

**Amendment no.3**

**10<sup>th</sup> Oct ,2015**

Sub : Supply & Installation of Automatic Online Chemical Dosing System as per tender specifications at HLL, IFC, Irapuram, Kochi.

Ref : IFB No:HLL/CED/IFC/ ACD /2015 Dated 22-08-2015

With reference to the above, we here by incorporate the following amendment to the tender documents as detailed below :

**Amendment no.3**

The last date of date for receipt and opening of bid of the above referred tender has been amended as follows.

- (a) Last date and time of receipt of tender : 17-10-2015,15.00Hrs
- (b) Date and time of opening tender : 17-10-2015, 15.30Hrs
- (c) Schedule V,Format for quoting

**EXISTING**

**EXISTING**

| <b>SCHEDULE V</b>  |  |      |          |            |              |
|--|--|------|----------|------------|--------------|
| <b>FORMAT FOR QUOTING</b>  |  |      |          |            |              |
| <b>Sub: Providing Automatic Online Chemical Dosing System for HLL CDM at IFC</b> |  |      |          |            |              |
| SI No  | Item/Work Description  | Unit | Quantity | Rate in Rs | Amount in Rs |
| <b>1</b>   | <b>Supply &amp; Installation of SS pipes (SS316) with necessary fittings as per drawing and specifications for the following sizes</b>   |      |          |            |              |
| a)   | 25mm seamless SS 316 pipe  | MTRS | 10.00    |            |              |
| b)   | 25mm SS Flange (threaded)  | Nos. | 2.00     |            |              |
| c)   | 25mm SS Ball Valve(Make : Minerva/Audco/GG)  | Nos. | 2.00     |            |              |
| d)   | 25 mm SS nipple  | Nos. | 2.00     |            |              |
| e)   | 40mm motorised drain valve   | Nos. | 2.00     |            |              |
| <b>2</b>   | <b>Fabrication &amp; fixing of structural platform using the following SS materials</b>  |      |          |            |              |
| a)   | 50/38 mm SS square tube(Material will be supplied by HLL)  | MTRS | 50.00    |            |              |
| b)   | Supply & Installation of 4mm thick MS chequered plate including painting with one coat synchromite primer & two coat enamel paint of approved quality.   | KG   | 130.00   |            |              |
| <b>3</b>   | <b>Supply &amp; Installation of SS Tank as per drawing</b>   |      |          |            |              |
| a)   | SS Tank having size-1000mmX1000mmX1000mmx2mm(L x W x H x T )   | Nos. | 1.00     |            |              |
| <b>4</b>   | Supply,Fabrication & fixing of MS Angle (40x40x4mm)supports including painting with one coat synchromite primer & two coat enamel paint of approved quality.   | Kg   | 25.00    |            |              |
| <b>5</b>   | Supply & Installation of GI U-clamps with nut,bolt,washer etc. complete for pipe line  |      |          |            |              |
| a)   | For 75mm PVC pipes   | Nos. | 10.00    |            |              |
| b)   | For 50 mm SS pipes   | Nos. | 10.00    |            |              |
| c)   | For 25mm SS pipes  | Nos. | 10.00    |            |              |
| <b>6</b>   | Supply& Installation of Chemical Pump as per specification<br><b>Specification of Pump</b><br>Capacity : 10m <sup>3</sup> /hr.<br>Type : Chemical<br>Application : Trisodium Phosphate<br>MOC: SS316<br>Suction :1 1/2"<br>Delivery : 1"<br>Viscosity of fluid : 4 CPS<br>Operating temperature : 50° C<br>Make : Grundfos<br><b>Specification of Motor</b><br>Power : 0.75KW,1HP,3PH<br>Make : ABB/Siemens/Grundfos | Nos. | 2.00     |            |              |

