Check List:

Part A TECHNICAL **A 1.1 (TRUCK CHASIS)**						
Sl. No.	**PARAMETERS / REQUIREMENTS**				**BIDDER'S OFFER (To indicate details or yes/no, as applicable)**	**REMARKS, IF ANY**
1	Make & Model of Chassis					
2	Gross Vehicle Weight (GVWR)					
3	Drive:					
4	Wheelbase					
5	Overall Dimensions (Width, Height & Length) of complete unit					
6	Ground Clearance					
7	Laden Weight (Total weight of the unit)					
8	Engine	a	Make & Model			
		b	Max. Output Power			
		c	Max. Output Torque			
		d	Naturally Aspirated or Turbo Charged			
		e	Emission Norms			
		f	Control System (Electronic?)			
9	Transmission (Main)	a	Make & Model			
		b	No. of gears			
10	Make & Model of Transfer Case, if any					
11	Total number of PTOs in operation					
12	Make & Model of PTOs					
13	Make, Model & Type of Steering System					
14	Minimum Turning Radius					
15	Type of Front Suspension					
16	Type of Rear Suspension					
17	Axle Capacity	a	Front			
		b	Rear			
18	Type, Size of Wheel & Tyre	a	Front			
		b	Rear			
19	Type of Service Brake (S/Z-cam or not)					

20	Type of Wheel Brake Servos(screw type manual release or not)	a	Front		
		b	Rear		
21	Fuel Tank capacity				
22	Reversing Alarm with Blinker Lights				
23	Provision of Air Dryer in truck's pneumatic system.				

Part B DOCUMENTATIONS
B1.1 TRUCK

Sl. No.	DESCRIPTIONS	DOCUMENT ENCLOSED (Yes or No)	REMARKS, IF ANY
1	Technical leaflets with detailed specifications, Make & Model of chassis, engine, transmission, transfer case (if any), PTOs, suspension, axle, steering, wheel & rim, brake, etc.		
2	Detailed dimensional layout drawing illustrating Driver's Cabin and all major items/ components.		
3	List of tools that shall be supplied under Standard Tool Kit for general maintenance of the truck.		

5.0 WARRANTY/GUARANTEE

Notwithstanding the Guarantee/Warranty clause(s) mentioned elsewhere in the NIT, complete units shall be under guarantee/warranty by the supplier for a minimum period of 1(one) year from the date of successful commissioning at site.

OIL reserves the right to inspect, test and if necessary, reject the truck or any part/parts after delivery at site, only if the said rejection is attributed to be the responsibility of the supplier. It shall, in no way be limited or waived by the reason that the truck was being previously inspected, tested and passed by OIL as per para 4.0 (A) above.

6.0 General:

1.0 The "DCP Tender" should be of "Right Hand Drive unit" (Steering on right hand side of unit). Left Hand Drive unit will not be acceptable.

2.0 The bidder shall quote the Engine power with emission norms - BS-III/BS-IV or equivalent.

SPECIFICATION FOR "DRY CHEMICAL POWDER TENDER (DCP TENDER)" WITH CHASSIS & ACCESSORIES
Annexure - 1

Part – B. Fabrication of "DRY CHEMICAL POWDER TENDER (DCP TENDER) & ACCESSORIES"

SPECIFICATION FOR DRY CHEMICAL POWDER TENDER (DCP)

1.0

SCOPE

1.1 This specification covers the requirements regarding design, procurement, fabrication, testing and supply of Dry Chemical Powder (DCP) tender to be used for fire fighting. The scope of supply shall be inclusive of, but not limited to the following.

- Chassis
- Two Cylindrical Vessels for Storage of DCP
- DCP Monitor
- Hose Reels
- Expellant Gas System
- Accessories and Spares
- Body Fabrication/Works
- Control Panel
- Piping, Specials, Necessary Controls etc. Complete

2.0 GENERAL

2.1 The DCP tender including all accessories shall be designed manufactured tested etc. as per relevant Indian standard (IS-10993). International Standards and requirements of these specifications wherever applicable and as per sound engineering practice.

2.2 All the equipments and accessories shall be fixed on the appliance in a compact and neat manner and shall be so placed that each part is easily and readily accessible for use and maintenance. The centre of gravity shall be kept as low as possible.

2.3 The drag hook or eye of adequate strength and design shall be provided at the rear of the chassis.

2.4 The controls on control panel shall be so arranged that one man can operate all the controls.

2.5 The vendor shall provide a detailed description of the "DCP Tender", a list of equipment to be furnished, and other construction and performance details to which the "DCP Tender" shall conform.

2.9 Responsibility for the "DCP Tender" and equipment shall remain with the vendor until they are accepted by the OIL.

2.11 On initial delivery of the "DCP Tender", the vendor shall supply a qualified representative to demonstrate the "DCP Tender" and provide initial instructions to representatives of the OIL regarding the operation, care, and maintenance of the "DCP Tender" and equipment supplied.

2.12 Registration of the vehicle will be arranged by OIL after the complete appliance is delivered to OIL.

2.13 The bidder shall have single point responsibility for complete package i.e. DCP Tender.

3.0 **CHASSIS**

3.1 The chassis for the "Dry Chemical Powder (DCP) Tender" will be as per **Annexure 1** and shall be procured & supplied by the vendor. The vendor shall be responsible for supplying all equipment / accessories & properly fixing them on the chassis as described in this specification. Other details & requirements which are not covered under this specification, but may be necessary to complete the **"**Dry Chemical Powder (DCP) Tender**"** and/or to fulfill the operation/performance requirement shall be provided by the vendor, who will be responsible for the design and construction of the complete appliance to the full satisfaction of the owner.

3.2 The spare wheel assembly (supplied along with chassis) shall be fitted at suitable location on the appliance.

3.3 Welding and drilling on frame work of chassis is not allowed.

3.4 Necessary temporary registration/ permit and Insurance will have to be arranged by vendor.

3.5 The vendor shall confirm that the chassis is capable of taking the payload indicated in requirement and shall be able to meet other duty requirements.

4.0 DCP STORAGE VESSELS

4.1 Each of the 2 DCP storage vessels shall be spherical l/ cylindrical in shape and shall hold 1000 kg of Dry Chemical Powder. The powder shall be of foam compatible type.

