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TENDER DOCUMENT NO. IGL/ET2/CP/CM18513

AMC of fire- fighting equipment & systems installed at CNG & PNG installations of IGL in states of Delhi, Haryana, UP and Rajasthan

CORRIGENDUM No. - I

Sr. No.	Section no.	Clause No.	Page No.	Description	Amendment / Additional/ Modification / Deletion/ Reply to bidder's Query	
1	V	Clause No. 4.0	61 to 180	Providing and Fixing of Spares as per Technical Specifications mentioned in Annexure VI	Additional	Referred Annexure VI of this clause is attached below.

Note:

1. Bidders are requested to visit IGL website / IGL's tendering website <https://igl.ewizard.com> regularly for further announcement.
2. All other terms & conditions of tender document remain unaltered.
3. Please submit the signed and stamped copy of this corrigendum along with your offer.

ANNEXURE -VI

Technical Specifications

The specific makes of the spares mentioned below are indicative, they may be replaced by other compatible make spares having the same specifications, similar safety ratings and National and International approvals / recognitions like ISI, ISO, EN, CE, TPED, VDS FM etc with latest manufacturing and testing standards and models.

75 KG DCP Trolley Mounted Extinguisher with 2 Kg Expellant CO2 cylinder (Spares as per BIS to be fitted)		
Sl. No.	Material Description	Specifications
1	Cap	As per IS 16018 and IS 15683.
2	Cap Joint Washer	As per 16018, should be compatible with Cap.
3	High Pressure CO2 Hose with washers	As per IS 15683 or IS16018 with good quality compatible washers.
4	Discharge hose	Discharge hose shall be of braided rubber or PVC of nominal bore 19mm diameter fitted with not less than 5m. The hose shall have bursting pressure of not less than 50 kg / sq cm. In accordance with IS 16018.
5	Discharge shut-off nozzle	As per IS 15683.
6	Drain Plug	The drain plug of not less than 25 mm diameter and the washer to make the joint water tight in accordance with IS 10658.
7	Locking Pin for CO2 valve	Good Quality corrosion resistant metallic locking pin as per IS 15683
8	Locking Ring for CO2 valve	Locking ring (socket) for locking pin.
9	Tamper indicator (seal)	For CO2 cylinder as per IS 15683.
10	Wheels for 75 Kg DCP Extinguisher	Solid rubber tyre with washer & pin to hold the tyre.
11	Pressure Gauge	Dial type pressure gauge having scale range shall be preferably 0 to 20 Kg/Cm2 and shall be as per IS 15683 marked.
12	CO2 cylinder Valve	Wheel type valve as per IS 3224.
13	Safety disc for CO2 cylinder	Softened copper disc having burst pressure between 200 – 220 kg/cm2. (As per Gas Cylinder Rules 2016)
14	Safety release Valve for DCP extinguisher.	Safety release valve shall release at a pressure of 25 Kg/ sq. cm. The valve shall be ISI /EN/ CE marked and compatible with the extinguisher.
DCP 2 Kg/9 Kg Stored Pressure Kg Fire Extinguisher		
Sl. No.	Material Description	Specifications
1	Squeeze Grip Cap Assembly with valve	As per IS 15683
2	Discharge hose	As per IS 15683
3	Safety-locking Pin & Seal.	The pin shall be made up of corrosion resistant material and attached to the extinguisher by a chain or similar device as per IS 15683
4	Plastic Buffer	As per IS 15683

5	Pressure Gauge	Dial type pressure gauge having scale range shall be preferably 0 to 20 Kgf/Cm2 and shall be as per IS 15683 marked.
6	Siphon Tube with fittings	As per IS 15683
Modular type DCP Fire Extinguisher		
Sl. No.	Material Description	Specifications
1	Mounting Stand with Bullet Bolts	As per OEM recommendations.
2	O-Ring	As per OEM recommendations.
3	Brass Valve	As per OEM recommendations.
4	Pressure Gauge	As per OEM recommendations.
5	Glass Bulb	68deg.C
6	Transparent Lable	As per OEM recommendations.
CO2 4.5 Kg Fire extinguishers		
Sl. No.	Material Description	Specifications
1	Discharge Horn	Discharge horn for 4.5 Kg CO2 extinguisher and shall be provided with handle to hold It should be non-conductor of electricity.
2	Cylinder valve wheel & screw	Wheel type valve as per IS 3224.
3	Locking Pin for CO2 valve	Good Quality corrosion resistant metallic locking pin as per IS 15683
4	Locking Ring for CO2 valve	Locking ring (socket) for locking pin.
5	Safety disc	Softened copper disc having burst pressure between 200 - 220 kg/cm2. (As per Gas Cylinder Rules 2016)
6	High Pressure Hose	As per IS 15683 with good quality compatible washers.
7	Carrying handle	Carrying handle as per IS 15683 to be provided with nut –bolts, washers.
8	Label	Operating lable as per IS 15683
Spares for Bus Point DCP Flooding System		
Sl. No.	Material Description	Specifications
1	Reducer	Heavy duty reducer to connect the Trolley discharge point with a lesser dia (1/2)” hose.
2	Discharge Hose	The discharge for the bus point trolley hose should be of lesser nominal dia 1/2” and shall be made as per IS 15683 and the other end should have male fitting of Quick Release Coupling crimped in it. The length of the hose should be minimum 3m.
3	Ball Valve	Heavy duty ball valve to be fitted at Trolley outlet. Nominal dia 20 mm.
4	Quick Release Coupler	The QRC should be of MS Chrome Plated or SS of Pressure holding capacity of not less than 50 kgf/cm2.
5	Elbow/Union/ GI Pipe	The material should be heavy duty as per IS 1239 (Part 2).
6	Discharge Nozzle	a) Material of construction : Brass / SS b) Threaded end nominal dia : 12mm c) Other end (orifice) nominal dia : 8-9 mm d) Overall length of nozzle : 28 mm

