



The Institute of Co-operative Management for Agriculture & Rural Development

(ICMARD - Training Institute of The WBSCARD Bank Ltd.)

Block-14/2, C.I.T Scheme-VIII (M), Ultadanga, Kolkata-700067.

Ph-033-23565522 (Principal) / 23566522 (EPBX)

FAX : 033-23563633

Email : icmard.kol@gmail.com

NIT No. 2137/ICMARD/ 787

Date : 26/03/2019.

NOTICE INVITING TENDER

Sealed Quotations/Tenders are invited from the Government enlisted Contractor or authorised/ bonafide outsiders/agencies having requisite experience & adequate skill in the field of installation of Fire Pump with respect to the Fire Protection System related with the Fire Hydrant System. The Sealed Quotations/Tenders are invited for the under mentioned works as per Technical Specifications & Schedule/Scope of Work as detailed in the Annexure - I enclosed herewith and also as per Terms & Conditions appended below :-

- A) **Name of the Work** : Supply, Installation, Testing and Commissioning of a Fire Pump as Stand by, along with Electric Motor , cubical type floor / wall mounted Fire Pump Control/ Starting Panel with the exiting Fire Panel , Piping and other relevant / requisite accessories/ allied fittings / fixtures as detailed/specified in the enclosed Schedule/ Scope of Works (Annexure-I) which is to be connected/ synchronized with the existing Fire Panel & Fire Pump in respect of Fire Protection System on Fire Hydrant System .
- B) **Place of Work** : In the existing Fire Pump House of "Institute of Co-Op Management for Agriculture & Rural Dev. (ICMARD) Building of The West Bengal State Co-operative Agriculture & Rural Dev. Bank Ltd. located at 14/2, CIT Scheme VIII(M), Ultadanga, Kolkata-700067".

Broad Terms & Conditions and necessary Technical Specifications and other details as specified in the Annexure -I (Schedule of Works) :

- (01). The Quoted rates should be inclusive of prevailing GST/Taxes etc. and other incidental charges and transportation charges.
- (02). The rate should be quoted in figures as well as words.
- (03). The Scope/Schedule of work comprises the details enclosed herewith.
- (04). The Quotationers/Tenders may visit the proposed site at the above address and also the official Website : www.icmard.org before submission of the Quotations/Tenders.
- (05). The Quotations/Tenders must be valid for a period of at least six months from the last date of submission.
- (06). Tools and tackles for the work shall be arranged by the contractor at his own cost.
- (07). The authority of the Institute reserves the right to accept and or reject any or all the Quotations/Tenders without assigning any reason thereof and also the authority is not bound to accept the lowest rate.
- (08). The Quotation/Tender in Letter Head, complete in all respect, must reach the Principal, ICMARD, under Sealed Cover latest by 06 April, 2019
- (09). The Quotations/Tenders must furnish the following documents with the Quotations/Tenders :
 - a) Copies of applicable GST/PAN/TAN as per prevailing Rules and payment on this score will be deposited with the authority concerned.
 - b) Experience Certificates / Credentials with respect to the captioned works.
- (10). The payment will be released on completion of the work to the satisfaction of the authority as to be demonstrated and on submission of final bill in duplicate.

H.O. 25D, Shakespeare Sarani, Kolkata-700017

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3:00 PM 3/22/2019



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- (11). 10% of the Final Bill amount shall be deducted at source as Security Deposit and the amount be retained by the Institute for at least 6(Six) months which will accrue no Interest.
- (12). Time for Completion of the whole work will be within 3(three) weeks from the date of receipt of the work order.
- (13). The Sealed Cover of Quotation/Tender shall be superscripted as “ **The Quotation for Supply, Installation, Testing & Commissioning of a Fire Pump (Stand by)& Fire Panel along with the allied works at the existing Fire Pump House**”
- (14) The Quotations/Tenders will be liable for rejection in case of violation of the above stipulated Terms and Conditions.