4.2 Free charge of Dry Chemical Powder is in vendor's scope. Dry Chemical Powder to be provided in sealed drum as per detailed specification of **"Annexure – 2".**

4.3 The DCP vessels shall be charged by the Vendor with 1000 kg of dry chemical powder in presence of OIL's representative at the time of Commissioning at OIL's site. **Permanent marking of "Dry Chemical Powder" filling height** should be considered /marked to avoid over-filling of vessel

4.4 Design, fabrication, inspection, testing etc. of the DCP storage vessels shall confirm to ASME Section VIII Division-1 code (latest edition)

4.5 Operating and design conditions for the DCP storage vessels are :

	Operating	Design
Pressure, Kg/cm²(g)	14	21
Temperature, deg C	45	65

Material of construction	: SA 516 Gr 70
Corrosion allowance	: 2 mm
Joint efficiency	: 1.0
Minimum metal temperature	: (-) 0.7 deg C

4.6 Vessels shall have supports adequately designed, which shall also ensure that the loaded vessel weight is uniformly distributed on the chassis. Supports shall not be directly attached to the vessels

4.7 Each vessel shall have following appurtenances:

a)	Manhole with bolted cover	:	1 No. X 450 mm ID
b)	Nozzle for entry of expellant gas	:	No. & Size by vendor
c)	Nozzle for exit of DCP	:	No. & Size by vendor
d)	Nozzle for safety relief valve	:	2 Nos. & size by vendor
e)	Nozzle for pressure gauge	:	1 No. & Size by vendor
f)	Emptying nozzle with bolted cover	:	1 No. X 100 mm NB
g)	Vent	:	1 No. & Size by vendor

Note
1. All appurtenances on the vessels shall be flanged. Flange rating shall be minimum ANSI 150 – lbs.
2. All nozzles shall be adequately reinforced
3. Nozzle pipes for nozzles upto 1.5” size shall be of Sch. 160 & Nozzle pipes for nozzles 2” to 8” size shall be of Sch. 40
4. All nozzles upto 1.5” shall have stiffeners.

4.8 Suitable lifting lugs shall be provided on the shell of the vessels to enable them to be lifted off the vehicle for repair/replacement as necessary. Lifting lugs shall not be directly attached to the vessels.

4.9 To ensure proper fluidity of the powder appropriate nos. of high pressure diffuser nozzles shall be suitably placed at the bottom of the vessel through which gas under pressure shall be discharged. Suitable arrangement shall be made to ensure that diffuser nozzles are not blocked under any circumstances. The diffuser nozzles should be fitted with synthesised filters.

4.10 The vessels shall be provided with blow valve or a similar device to discharge the nitrogen gas in the atmosphere if the vessels is under full charge and it is not needed to discharge the balance of Dry chemical powder left in the vessels.

4.11 Each vessel shall be provided with two nos. safety valves each sized for 100% capacity. Safety valves shall be selected as per ASME: code Safety valves shall be so sized so as to provide required relief in case of failure of pressure reducing device in expellant system. The discharge from safety valves shall lead to a safe place preferably under the chassis.

4.12 Potable water shall be used for hydro test. Test pressure shall be determined as per Code but in no case shall it be less than 1.5 times the design pressure corrected to the test temperature.

4.13 The inside of the vessels shall be provided with anti-corrosion treatment by Epoxy paint over surface, which has been suitably blasted to near white finish. The DFT shall be minimum 0.12 mm. Epoxy painting shall be done after hydraulic testing.

4.14 The external surface of the vessel shall be given two coats of zinc chromate primer over a well cleaned surface. Primer shall be applied only after hydro test.

4.15 The two DCP storage vessels shall not have any direct interconnection.

4.16 Vessels shall be so sized as to have 10% of inside height as free space after filling the specified quantity of powder.

5.0 EXPELLANT SYSTEM :

5.1 Nitrogen gas shall be used as the expelling medium for discharging the DCP.

5.2 Each DCP storage vessel shall have an independent expellant gas system.

5.3 The expellant gas shall be stored in cylinders of capacity not less than 54 liters each. The filling pressure of nitrogen in cylinders shall be 130-140 kg/Cm².

5.4 Each DCP vessel shall be provided with a battery of cylinders to provide expellant gas to ensure the required discharge of DCP. The number of cylinders required shall be decided by the vendor. However, each DCP vessel shall be provided with a battery of four (2 working and 2 spare) cylinders minimum.

5.5 **Nitrogen cylinders shall be provided with quick operating valve & the cylinders with valves must be of approved type by PESO/CCOE Nagpur.** Certificates of the same shall be submitted to the OIL at the time of supply

5.6 The expellant system shall have a working pressure of 14.0 kg/Cm² each expellant system shall have an independent and suitable pressure reduction station.

5.7 The design of the each expellant system should be such so as to ensure that the total discharge of the powder shall not be less than 90 percent of the total contents of the DCP vessel.

5.8 Suitable device shall be provided or arrangement made in each expellant system to restore the fluidity of the powder to ensure its capability to flow through the fittings, valves and pipelines to the outlets.

5.9 Nitrogen cylinders shall be fitted with back flow valves to prevent return of N_2. The operating valve of N_2 cylinders shall be of trigger/lever type. Arrangement shall be such that these valves can be operated one at a time and all at a time with one lever.

5.10 Arrangement shall be made to check the pressure of each N2 cylinder without removing the cylinders.

5.11
a) Efficient means shall be provided for flushing the monitor, hose reels and piping etc, after use, with the expellant gas. Sufficient amount of the expellant gas shall be available in the cylinders for this purpose. Arrangements shall be made to prevent back flow of the expellant gas.

b) An additional connection shall be provided in the common manifold, with required valve connection, to flush the system using air from outside source.

5.12 The expellant system shall be used to discharge the DCP from :

a) DCP monitor, or
b) Both hose reels at a time or from any one hose reel

The expellant system should be capable of providing the required gas so as to ensure the specified discharges from monitor and / or hose reel(s).

5.13 The nitrogen cylinders shall not be manufactured two years earlier than supply of the DCP tender.

5.14 One battery of cylinders shall face the right side of the tender while the other shall face the left side.

Note: Required number of cylinders fully charged with nitrogen shall be supplied duly mounted on vehicle.

6.0

DCP MONITOR

6.1 One No. DCP monitor shall be mounted on suitable and independent platform just behind the driver's cabin.

6.2 The discharge through the monitor shall be adjustable at 15, 25 and 40 kg/Sec. at operating pressure. The throw through the monitor shall not be less than 40m horizontally and 30m vertically in still air.

6.3 Suitable controls/ Flow control lever shall be provided near the grip of the handle to facilitate the operator to control and regulate the discharge of the powder. Automatic system to be provided to regulate the output and throw.

6.4 The monitor shall be provided in a manner so as to enable the operator to move it easily. It shall be capable to work on any angle upto 360 deg. horizontally and 100 deg. (+ 90deg. to -10 deg.) vertically.

6.5 The platform shall be adequate strengthened to avoid any vibration while the monitor is in use. There shall be proper and sufficient moving space around the platform for movement of the operator.

6.6 The monitor shall rest on a clamp, properly secure, while not in use.

7.0 HOSE REELS

7.1 Each vessel shall have two hose reels for discharge of DCP. Two hose reel to be provided on each side of the tender.

7.2 The throw of the powder shall not be less than 10m horizontally and 8m vertically while working with both the hose reels simultaneously. Each hose reel shall be capable of discharging DCP @ 5kg/sec.

7.3 Each hose reel shall be provided with 25 mm x 30m long high pressure hose (30 bar working pressure) fitted with trigger type pistol grip nozzle. Hose shall be Parker make.