		e) The threaded end to be fitted vertically in underground GI elbow.
7	Dust Cap	The dust cap should be of PVC with a neck ring for nozzle fitting.
8	Iron Mesh & Frame	The rectangular iron mesh should be heavy-duty type having size 5" * 5" with an iron mesh of 6" * 6" size grouted and surrounding the nozzle for its protection.

Spares for CO2 Flooding System		
Sr. No.	Description of Material	Specification
1	Quick release VTI make valve i.e. Master Valve for 45 Kg CO2 cylinder of CO2 flooding system.	<ul style="list-style-type: none"> a) Make: VTI; Model No. K85-41.1.0-S1 (preferably) b) The valve shall be as per the new marking i.e. ISO QC marked as can withstand at least 100 opening cycles. c) Inlet Dia - 25 E ACC TO EN 629-1 d) Outlet Dia - W 21.8 x 1/14" e) MOC - High Tensile Brass f) Working Pressure Minimum 200 bar g) To be provided with safety device with bursting pressure from 200 - 220 bar h) Approvals - TPED & CPD
2	Non Return Valve for CO2 High Pressure Hose	<ul style="list-style-type: none"> a) Operating Media: CO2 b) Body Material: Brass, BIS: 319 c) Ball: SS 316 d) Pin: SS 316 e) Seat: Teflon (PTFE) f) Working Pr.: 60Bars g) Test Pressure: 90 Bars for 1 min h) Weight: 70gm i) Outlet Size: 3/4" BSP at manifold end j) Inlet Size: 1/2" BSP at CO2 Discharge Hose end k) Temp. Range: -29 C to 66 C
3	Discharge Nozzle	<p>CO2 Discharge Nozzle :</p> <ul style="list-style-type: none"> a) As per BIS specifications b) Operating Media: CO2 c) Body Material: Lead Tin Bronze as per BIS: 318:1981 d) Design Nozzle Pr.: Not less than 20.6 kgf/cm² at 27 deg. Celsius. e) Test Pressure: 140 kgf/cm² f) Marking for Code No. (on the basis of equivalent single orifice dia.): As per BIS: 6382:1982 g) Temp. Range: -29 C to 66 C <p>Horn:</p> <ul style="list-style-type: none"> a) Thread: 1/2" BSP b) Body Material: Aluminium Alloy

		<ul style="list-style-type: none"> c) Body Colour: Fire Red d) Temp. Range: -29 C to 66 C
4	High Pressure CO2 Hose*	<ul style="list-style-type: none"> a) Hose Type: Double wire braided b) Min. Bursting Pr.: 420 kgf/cm² at 54 deg. C c) Length: 40 cm d) Cross-section: ½" e) End Connection: ½" BSP (F) xW21.614 TPI f) End Fittings: Brass / g) Temp. Range: -29 C to 66 C
5	Metallic Washer	<ul style="list-style-type: none"> a) As per BIS specifications b) Operating Media: CO2 c) Body Material: Mainly Brass d) Test Pressure: 250 Bar e) Max. Working Pressure: 150 Bar f) Temp. Range: -29 C to 66 C
6	Blind Cap of Manifold	<ul style="list-style-type: none"> a) As per BIS specifications b) Operating Media: CO2 c) Body Material: Mainly Brass d) Test Pressure: 250 Bar e) Max. Working Load: 150 Bar f) Temp. Range: -29 C to 66 C
7	Operating Label	<ul style="list-style-type: none"> a) As per IGL requirement b) Size/design, color pattern, type and the matter to be printed will be as decided by the competent authority c) Material shall be of good quality and longevity d) Adhesive should be of the best quality so that it remains on the cylinder surface for considerable period. e) Contractor shall not mention any name or other reference on it.
8	Manifold Pipe	Seamless heavy duty steel tube as per IS 1239 (Part I): 2004 compatible with the CO2 flooding system requirement.
9	Pull Down Lever	Made of Brass for 45 kg cylinder operating VTI valve.
10	Online Weighing Gauge for CO2 45 Kg cylinder.	Weighing gauge of 200 Kg having least count of 1 Kg shall be used. The gauge shall be of Accuracy class IIII and should be MS SSI Certified.
11	Neck Ring (hanger supports)	Neck Ring (hanger supports) of MS for high pressure CO2 cylinders of CO2 Flooding System, should be compatible with the 45 kg CO2 cylinder.
12	U-Clamp hangers for CO2 Flooding System	SS U Clamp for CO2 cylinders of CO2 Flooding System. U clamp to be required for hanging of high pressure 45 kg CO2 cylinders with the frame.
13	Instruction Board	Photo luminescent acrylic board of 12"*12" size, 6 mm thick with operating instructions.
14	Adaptor for Valve	Adaptors For VTI Valve And SOV For CO2 Flooding System.