(C) TECHNICAL SPECIFICATIONS of the whole work :-

(i) Fire PUMP – One number horizontal centrifugal type Electric Motor driven standby Fire water Pump of capacity 2400 lpm at 79 Mtr. Head will be installed in the Fire Water Pump House to cater the water demand for the Fire Hydrant/Wet Riser & Sprinkler System. All the pumps (existing & new) will have auto-manual starting arrangement and will remain so interlocked that in case of any fire hazard or routine testing of the system, when any hydrant/landing valve/hose reel is opened manually to spray water then there will be drop of water pressure in the water header causing auto start of Electric Motor driven Fire Pump and auto stopping of Jokey Pump. The main existing Fire Pump of electric motor driven having same capacity (2400 lpm at 79 Mtr head) installed in the Fire Water Pump House. Now the standby Fire Pump (considering that during emergency, electricity to run the Fire Pump shall be made available from the installed D.G. set in the premises). Both the fire pump will be so interlocked that, at any point of time only one Fire Pump (either main or standby) will remain in operation i.e. both the fire pumps cannot be operated simultaneously. Stopping of Fire Pump will be manual only.

The Pump shall be of horizontal centrifugal type and designed for continuous operation at its best efficiency point. The pump shall have continuously rising head characteristic from operating point towards shut-off, generally complying the regulation. The drive unit of the Pump shall be suitably rated, so that the same can take the load of full open condition. The Pump set along with its drive unit shall run smoothly without undue noise and vibration. Parts of Pump like impeller, shaft sleeve, wearing ring etc. shall be of non-corrosive metal.

Under certain conditions, there may be occasions when fluid flow through the Pump would be reversed, as in case of loss of power to the pump drive. The Pump should be so designed that the impellers and other accessories are not damaged under such conditions of flow reversal. The coupling between Pump and Motor shall be of pin bush type.

(ii) ELECTRIC MOTOR : Notwithstanding anything stated in this specification, the motor has to satisfy the requirement of the mechanical system during normal and abnormal conditions. All induction motors shall be of squirrel cage TEFC type and shall conform to the latest applicable Indian Standard (IS:325) & IEC.



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The Motors shall be suitable for continuous duty in the specified ambient temperature and the enclosure shall be dust proof as per IS:4691. The starting current of the motor at rated voltage shall not exceed six (6) times the rated full load current subject to tolerance as given in IS:325.

(iii) PUMP STARTING / CONTROL PANEL : One new pump starting panel having capacity to run 60 HP motor to run the pump sets and having provision to hook up/ synchronise the existing Pump Starting Panel and necessary modified as required to failsafe operation of the new Pump. The panel to be wall mounting type as required and out of CRCA sheet steel. Suitable terminal blocks shall be provided for termination of external cable/wires. The panel feature shall be able to match the philosophy of water based fire protection system.

The Panel shall be suitable to accept electric feeding of 440 + 10% Volts, 3 phase & 50HZ +5% A.C. supply. The panel shall have the visual indication for power supply and of pump status. The starting interlock of the Pump Motor shall meet the system philosophy. The starter for fire pump shall be of Star-Delta Type.

(iv) PIPING : Mild Steel Black Pipe should be as per IS:1239, Part-I, medium grade. The complete piping system should withstand the hydraulic test pressure equal to 1.5 times of maximum working pressure. Piping to be laid over ground shall be supported properly on wall / column / beam / floor to suit site condition.

Outer surface of over ground pipes shall be thoroughly cleaned of mill scale, rust etc. by wire brush, thereafter, one coat of red lead primer shall be applied. Finally two coats of synthetic enamel paint of approved Colour shall be applied.