7.4 The hose reels shall be provided an easily accessible location so as to facilitate quick withdrawal.

7.5 The reels shall be provided with friction brakes to prevent over-run of tubing without affecting easy run of the reel. It shall be possible to de-clutch the brake for rewinding. Design shall be reliable and permit adjustment for wear and friction force to suit end use.

7.6 The hose reel shall be quick rolling type with ball bearing with external flushing connection.

7.7 The hose reels shall be of non-kinking type

8.0 PIPING

8.1 All piping shall be sized so as to have minimum pressure drop and achieve the required pressure and flow at various locations.

8.2 All piping shall be of carbon steel and seamless to A 106 Gr. B. Piping shall be designed for 10% over the maximum pressure encountered in the pipe.

8.3 The piping shall be flanged for ease of maintenance. However, flange joints to be kept minimum.

8.4 All valves in the circuit shall be full-bore ball type. Body to be carbon steel with SS-304 trims and Teflon seats. Valves of less than 1.5" size shall be forged with 100mm long nipples at both ends. Valves more than 2" size shall be flanged and can be of cast construction. Valves shall be provided at suitable locations ensuring quick and easy operation.

8.5 All lines shall be hydraulically tested at 1.5 times the design pressure and pressure shall be held for 2 hours. However, in no case shall the lines be hydraulically tested below 25 kg/cm².

8.6 All lines shall be suitably supported so as to provide rigidity and avoid vibrations.

8.7 All lines less than 1.5" NB size can be socket welded to matching fittings (3000 lbs. rating minimum). All lines above 2" NB size shall be butt welded with full penetration welds.

8.8 All gaskets shall be spiral wound with SS-304 asbestos filler.

9.0 CONTROL PANEL

Adequately illuminated control panels shall be provided at easily accessible position to operate the dry powder system.

Each vessel shall have a separate control panel located at side of the tender close to the cylinder bank.

The control panels shall include the following.

h) Pressure gauge for expellant gas cylinders at manifold.
ii) Pressure gauge to indicate operating pressure of DCP vessel in charged condition.
iii) Operating levers for

- Expellant gas valve
- Monitor valve
- Valves for hose reels
- Pressure release valve
- Flushing valve for flushing the system using expellant gas
- Flushing connection with valves for flushing the system with external air.

iv) Switches for lighting
v) System schematic diagram, etched on brass plate
vi) Operating instruction plate and flushing out instruction plate (both etched on brass plate)

In addition to the items mentioned above, vendor shall provide any other items that he may find essential. Any of these items which are also required in the driver's cabin shall be provided at suitable locations in the driver's cabin. Each lever, switch, valve, gauge, outlet/inlet etc. shall have identification made on brass plate and duly riveted.

10.0 BODY WORK

10.1 For Cabin

The cabin shall be built by the vendor as per the standard design. The cabin shall have a sitting arrangement of total six persons (including driver). There shall be two independent seats in the front including one for the driver. The cabin design shall afford protection from heat, rain, dust etc.

10.2 The driver's seat shall be adjustable. The rear of the cabin shall have one fixed seat for full width of cabin for other crew members. All seats shall have foam cushion and their back shall be covered with rexene. All seats shall have safety belts.

10.3 There shall be four doors in the cabin. Two doors, for the front two seats ad two doors for the back seat. The doors shall be generously sized for easy embarking/ disembarking of crew members. The doors shall open outwards and hung forward and shall have levers for unlatching from outside and inside. The door lever on outside of driver's side shall have locking arrangement. Other doors shall have locking arrangement from inside.

10.4 The doors shall have shatter proof safety glasses, which should be raised / lowered by winding type mechanism.

10.5 Non-slip steps of adequate width and hand rails shall be provided to assist the driver and crew to get in and out.

10.6 The cabin should have one roof light and two side lights (one on each side) for illumination. These lights shall be properly positioned to ensure good illumination.

10.7 Pressed sections of 40mm x 40mm x 2mm thick MS square tubes of sufficient strength shall be used for the cabin construction as far as possible.

10.8 The cabin structure shall be so designed so as to avoid any vibration/rattling/ deformation in the intended usage of the vehicle.

10.9 All steel work shall be given two coats of red- oxide primer to any cladding work.

10.10 The paneling/cladding shall be so laid and properly sealed so as to avoid any water leakage in to the cabin. Inside of the cabin shall be lined with smooth aluminum shut work with anodized aluminum beading.

10.11 The entire roof of the vehicle including the crew cabin top, entire rear, crew cabin floor, locker floor and sides shall be made from 2 MM of Aluminium sheets 14 SWG sheets suitably treated for slippage. The roof of the cabins should be rigid enough to take the weight of two persons without deforming the roof sheeting.

Proper access ladder with Grab rails and non-skid steps shall be provided to give access to the roof for approaching to the DCP vessels and monitor etc.

10.12 The joint of cowl and the cabin shall be properly made and sealed so as to avoid any deformation of the cowl and also avoid water leakage.

10.13 The cabin floor shall be covered with aluminum checkered plate 2 mm thick over 16 SWG MS plain sheet and metallic structure frame.

10.14 The entire floor of the cabin shall be provided with 3M make vinyl matting of minimum 6MM thickness with anti-skid features.

10.15 Battery shall be placed in totally enclosed box with spark proof gland for cable entry with battery cut-Off switch. Installed battery shall have a charging facility from external source at its location itself.

10.16 Dual sun visors and long arm outside fitting rear view mirrors shall be fitted to cabin.

10.17 Wiper machine and blade shall be of heavy duty type.

10.18 The cabin shall have other features and accessories as listed elsewhere.

10.19 First aid box Thadani make suitable for 10 persons shall be provided in the cabin. First aid box shall be suitably mounted in the cabin at easily accessible location.

11.0 **For other work on Chassis**

11.1 Sufficient number of lockers for storage of all accessories (listed elsewhere) shall be provided. Lockers shall be accessible from ground level by man of average height (1.65m). All the lockers shall be fitted with internal lighting, which shall be capable of being automatically switched. "ON" and "OFF" by the opening of the door/lids. A master switch for isolating the locker lighting circuit shall also be fitted in the driver's cabin.

11.2 The floor of lockers shall be covered with 2 mm tick aluminum chequered plate over 16 SWG MS plain sheet and structural frame. The sides and bottom of the lockers shall be rigid enough to take the load of items stored in the lockers. Each locker shall have holes in bottom for drainage of water.