|  |   |      |      |  |  |
|--|---|------|------|--|--|
| 7  | <b>Supply and Installation of Solenoid Valve with accessories</b>   |      |      |  |  |
| a)   | Solenoid valve (3/2) with 6" PU tube(50 Mtrs) with suitable connectors, Tee connectors.As per relevant IS/IEC Standards with test and calibration certificates  | Set  | 4.00 |  |  |
| 8  | <b>Supply and Installation of Level sensors</b>   |      |      |  |  |
| a)   | Ultrasonic/Capacitance type level sensors for TSP(Tri sodium phosphate),Ammonia applicationAs per IS/IEC 60947-5-2 , level should be indicated digitaly.  | Nos. | 1.00 |  |  |
| 9  | <b>Supply and Installation of PLC</b>   |      |      |  |  |
| a)   | PLC for dosing application(10 bit PLC 5/5 I/O)As per IS/IEC 61131-3/IEC 61499/IEC 61508   | Set  | 1.00 |  |  |
| 10   | <b>Supply and Installation of Panel board Panel wiring should be as per IS 732 &amp; Earthing of Panel should be as per IS 3043/IEC 60364 , Panel should be as per IS 8437(Part 1&amp;2) / IEC 60479-1&amp;2 , IS 60529/IEC 60529 , IS 9409/IEC 61140 ,IS 9676, IS 5216 with Test Certificates)</b>                         |      |      |  |  |
| a)   | Panel Board with size 600x600x210 mm with 2 mm Powder Coated CRCA Sheet.  | Set  | 1.00 |  |  |
| 11   | <b>Supply and Installaion of MCCBAs per IS 13032 , IS 13947/IEC 60947-5-2 , IS 9409/IEC 61140 , IS 8623 (part 1 to 3)/IEC 60439(1to 3), IS 8504/IEC 60216-4-2 , IS 60715/IEC 60715 ,IS 60898/IEC 60898 , IS 60947(Part 1&amp;2)/IEC 60947, IS 10118(Part 1 to 4) , IS 60529/IEC 60529 , IS 9676 with test certificates.</b> |      |      |  |  |
| a)   | 63 A , 3 Pole 450 V MCB   | Nos. | 1.00 |  |  |
| 12   | <b>Supply and Installation of MCB(As per IS 13032 , IS 13947/IEC 60947-5-2 , IS 9409/IEC 61140 , IS 8623 (part 1 to 3)/IEC 60439(1to 3), IS 8504/IEC 60216-4-2 , IS 60715/IEC 60715 ,IS 60898/IEC 60898 , IS 60947(Part 1&amp;2)/IEC 60947, IS 10118(Part 1 to 4) , IS 60529/IEC 60529 , IS 9676 with test certificates</b> |      |      |  |  |
| a)   | 10 A ,3 Pole ,415 V MCB   | Nos. | 2.00 |  |  |
| 13   | 6A , 2pole , 230 V MCB  | Nos. | 2.00 |  |  |
| 14   | <b>Supply and Installation of online-starters As per IS 60947(Part 4 &amp; Section 2)/ IEC 60947-4-1 &amp; 2 Standards with Test Certificate</b>  |      |      |  |  |
| a)   | 0-4 A , 3 Pole 415 V ( 1HP)   | Nos. | 2.00 |  |  |
| 15   | <b>Supply and Installation of TimerAs per relevant IS/IEC Standards with test and cslibration certificates</b>  |      |      |  |  |
| a)   | Digital Timer(programmable type, 0-20minutes)   | Nos. | 2.00 |  |  |
| 16   | <b>Supply and Installation of Power Supply( 24 V DC) sourceAs per IEC 61850-3/IEC 60950-1with Test &amp; Calibration Certificates</b>   |      |      |  |  |
| a)   | Power Supply( 24 V DC) source   | Nos. | 1.00 |  |  |
| 17   | Supply of motorised flow valves with size 2" (As per relevant IS/IEC standards)   | Nos. | 4.00 |  |  |
| <b>BASIC PRICE</b>   |   |      |      |  |  |
| <b>SERVICE TAXES &amp; OTHER TAXES IF ANY</b>                                    |   |      |      |  |  |
| <b>GROSS AMOUNT IN RS. (INCLUDING TAXES)</b>                                     |   |      |      |  |  |
| <b>( IN WORDS)</b>   |   |      |      |  |  |
| I agree to execute the works as per schedule, at the rates quoted by me as above |   |      |      |  |  |
| <b>SIGNATURE OF THE CONTRACTOR</b>   |   |      |      |  |  |

**READ AS****FORMAT FOR QUOTING****Sub: Providing Automatic Online Chemical Dosing System for HLL CDM at IFC**

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| e)       | 40mm motorised drain valve   | Nos. | 2.00     |            |              |
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| <b>5</b> | Supply & Installation of GI U-clamps with nut,bolt,washer etc. complete for pipe line  |      |          |            |              |
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| <b>6</b> | Supply& Installation of Chemical Pump as per specification<br><b>Specification of Pump</b><br>Capacity : 10m <sup>3</sup> /hr.<br>Type : Chemical<br>Application : Trisodium Phosphate<br>MOC: SS316<br>Speed : 1500 RPM<br>Suction : 1 1/2"<br>Delivery : 1"<br>Viscosity of fluid : 4 CPS<br>Operating temperature : 50° C<br>Make : Grundfos<br><b>Specification of Motor</b><br>Power : 0.75KW,1HP,3PH<br>Speed : 1500RPM<br>Make : ABB/Siemens/Grundfos | Nos. | 2.00     |            |              |

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| <b>BASIC PRICE</b>   |   |      |      |  |  |
| <b>SERVICE TAXES &amp; OTHER TAXES IF ANY</b>                                    |   |      |      |  |  |
| <b>GROSS AMOUNT IN RS. (INCLUDING TAXES)</b>                                     |   |      |      |  |  |
| <b>( IN WORDS)</b>   |   |      |      |  |  |
| I agree to execute the works as per schedule, at the rates quoted by me as above |   |      |      |  |  |
| <b>SIGNATURE OF THE CONTRACTOR</b>   |   |      |      |  |  |

All other conditions are as per original IFB No:HLL/CED/IFC/ ACD /2015 Dated 22-08-2015 & amendment no.1 dtd. 3.09.15 & amendment no.2 dtd.10.09.15

**ASSOCIATE VICE PRESIDENT**