During installation of Pipeline the following features should be considered for better system performance :

- a) Pipes & fittings shall be fixed truly vertical, horizontal or in slopes as required in a neat workman like manner.
- b) Short or long bends shall be used on all main pipe lines as far as possible. Use of elbows shall be restricted for short connections
- c) Pipes shall be fixed in manner as to provide easy accessibility of repair & maintenance & shall not cause obstruction in shafts, passage etc.
- d) Pipes shall be securely fixed to walls & ceiling by suitable clamps at intervals specified.
- e) Clamps, hangers & support on RCC Walls, columns & slabs shall be fixed only by use of Power Drills.
- f) After laying and jointing, the entire piping shall be tested to hydrostatic test pressure. The pipes shall be slowly charged with water so that the air is expelled from the pipes. The pipes shall be allowed to stand full of water and then tested under pressure. The test pressure shall be at least 1.5 times the operating pressure and no leakage should be allowed within a period of two hours. The test pressure shall be applied by means of manually operated test pump or by a power driven test pump to be provided by the Contractor. In either case precautions shall be taken to ensure that the required test pressure is not exceeded. The open end of the Piping shall be temporarily closed for testing.



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(v) **SLUICE VALVE / GATE VALVE** : The Valves shall be heavy pattern gunmetal/C.I valves with cast iron wheel tested to 16 Kg./Cm² pressure.

The cast iron Sluice Valves will be double flanged with non-rising spindle. Sluice Valves in exposed locations i.e. Pumps House etc. shall be provided with cast iron wheels. Sluice Valves shall conform to IS:14846 class PN 1.6 and shall be of approved make.

(vi) **BUTTER FLY VALVE** : The valve shall be of cast iron wafer type with lever operated. The valve shall generally conform to IS:13095, Class PN 1.6 and shall be of approved make.

(vii) **NON-RETURN VALVE** : Non- Return Valve shall be of cast iron double flanged & Swing Check type. The Valve should have a permanent " Arrow" inscription on its body to indicate direction of flow of water. The Valve shall generally conform to IS:5312. The pressure rating of the Valve shall be in accordance with the system design and the make shall be of approved type.


PRINCIPAL 26/03/2019
ICMARD

Memo. No. 2137/ICMARD/ /1(4).

Date : 26/03/2019.

Copy forwarded for information and necessary action to -

1. The Managing Director, The WBSCARD Bank Ltd., 25D, Shakespeare Sarani, Kolkata-700017.
2. Miss Sanchari Mitra, Manager & AFM, ICMARD, with the request to upload this NIT in the official website of The WBSCARD Bank Ltd.(www.icmard.org).
3. Display on the Notice Board of The WBSCARD Bank Ltd.
4. Display on the Notice Board of ICMARD, The WBSCARD Bank Ltd.


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ANNEXURE - I
(Schedule / Scope of Works)

SL. No.	Description/Particulars of the Items of Works	Unit	Qty.	Rate (Rs)	Amount (Rs)
1.0	<p>Supply, Installation, Testing & Commissioning of Electrical Motor driven Fire Water Pumping set suitable for automatic operation, consisting of the following features / accessories and complete in all respect.</p> <p>1.1-Horizontal centrifugal type single stage fire water Pump capable to deliver 2400 LPM against a total head of 79 M having cast iron body, bronze impeller, stainless steel shaft and complete with all accessories for successful operation and periodical testing of the pumping system as per requirement of WBFES.</p> <p>1.2- Suitable capacity squirrel cage induction motor T.E.F.C. type with synchronous speed of 3000 RPM conforming to IS:325 & suitable for 415 volts+ 10%, 3 phase, 50Hz A.C. supply for the above Fire Pump to couple with flexible coupling, as per relevant Indian Standard & specifications.</p> <p>1.3- Common base frame for mounting Pump and Motor, fabricated from suitable M.S. section including pin bush type coupling as per manufacturer's recommendation standard & specifications.</p> <p>1.4- Suitable pump-foundations as per manufacturer's design & 6 nos. Dunlop or equivalent make heavy duty anti-vibration pads (Cushy foot) Make : PUMP-KIRLOSKAR/KSB MOTOR- KECL/KSB/ABB</p>	Set	1		
2.0	<p>Supply, Installation, Testing & Commissioning of cubical type floor/wall mounted Fire Pump Control Panel, fabricated from 14 g M.S. sheet duly powder coated finish of approved shade, comprising of incoming isolator with fuse, volt meter with selector switch & protection fuse, indicating lamps (one for each phase) with protection fuse, Amp. Meter with 3 nos. C.T. & Selector Switch suitable for one no. standby Fire Pump Set duly wired & terminated to accept all incoming & outgoing cables and complete in all respect. The panel to be interlocked/ synchronized with the existing panel for auto operation. Make : KRITTIKA/JD ELECTRICAL</p>	Set	1		