Equipment Stowage Compartments

11.3 The entire structure of appliance will be welded structure made of pressed section, 40 mm x 40 mm x 2 mm thick MS square tubes, 35 mm x 35 mm x 5 mm angles and 100 mm x 50 mm x 5 mm channels with Aluminium paneling. The complete MS structure will be painted with Zinc rich primer / Epoxy Paint for better corrosion resistance. Roof panels shall be made of aluminium padded plates. The roof should be strong enough for being walked-on and must be sufficiently supported. The intermediate walls and shelves shall be constructed from aluminium sheets panelled to the MS superstructure. The outside paneling shall be done

from 16 SWG aluminium sheet. Complete flooring shall be of 16 SWG and the inside of lockers shall be done from 18 SWG Aluminium Chequered Plate. The vehicle shall be covered from top with 16 SWG chequered plate having rainwater channel at both side. Guide Rails shall support over entire length on both sides. Compartment Superstructure shall be bolted on the chassis frame using the high tensile 'U' bolts.
All lockers shall be provided with Roller type shutter doors. The shutters shall have smooth operation. The aluminum shutters shall be dust & water proof of MCD, France imported make only made of extruded aluminum & duly hard anodized. Roller shutters shall be of hollow rectangular shaped & made from aluminium inter-changeable links connected by means of plastic profiles. Sealing of roller shutter shall be watertight when closed. Roller shutters shall be inward rolling type and shall be provided with guide rails over entire length on both sides to make them torsion free. When shutters are rolled, unobstructed access should be available to the equipment & hoses. Shutters should open in all positions of the vehicle even in rough terrains. Roller shutters shall have locking arrangement to prevent accidental opening during movement of the vehicle.

Stowage System

Arrangement shall be provided for secure, scientific and systematic stowage of all accessories within the Fire Tender. Each equipment shall have its designated location so that it can be easily located during emergency situations. Suitable clamps, brackets, holders etc. shall be provided for major accessories as the need be. The accessories should be properly clamped / strapped to prevent shifting of the equipment while the vehicle is in

11.4 motion and thereby avoiding damage to the paneling of the vehicle.

11.5 Arrangement shall be made on Dashboard opposite to the fire officers' seat to fix a Motorola mobile wireless set of 25W capacity. Power supply shall be provided from vehicle battery. The owner shall fit wireless set later.

11.6 **ELECTRICAL SYSTEM & ELECTRICAL ACCESSORIES**

All important electrical circuits will have separate fuses suitably indicated & will be grouped into a common fuse box located in an accessible position in Driver's cab and fitted with means for carrying spare fuses. All the wiring will be dipole and shall not be exposed to the atmosphere. Conduits will be used wherever necessary. All equipment's lockers will have individual lights and these will be operated by means of a master switch on the dash board in the driver's cabin. A trickle type battery charger will be provided for recharging the battery in situ. A red pilot lamp indicating when the batteries are being charged from an external supply will be provided. Following electrical fittings will be provided on the appliance at suitable locations:

(Standard Chassis Fitment)	
Reversing Lights	2
Trafficators (with indicators on control panel)	1
Wind Screen Wipers	2
Tail Lamps (one on each side)	2
Rear Reflectors	1

11.7 **Optical Warning Devices :**

DCP Tender shall have a system of optical warning devices.

11.7.1 The optical warning system shall consist of an upper and a lower warning level. The four zones shall be designated A, B, C, and D in a clockwise direction with zone A to the front of the DCP Tender in accordance with Figure -----

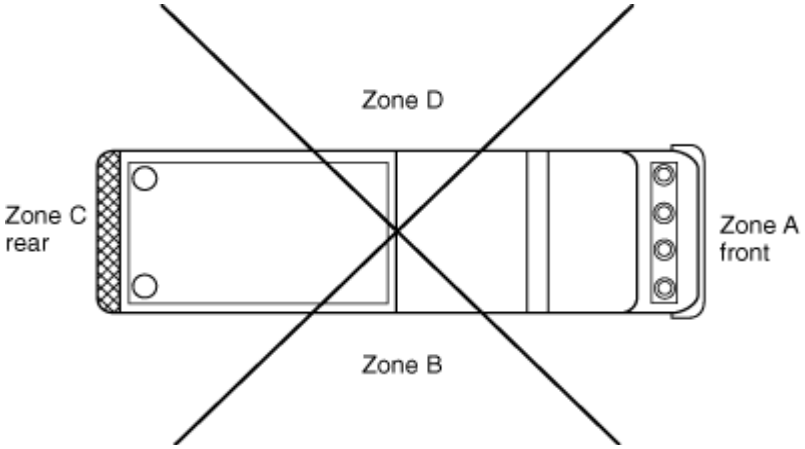

FIGURE: Warning Zones for Optical Warning Devices

11.7.2 Each optical warning device shall be installed on the DCP Tender and connected to the DCP Tender's electrical system in accordance with the requirements. A master optical warning device switch that energizes all of the optical warning devices shall be provided in driver's cabin. The optical warning system on the "DCP Tender" shall be Capable of two separate signaling modes during emergency operations. One mode shall signal to drivers and pedestrians that the DCP Tender is responding to an emergency and is calling for the right-of-way. One mode shall signal that the DCP Tender is stopped and is blocking the right-of-way. A switching system shall be provided that senses the position of the parking brake or the park position of an automatic transmission.

When the master optical warning system switch is closed and the parking brake is released or the automatic transmission is not in park, the warning devices signaling the call for the right-of-way shall be energized. When the master optical warning system switch is closed and the parking brake is on or the automatic transmission is in park, the warning devices signaling the blockage of the right-of-way shall be energized. The system shall be permitted to have a method of modifying the two signaling modes. The optical warning devices shall be constructed or arranged so as to avoid the projection of light, either directly or through mirrors, into any driving or crew compartment(s). The front optical warning devices shall be placed so as to maintain the maximum possible separation from the headlights. The optical sources on each level shall be of sufficient number and arranged so that failure of a single optical source does not create a measurement point, in any zone on the same level as the failed optical source, without a warning signal at a distance of 100 ft (30 m) from the geometric center of the DCP Tender.

Flash Rate.

11.7.3 The minimum flash rate of any optical source shall be 75 flashes per minute, and the minimum number of flashes at any measurement point shall be 150 flashes per minute. Color of Warning Lights. Permissible colors or combinations of colors in each zone, within the constraints imposed by applicable laws and regulations, shall be as shown in Table.

Table Zone Colors		
Color	Calling for Right-of-Way	Blocking Right-of-Way
Red	Any zone	Any zone
Blue	Any zone	Any zone

Yellow	Any zone except A	Any zone
White	Any zone except C	Not permitted

11.7.4 Audible Warning Devices :

Audible warning equipment in the form of at least one automotive traffic horn and one electric or electronic siren shall be provided. A means shall be provided to allow the activation of the siren within convenient reach of the driver.

11.7.5 Work Lighting :

Ground Lighting :
The work area immediately behind the vehicle shall be illuminated The "DCP Tender" shall be equipped with lighting that is capable of providing illumination on ground areas within 30 in. (800 mm) of the edge of the DCP Tender in areas designed for personnel to climb onto the DCP Tender or descend from the DCP Tender to the ground level.

Lighting designed to provide illumination on areas under the driver and crew riding area exits shall be switchable but activated automatically when the exit doors are opened. All other ground area lighting shall be switchable.

Surface Lighting.
The DCP Tender shall have sufficient lighting on all work surfaces, steps, and walkways.

Interior Lighting.
The DCP Tender shall have sufficient lighting to provide in the driving and crew compartments.

Compartment Lighting
Each engine compartment shall have a light.