15	Turn buckle for online weighing gauge	Stainless Steel made turn buckle for hanging of CO2 45 Kg cylinders of CO2 Flooding System for online weighing arrangement. The turn buckle shall be connected to cylinder U-clamp (hanger) and its bottom end and hanged on the CO2 flooding system skid from its top end.
16	Siphon tube for CO2 Cylinder	Siphon tube for CO2 Cylinder of 45 Kg capacity installed with CO2 flooding System for CNG Compressor Material of Construction – Aluminium Length – 1360 mm Inner Dia – 10 mm Outer Dia – 15mm
17	U-Clamp for piping of CO2 Flooding system	Clamping of CO2 flooding piping on channel supports compatible with the clamp of Size : 0.75-1.25” MOC: Carbon Steel Thread Grade : M6 - M8
18	Shed for CO2 Flooding system	Shed for CO2 Flooding system: Dimensions: Min. 1200mm X 1200 mm MOC : Mild Steel Shape : Bend in V shape with 35 degrees Provided with angle support and compatible with CO2 system stand.
* Pressure ratings of the hose includes that of fittings also.		

Spares of Cascade DCP flooding system		
Sr. No.	Description of Material	Specification
1	PRESSURE GAUGE FOR NITROGEN CYLINDER 0-300 BAR WITH CONNECTOR / ADAPTER	Make : VTI (preferably) Approval / Marking : ISI / CE/ EN/ Vds Pressure range : 0-250 bar Least Count : 10 bar
2	NITROGEN CYLINDER HOSE WITH CONNECTOR	Dia : 1/2" WP WP : 27.5 Mpa Length: 650 mm approx. Marking : ISI / EN/ CE/ UL etc.
3	NITROGEN CYLINDER QUICK RELEASE VALVE (MANUAL)	Make : VTI (preferably). Approval / Marking : BIS/ISI / CE/ EN/ Vds / IS:3224 / ISO 17871
4	NITROGEN CYLINDER MANUAL VALVE PULL DOWN LEVER	Compatible with valve lever. MoC : Brass / Aluminium
5	NITROGEN HOSE CONNECTOR 1/2"	Dia : 1/2" MoC : Brass WP 27.5 MPa
6	NITROGEN PRESSURE REGULATOR CONNECTOR	Compatible with the regulator Moc : Brass
7	PRESSURE REGULATOR FOR NITROGEN CYLINDER	Make : Sterco As per IS : 6901

		MoC : Brass SET POINT - 16.7 TO 17.6 BAR WP : 27.5 MPa
8	HI PRESSURE GAUGE FOR NITROGEN PRESSURE REGULATOR	Pressure range : 0-250 bar Marking : ISI marked Least Count : 10 bar
9	LOW PRESSURE GAUGE FOR NITROGEN PRESSURE REGULATOR	Pressure range : 0-16 bar Marking : ISI marked Least Count : 1 bar
10	2" BALL VALVE FOR DCP SYSTEM OUTLET	Dia : 2" MoC : Brass WP 27.5 MPa Marking : ISI marked as per IS:3224
11	1" BALL VALVE FOR NITROGEN INLET LINE OF DCP SYSTEM	Dia : 1" MoC : Brass WP 27.5 MPa Marking : ISI marked as per IS:3224
12	PRESSURE GAUGE FOR SYSTEM VESSEL WITH CONNECTOR 0-25 bar	Pressure range : 0-25 bar Marking : ISI marked Least Count : 1 bar
13	1/2" BALLVALVE FOR AIR BLOW DOWN	Dia : 1/2" MoC : Brass WP 27.5 MPa Marking : ISI marked as per IS:3224
14	1/2" CHECK VALVE FOR DCP SYSTEM,60 MM L	Dia : 1/2" MoC : Brass WP 27.5 MPa Marking : ISI marked as per IS:3224
15	3/4" SAFETY RELIEF VALVE FOR DCP SYSTEM	Dia : 3/4" MoC : Brass WP 27.5 MPa Marking : ISI marked as per IS:3224
16	Burst Disc	Dia 2" Marked burst Pressure : 11.54 bar Marking : ISI marked
17	1/2" BSP DCP DISCHARGE NOZZLE	Dia : 1/2" MoC : Brass WP 36 BAR Test Pressure : 50 BAR
18	Instruction Board	Photo luminescent acrylic board of 8" * 6 " size, 6 mm thick having with operating instructions and pictorial representation of quick release valve.