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3.0	Supply, Installation, Testing & Commissioning of C.I. Swing Check type Non-Return Valves (IS:5312, PN1.6) complete with matching flanges, rubber insertion, nuts, bolts and washer etc. of following sizes complete in all respect. 3.1- 150 mm dia 3.2- 50 mm dia Make- S.E.W/SARKER	Each Each	1 1		
4.0	Supply, Installation, Testing & Commissioning of slim seal butterfly Valves class PN 1.6 as per IS: 13095 complete with matching flanges, rubber insertion, nuts, bolts and washer etc. of following sizes and complete in all respect. 4.1- 150 mm dia 4.2- 50 mm dia Make- KITZ/KIRLOSKAR	Each Each	2 1		
5.0	Supply, Installation, Testing & Commissioning of Dial type Pressure Gauge (100 mm Dial) including necessary pipe line connection and complete in all respect. Make- H.GURU/MASS	Each	2		
6.0	Supply, Installation, Testing & Commissioning of non-rising spindle type C.I. Gate Valves class PN 1.6 as per IS:14846 complete with matching flanges, rubber insertion, nuts, bolts and washer etc. of following sizes and complete in all respect. 6.1-150 mm dia 6.2-50 mm dia Make : S.E.W./SARKER	Each Each	1 1		
7.0	Supply, Installation, Testing & Commissioning of Ball Valve with hard chrome plated ball inside PTFE(Teflon) seat & ring with chrome plated center handle with female BSP threads and complete in all respect. 7.1- 15 mm dia nominal bore Make- KITZ/LEADER	Each	2		
8.0	Supply, Installation, Testing & Commissioning of differential type Pressure Switch including piping connection and complete in all respect. Make- INDFOS/HONEYWELL	Each	3		



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9.0	Supply, Installation, Testing & Commissioning of Control Cabling for connection between Pressure Switch and Pump Control Panel by 1.0 Sq.mm PVC insulated copper wire with PVC conduit and complete in all respect. Make- POLYCAB/GLOSTAR	LOT	1	
10.0	Supply, Installation, Testing & Commissioning of Power Cabling with earthing for connection between Pump Starting Panel to Pump Motor and main supply to Pump Starting Panel as per requirement. Make- POLYCAB/GLOSTAR	LOT	1	
11.0	Supply, Installation, Testing & Commissioning of mild steel black pipe (IS:1239 Part-I) of following sizes including cutting, threading, welding etc. including bends elbows, reducers, clamps, hangers, pipe supports, brackets etc. and cutting holes in brick or RCC walls/slabs including painting with one coat of primer and two coats of synthetic enamel paint of approved make & shade and complete in all respect. 11.1- 150 mm dia Medium 11.2- 50 mm dia Medium Make- TATA/JINDAL	RM RM	6 6	
12.0	Necessary Civil Works for Modification / Upgradation of Pump Foundation & Provision of New Pump-	Job	1	
TOTAL AMOUNT				
SGST @				
CGST @				
GRAND TOTAL				

N.B. (a) The quantity etc. against the Description of work may vary during execution depending upon actual requirement.

(b) The Tenderer may please make spot inspection to furnish the possible items/ quantity etc. and the item-wise rate stating the Total Quoted Price of
Rs. _____ (Rupees _____) only.

I do hereby accept all the stipulated Terms & Conditions as laid in the NIT vide Memo. No. 2137/ICMARD/ _____, dated _____ /03/2019.

**Signature of the Authorised Signatory
On behalf of the Agency with Date and Seal**