Switches for all work lighting shall be readily accessible.
The lights shall be arranged or protected to minimize accidental breakage.

11.7.6 Backup Alarm (Reverse Horn) :

An electric or electronic backup alarm (Reverse Horn) with light indication shall be provided that meets the Type D (87 dBA) requirements.

11.7.7 Stop, Tail, and Directional Lights:

The DCP Tender shall be equipped with all legally required stop, tail, and directional lights.
Directional lights shall be visible from the front, sides, and rear of the DCP Tender. Equipment shall not be mounted in a manner that obscures the stop, tail, or directional lights.

11.8 No part of the body work shall reduce road clearance to less than 36cms not increase the overall width to more than 2.5 m the highest part of the appliance with the ladder and monitor mounted on it shall not exceed 3.60 m from ground level. The construction of superstructure shall not reduce the angle of approach and departure below 30 degree.

11.9 All light fixtures shall be placed in recesses or protected by grill covers to avoid damage by movement of personnel.

11.10 Body work shall be done by the vendor

11.11 PAINTING AND MARKINGS

11.12 The entire appliance shall be painted in 'Yellow' preferably of ASIAN PPG make using double coat spray painting on the outside. The company Logo and the name writing shall be done as per OIL' instructions. DCP Tender shall be written on the front of the vehicle.

11.13 The driving compartment and the inside of lockers shall be painted pale cream.

12.0 The chassis and wheel arches shall be painted black.

12.1 DCP vessels shall be painted with two coats of fire red paint. Piping shall be painted with two coats of fire red paint over two coats of red oxide primer; expellant gas piping shall be painted with two coats of black paint with red stripes over two coats of red oxide primer.

12.2 The appliance should clearly have the following markings on suitable location :

- Manufacturer's Name or Trademark
- Year of manufacture
- Capacity of DCP Vessel in kgs, volume in liters, working and design pressure of the vessels.
- Engine and Chassis number
- All instrument controls shall be identified with name plates.
- Set pressure of PSVs.
- DCP system along with DCP Vessel pressure Test and next due date.
- DCP Vessel PSV calibration set pressure & date.

A brass plate with operating / maintenance instructions suitably engraved on it should be provided near the operating panel for easy reference for the operator.

12.3 PERFORMANCE GUARANTEE

The manufacturer shall guarantee the design, material, workmanship (including chassis from chassis manufacturer) and the performance of the unit for a period of 18 months from the date of supply or one year from the date of commissioning of the appliance whichever is earlier. Any mechanical defect, faulty workmanship or operational defects found during this period shall be rectified by the vendor without any extra cost.

12.4 INSPECTION AND TESTING

Prior to despatch of tender from vendor's shop the following inspection & test shall be carried out by the vendor to the complete satisfaction of OWNER'S representative without any extra cost to owner.

All consumables (e.g. DCP, nitrogen gas in cylinders, diesel, fuel, engine lube oil water etc.) required during inspection & testing shall be arranged by vendor at his own cost. Vendor shall arrange all facilities to carry out inspection & testing.

12.5 For DCP Vessels

12.5.1 Review of mill test certificates and co-relation of raw materials before start of fabrication.

12.5.2 DP test of root run and completed weld for all seams of vessels.

12.5.3 DP test of all nozzles to shell joints (i.e. reinforcement pads)

12.5.4 100% Radiographic examination of all welds of the vessels.

12.5.5 Hydrostatic test of each vessel at 21 Kg. /Cm2 for 30 min.

12.5.6 Visual and dimensional check of vessels before mounting on chassis.

12.6 For piping

12.6.1 **Review of mill test certificate and co-relation of raw materials (For pipes, fittings, valves etc.) before start of fabrication.**

12.6.2 **DP test of root run and final run of all butt welds DP test of all socket welds.**

12.6.3 **Radiographic examination of 10% butt welds (selected at random)**

12.6.4 **Hydraulic test of piping before installation of chassis.**

12.6.5 **Visual and dimensional check.**

12.7 For Tender (during fabrication and assembly)

12.7.1 **Inspection of frame work (for cabin and body) for soundness of welding and fitment to chassis and dimensional check.**

12.7.2 **Inspection for proper installation of vessels, piping with supporting etc. and dimensional check.**

12.7.3 **Visual inspection of raw materials for frame work, cladding, flooring etc.**

12.8 For completed vehicle

12.8.1 **Determination of actual payload on the chassis so as to confirm payload within values given by vendor in the bid.**

For determining actual payload all vessels shall be charged with DCP to rated capacity, charged nitrogen cylinders on board, all removable accessories will be on vehicle with crew of six.

12.8.2 **Stability of the vehicle laden to the payload shall be checked to ensure that no overturning occurs till 27degrees from horizontal.**

12.8.3 **Road test of the vehicle laden to the payload shall be carried out to ensure the maximum speed, acceleration, turning radius, braking ability as specified by chassis manufacturer.**

12.8.4 **Test to confirm functional capability of the tender shall be carried out.**
The monitor and hand lines, separately and in combination as per clause No. 6.2 and 7.2 shall be tested for delivering DCP at their rated capacity and required throws.

12.8.5 **Dimensional check of overall dimension of completed vehicle. The overall height shall be measured when vehicle is laden with payload and unladen.**

13.0 INSPECTION

13.1 **Owner or his representative shall have access at all reasonable times to vendor's works where the appliance or its accessories are being fabricated and tested.**

13.2 **Drawings (i.e. Skelton Structure, General layout drawing, Load distribution chart, Electric circuit diagram etc.) & Quality assurance Plan (QAP) shall be approved by the Oil India Ltd. No supply shall be accepted unless drawings & Quality assurance Plan (QAP) are finally approved by the Oil India Ltd.**

13.3 **Third party stage-wise inspection, testing etc. in presence of OIL's representative shall be carried out.**

13.4 **The inspection release note of Third part Inspection agency shall clearly stipulate that**

13.5 **Material /equipment have been inspected as per approved drawings & approved QAP.**

All the tests/inspection for vehicle shall be witnessed by Oil India Ltd. representatives along with third party inspection agency.

There will be three stage inspections including final:

First stage: Chassis Inspection, Material of construction & positioning of vessels on the chassis.

Second stage: Construction of super structure, DCP Vessel and driver cum crew cabin. Placement of vessels, fittings, lockers etc.

Third stage: Testing of all equipment, systems, electrical fittings, checking of all relevant documents etc. (Before final painting).

14.0 INFORMATION / DOCUMENTS REQUIRED FROM VENDOR

14.1 AFTER PLACEMENT OF ORDER

The following documents are required to be submitted in 4 sets and got approved prior to start of fabrication.

a) Flow diagram with line sizing and showing all valves etc.
b) Design, fabrication drawings & data for DCP vessels
c) Drawings & data for DCP monitor
d) Drawings & data for DCP hose reels
e) Drawings, data & other details for the expellant system
f) Line diagram for electrical circuits.
g) Drawing showing layout of all equipments, lockers, cabin etc on the chassis.
h) QAP incorporating the stipulated inspection and testing requirements

14.2 AFTER COMPLETION OF OREDER (4 SETS) ALONGWITH SOFT COPY

Various documents shall be duly certified

a) As built drawing of tender, 1 No. reproducible also required.
b) As built drawing for vessels
c) Flow diagram
d) Line diagram for electrical circuits
e) All inspection and testing records (for vessels, piping, valves etc.)

f) A copy of necessary clearance certificate from PESO, Nagpur for Nitrogen Cylinders shall be furnished.

g) Operating and maintenance manual for the DCP tender. This should contain complete information for monitor, hose reels, expellant system etc. and all bought out items.

15.0 SPARES

The following spares shall be supplied by the vendor.

1.	**Spare Nitrogen cylinder each of 68 liters capacity filled with gas at 130-140 kg/Cm² pressure.**	**: 4 Nos.**
2.	**Wrenches for opening/closing cylinder valves**	**: 4 Nos.**
3.	**Nitrogen pressure reading/testing devices**	**: 2 Nos.**
4.	**Flex hose/steel tubing with end fittings for connecting between cylinder and manifold.**	**: 10Nos.**

16.0 ACCESSORIES

For DCP tender the following accessories shall be provided in addition to those normally fitted to the chassis. All the accessories shall be suitably fixed in position or shall be kept in lockers or other suitable place on the tender.

S.No.	Accessories	Unit
1.	**Compact blinker light**	**: 1 No. (fitted on roof operable from cabin)**
2.	**Siren unit**	**: 1 No. (fitted on roof operable from cabin)**
3.	**Manually operated fire bell**	**: 1 No. (fitted on roof and operable by crew sitting on left side)**
4.	**Fog lamps powered by the battery of the appliance.**	**: 2 Nos. (fitted at front with switch in cabin)**
5.	**Reversing lights**	**: 2 Nos. at rear of chassis**
6.	**Torch light Model- WOLFLITE HANDLAMP H-4DCA BRIGHT STAR, WorkSafe- Model#2206**	**: 2 Nos.**
7.	**Spot-light adjustable, mounted in a convenient position of the rear side of the driver's cab**	**: 1 No.**

8.	**P.A. system with microphone, main battery operated. The microphone should be hand held type with coiled type extension lead as to permit use by a person standing on ground adjacent to the vehicle**	**:**	**1 No.**
9.	**All tools required for normal routine maintenance of the appliance, which are not included with the kit of the engine**	**:**	**1 set (in tool box under rear seat in cabin)**
10.	**Removable spark arrestor fitted to the exhaust of the engine (PESO approved).**	**:**	**1 No.**
11.	**A trickle charger 250 V AC supply for self charging of battery alongwith a red pilot light to indicate the battery being charged. It shall be fitted in the drivers cabin**	**:**	**1 No.**
12.	**Shovel as per IS: 274(Part-I&2)**	**:**	**1 No.**
13.	**Axe hand as per IS: 5505**	**:**	**1 No.**
14.	**Fireman's axe as per IS: 926**	**:**	**2 Nos.**
15	**Axe, large as per IS: 505**	**:**	**1 No.**
16.	**Allen Key Set (mm) size, Taparia Make (box packing)**	**:**	**2 Nos.**
17.	**Hydraulic jack (18T)**	**:**	**1 No. (under rear seat in cabin)**
18.	**Arrangement on dashboard opposite shift officer seat to fix "MOTOROLA" mobile wireless set of 25W Capacity. Power supply from vehicle battery to be provided. Wireless set will be fitted later on by owner**	**:**	**1 No.**
19.	Socket Wrench Box ½ inch Square drive(Taparia Make)	:	2 Nos.
20.	Grinding Machine 4" size (Bosch Make) With Grinding Disc (100x6x16mm) - 10 nos., Cutting Disc (100x1x16mm)-25nos, Cutting Disc (100x2.8x16mm)-25nos.	:	2 Nos.
21.	Drill Machine 700 W (Bosch make)	:	2 Nos.
22.	Totem Threaded Tools (Hand taps) (B.S.W.) Size		

	1/16,3/32,1/8,5/32,3/16, 7/32,1/4,5/16,3/8,7/16,1/2,5/8,3/4 (B.S.F) 3/32,1/8,5/32,3/16 7/32,1/4,5/16,3/8,7/16,1/2	**:**	**1 set each**
23.	Fire Proximity Suit as Per **Annexure -3**	:	4 nos.
24.	Carpenter Saw (Medium & Large)	:	1 no. each
25.	Wooden wheel Chocks with chain	:	10 nos.
26.	Road Safety Cone	:	10 nos.
27.	Reflective Jacket	:	10 nos.
28.	Rubber Electrical Hand Gloves	:	1 no.
29.	Poly Propylene Wooden Rope Ladder	:	1 no.
30.	Hose Ramp	:	2 nos.
31.	First aid box Thadani make suitable for 10 persons	:	4 nos.

17.0 DEVIATIONS

There should be no deviation to the specifications and bids with deviations are liable for rejection.
However, if the vendor still wishes to take deviations, the same shall be stated clause-wise and all deviations shall be listed separately under heading “Deviation/Exceptions”.
Any deviation listed at place other than specified above shall not be considered.

18.0 TRAINING

After delivery of tender, training shall be given by vendor free of cost at owner’s work place.

Annexure -2

Dry Chemical Powder Potassium Urea Based

1. General: The Powder shall be Potassium Allophonate / Carbonate based dry chemical powder, a reaction product of Potassium Bicarbonate – Urea suitable for large scale high intensity flammable oil & gas fire. The product should be UL Approved.

2. Physical & Chemical Parameters:

a. Appearance : Off-White free flowing powder
b. Particle Size : 50 – 70 microns
c. Apparent density : 0.5 - 0.7 gm/cc
d. Water Repellency : 1.5% Max
e. Moisture content : less than 0.25%(m/m)
f. Temperature stability : ± 60°C

3. Performance Test:

Shall able to extinguish a 20B / 144B Hydrocarbon tray fire by filling 3.5 kg (max) Powder in 5 kg extinguisher.

4. Physiological Effect:

a. The DCP shall not have harmful ingredients
b. It should be environmental friendly & nontoxic to humans and animals.
c. Should submit certificates of 1) Non-Toxicity 2) Non-Skin Irritation Test

5. Compatibility:

The DCP shall be compatible with all type of firefighting foams.

6. Approvals:

The Dry Chemical Powder (DCP) should be Listed/Approved by UL as per UL-299C on fire extinguishing Dry Chemical for special application.

The dry powder should follow the latest Oil Industries Safety Directorate norms (OISD-116), as mentioned in Section 12, Page No. 24.

7. Packing:

The DCP shall be packed in 25kg good quality HDPE drums which should be hermetically sealed.

8. Shelf Life:

DCP shall have minimum shelf life of 05 years without any degrading of chemical & physical properties.

9 .Documents:

a. Must submit valid UL: 229C Certificate along with offer and supply.

b. Thermal Gravimetric Analysis (TGA) with decomposition between 215°C and 260°C should be submitted of a

reputed Lab along with the supply, IR analysis report as conducted by UL to be also to be submitted along with the supply.

c. The bidder should submit ISO 9001:2008, ISO 14001: 2004 & OHSAS 18001:2007 certificate copies along with supply.

d. The DCP vendor should have approval from Department of Scientific & Industrial Research (Govt. of India) for In-House Research & Development facility.

e. Warrantee / guarantee Certificate for the DCP along with supply.

f. MSDS of the material along with supply.

g. Original manufacturer test report along with supply.

h. Disposal Procedure for the material along with supply.

i. If the powder is imported the latest Bill of Lading is to be produced along with supply.

j. OIL reserves the right to send the sample from the supplied powder for further testing to any authorized national laboratory in India.

10. MARKING:

Each container/drum containing Dry Chemical Powder shall be labelled with the following information:

(a) Manufacturer's name or trade mark.
(b) Quantity of the Powder, in Kg (Net and Gross weight)
(c) Type of the Powder and Foam Compatible.
(d) Date of manufacture/Batch No.
(e) UL Marking.

Annexure 3

Fire Proximity Suit

The suit should be a MULTI LAYER FIRE SUIT(Three Layer), designed for proximity fire fighting, in two piece design, CE Certified / marked meeting the performance requirements of Standard EN-469:2007 (Level 2) or their latest applicable version. It should consist of Protective Fire Coats and Over-trousers worn by fire fighters to provide protection against occasional flame contact, the transmission of radiant heat and moisture during structural fire fighting activities. The Coat and Over-trouser should be supplied as a matched ensemble providing protection to the upper and lower torso including neck, arms to the wrists and legs to the ankles.

The Coat and Over-trouser ensemble should be constructed as a multi-layer (three layer) assembly containing an outer shell, moisture barrier and thermal liner. The Outer shell should be made of inherently flame resistant NOMEX material only. The Moisture barrier should be made of suitable material / membrane with laminated FR fabric. The Thermal Liner should insulate against radiant & convective heat and should be made of heat resistant material quilted to FR fabric. Garment design features should include a double close front, velcro fixing device and safety zipper; Throat Safeguard design adjusted by Velcro fixing device; Double Super large pocket on the Jacket and Pants, One Radio Pocket on the Chest and Concealed Paper Pocket between double close fronts; Cuffs should be adjusted by Velcro and with fire proof, water proof and thumb ring design; Extra patches shall be placed to the bottom of the Jacket's arms to increase the movement capacity; 3M® F.R. Reflective tape in Lime Green color should be sewn around the cuffs, foot, chest & back part of the Jacket and on the lower part of the Trousers all around as well as on the side; Waist of the trouser should be at least 25 to 30cm higher than the Jacket's base (for overlap); Elastic girdle and suspenders should be easily opening /lockable type with adjustable clips; Garment should be sewn using Nomex thread, Color should be NAVY BLUE. **Model: "MAHERO 08113"**

The suit should be supplied with following accessories:-

1. A pair of Multi-Layer 'FIRE FIGHTER GLOVES' with outer shell made of FR material with additional moisture barrier & thermal liner. It will have extra strength & dexterity. It will provide flame and heat resistance, water and chemical resistance, and high resistance to cutting. It will be CE Marked /Certified to meet performance requirements of standard EN-659: 2008. **Model: "MAHERO FG04201"**

2. A pair of 'FIRE FIGHTER BOOTS' made of Flame Retardant Rubber with Steel Toe Cap and Steel Mid Sole. Will be Electric Shock Resistant and will have a heat and oil resistant anti-slip sole. Will have heavy canvas lining with sponge cushion insole. Will provide ankle protection. Will be 100% Waterproof & have carrying arrangement on top for ease of donning. Boots should be CE Marked / Certified to meet requirements of EN-15090:2006 standard. Size should be equivalent to size 8 (Europe). **Model: "HARVIK # 9687L"**

3. A balaclava style 'KNITTED SOCK HOOD' to provide head and neck protection against direct flame contact. Will be made of knitted FR material. It should be CE Marked / Certified to meet requirements of EN-13911 standard. **Model: "MAHERO FH-05/N"**

4. A 'FIRE MAN HELMET' Light-weight and made of Kevlar Shell. It should have an impact liner c/w leather headband, Ratchet dial size adjuster 52-64cm, 2 point chinstrap with snap-clip, a polycarbonate Face Shield such that the visor can be adjusted to any position. The helmet will have a Neck Protector made of FR material and will be CE Marked /Certified to meet performance requirements of standard EN-443:2008. Colour Yellow/ Lime Green. **Model: "F3"**

5. A suitable FRP box for each suit to be provided to carry and keep the entire suit with accessories.

Notes:

1. All the relevant certificates, brochures/catalogues shall be submitted along with the supply.

2. The suit & accessories (boots, helmet, hood & helmet) should bear CE Marking & supporting copy of EC type examination certificate mentioning the model/make to be provided along with the supply.

2. The size of the suit should be suitable for fitting on person of height 5'-8" & 36" waist. Length of the jacket should be 32 Inches. The bidder to confirm the size before supply of material.

3. A large clear label should be permanently attached (sealed) or stitched inside the lining of fire suits. The label should give full details of compliance to EN Standards, manufacturer's contact details, sizing, wash/care information, style and date of manufacture and traceability coding.

4. WARRANTY: The bidders shall provide warranty for minimum 12 Months from the Date of Commissioning or 18 Months from the Date of Supply.

5. PAYMENT:-70% payment will be released against dispatch and other relevant documents as per terms and conditions of the purchase order. Balance 30% of the material cost and commissioning charges will be released after successful commissioning & training of the system at site.

ANNEXURE 4

SPECIAL TERMS AND CONDITIONS

Buy Back of Old DCP Fire Tender - OIL 8015

1.0 The old DCP Fire Tender OIL – 8015, (without Dry Chemical Powder) will be offered to the successful L1 bidder along with buy back offer. Actual condition of the vehicle can be assessed by the bidder at OIL's site at Duliajan. Party shall make all efforts to carry this vehicle from OIL's site at Duliajan and the necessary registration book/document along with necessary "NO OBJECTION CERTIFICATE" would be given to successful bidder by OIL. All required formalities with RTO/other applicable authorities shall be done by the Party only. The old DCP Fire Tender will be handed over to the party after commissioning of the new DCP Fire Tender.

2.0 The details of old DCP Fire Tender, OIL - 8015 is given below:

Chassis Model : TATA 807
Year of Commissioning : 1987
DCP Vessel : 1000Kg Capacity with Nitrogen expellant system

3.0 The DCP Fire Tender however shall be offered on "AS IS WHERE IS" basis at the time of final buy-back of the said item by the successful bidder.

BID EVALUATION CRITERIA/BID REJECTION CRITERIA

The following BRC/BEC will govern the evaluation of the bids received against this tender. Bids that do not comply with stipulated BRC/BEC in full will be treated as non responsive and such bids shall prima-facie be rejected. Bid evaluation will be done only for those bids that pass through the "Bid Rejection Criteria" as stipulated in this document.

Other terms and conditions of the enquiry shall be as per General Terms and Conditions vide MM/CALCUTTA/E-01/2010 for E-Procurement LCB Tenders. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BRC / BEC) contradict the Clauses of the tender or MM/CALCUTTA/E-01/2010 elsewhere, those in the BRC / BEC shall prevail.

BID REJECTION CRITERIA (BRC)

TECHNICAL

1.0 BIDDER'S QUALIFICATION

1.1 The bidder shall be a "Fabricator / Assembler" of "Fire Water Tender/ Foam Tender/DCP Tender or multipurpose Fire Tender (i.e. combination of Water Tender, Foam Tender & DCP Tender) . Copy of "Certificate of Incorporation" / "NSIC" certificate of the firm shall be furnished along with the bid.

OR

1.2 The bidder shall be an authorized dealer/distributor in India for the "Fabricator / Assembler" of "Fire Water Tender/ Foam Tender/ DCP Tender" or multipurpose Fire Tender (i.e. combination of Water Tender, Foam Tender & DCP Tender). Copy of "Certificate of Incorporation" / "NSIC" certificate of "Fabricator / Assembler" shall be furnished along with the bid.

2.0 BIDDER'S EXPERIENCE

2.1 In case, the bidder is a "Fabricator / Assembler" of the offered "DCP Tender", the following criteria shall be met by the Bidder:-

2.1.1 The bidder should have been in the business of fabricating / assembling including commissioning of "Fire Water Tender / Foam Tender/ DCP Tender" at

least 3 (Three) years preceding to the Bid Closing date of this Tender. Necessary document {i.e. Copy of Audited Balance sheet for last 3 (Three) years} should be enclosed along with techno-commercial bid to ascertain the same.

2.1.2 The bidder should have the experience of successful execution of supply of at least 1 (One) no. DCP Tender or "Fire Water Tender/ Foam Tender/DCP Tender or multipurpose Fire Tender (i.e. combination of Water Tender, Foam Tender & DCP Tender) in the last 05 (Five) years preceding to the Bid Closing date of this Tender. Necessary copy of Purchase Order and Commissioning report /Performance report should be enclosed along with bid to ascertain the same.

2.2 In case the Bidder is an authorized dealer/distributor of "Fabricator / Assembler" of "Fire Water Tender/ Foam Tender/ DCP Tender", the following criteria shall be met by the Bidder:

2.2.1 The Bidder shall confirm supply of "DCP Tender" from Fabricator /Assembler who meets the qualification criteria stipulated under clauses 2.1.1 & 2.1.2 above. Necessary documents as mentioned under clauses 2.1.1 & 2.1.2 above has to be submitted along with the bid.

2.2.2 In addition to 2.2.1, the bidder shall have the experience of successful execution of supply & commissioning of at least 1(one) number (additionally) Fire Water Tender/ Foam Tender/DCP Tender as described under clause 2.1.2 in the last 05 (Five) years preceding the bid closing date of this tender.

2.2.3 Bidder shall enclose a Certificate in original in support of authorization of dealership/distributorship with back up Warranty & Guarantee from the "Fabricator / Assembler" to quote for this tender.

2.2.4 The bid shall be rejected in case of any change of the proposed "Fabricator / Assembler" after submission of the bid (except merger, takeover of the "Fabricator/ Assembler" Company etc.) by authorized dealer/distributor of the "Fabricator / Assembler".

B:COMMERCIAL

i). **Bid security of Rs 40000.00** shall be submitted manually in sealed envelope superscribed with BID SECURITY AGAINST Tender no. **SKI 2912P14** **Head Calcutta Branch, Oil India Limited,4 , India Exchange Place , Kolkata-700001** only on or before the Bid Closing Date and Time mentioned in the Tender. **If bid security in ORIGINAL of above mentioned amount is not received within bid closing date , the bid submitted through electronic form will be rejected without any further consideration.** For exemption for submission of Bid Security, please refer relevant para of

General Terms and Conditions vide MM/CALCUTTA/E-01/2010 for E-Procurement LCB Tenders. **The Bid Security shall be valid for six month from the date of bid opening.**

i). The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.

ii). Successful bidder will be required to furnish a **Performance Bank Guarantee** @10% of the order value. For exemption for submission of Performance Bank Guarantee, please refer relevant para of General Terms and Conditions vide MM/CALCUTTA/E-01/2010 for E-Procurement LCB Tenders. The Performance Bank Guarantee must be valid for one year from the date of successful commissioning of the equipment or 18 months from the date of despatch whichever is earlier. **Bidder must confirm the same in their bid. Offers not complying with this clause will be rejected.**

The validity requirement of Performance Security is assuming despatch within stipulated delivery period and confirmation to all terms and conditions of order. In case of any delay in despatch or non-confirmation to all terms and conditions of order, validity of the Performance Security is to be extended suitably as advised by OIL.

iii). ***The Bank Guarantee should be allowed to be encashed at all branches within India.***

iv). Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.

v). Validity of the bid shall be minimum 120 days from the Bid Closing Date. Bids with lesser validity will be rejected.

vi). Bids containing incorrect statement will be rejected.

vii). All the Bids must be Digitally Signed using "Class 3" digital certificate *(e-commerce application)* as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than "Class 3" digital certificate, will be rejected.

2.0 BID EVALUATION CRITERIA (BEC):

A. TECHNICAL:

The bids conforming to the technical specifications, terms and conditions stipulated in the bidding document and considered to be responsive after subjecting to Bid Rejection Criteria (BRC) will be considered for further evaluation as per the Bid Evaluation Criteria given below.

i) In the event of computational error between unit rate and total price, the unit rate as quoted by the bidder shall prevail.

ii) Similarly in the event of discrepancy between words and quoted figure, words will prevail.

iii) Evaluation will be done on 'total contract cost' basis to ascertain the lowest bid.

B. COMMERCIAL:

i) To evaluate the inter-se-ranking of the offers, Assam entry tax on purchase value will be loaded as per prevailing Govt. of Assam guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their offer.

ii) To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in to must be received on or before the dead line given by the company, failing which the offer will be summarily rejected.

Standard Notes:

A. The original bid security (Amount is mentioned above and also in Basic Data of the tender in OIL's e-portal) should reach us before bid closing date and time .Bid without original Bid Security will be rejected. The bidders who are exempted from submitting the Bid Bond should attach documentary evidence in the Collaboration folder as per General Terms and conditions for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2010 for E-procurement (LCB Tenders).

B. All the Bids must be Digitally Signed using "Class 3" digital certificate *(e-commerce application)* only as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than "Class 3" digital certificate, will be liable for rejection.

C. "General Terms & Conditions" for e-Procurement as per Booklet NO. MM/CALCUTTA/E-01/2010 for E-procurement (LCB Tenders).

D. **Offers should be valid for minimum 120 days from the date of Technical Bid closing Date, failing which offer shall be rejected.**

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