

## **DETAILED SPECIFICATIONS**

**Name of Work: - Operation, Maintenance & repairs to PSC/MS pipeline of dia 1500/1200 mm from Hetawane Dam to Panvel Creek Bridge (Reti Bunder), Navi Mumbai including operation of intake structure, break pressure tank and MBR at Vahal.**

### **PART – I**

**(Operation, maintenance & minor repairs to PSC/MS pipeline Hetawane Dam to Panvel Creek Bridge (Reti Bunder)**

**1.0 Item No. 1: -**

Works to be performed includes providing necessary man power (minimum staff essential under Item No.1 is given on separate page) as per requirement for various works included under this item. Patrolling the pipeline even during night time with necessary tools required for repairing and reporting leakages to department and to collect instructions for operation and maintenance or repairs and removing leakages including guarding of excavated trenches, tightening of nut bolts of flanged joints / expansion joints etc. replacing of gland packing / rubber packing and also to carry out work of realigning of dislocated pipes and specials and all such labour operation to stop leakage through all types of joints / specials / accessories. For patrolling contractor has to keep required persons with suitable vehicle during night time. While patrolling, it is necessary to see that unauthorized water connections from pipeline is not taken by any person. If such instances are noticed, it should be promptly communicated orally and in writing on the same day to the

Engineer and immediately such connections should be disconnected by the contractor.

The contractor has to provide sufficient number of fitter, welder, helper, labours etc. for executing Item No. 1. Contractor has to employ extra helpers / fitters / welders etc. required as a reliever on holiday and on day of weekly off without any extra cost.

Whenever leakage detected at any air valve, scour valve, butterfly valve or any accessories / specials from the welding joints of pipeline, it is to be removed within 24 hours. If more numbers of leakages are noticed at a time then the contractor has to employ additional labour and has to remove all the leakage within 24 hours even if these may be at a various places. The job of removal of minimum leakages includes, excavation dislocating the special / accessories and to bring disturbed special accessories / pipe in its original. Excavation and breaking of concrete should be done as per required in minimum size and depth and the excavated trench or pit should be guarded or protected by barricading with red signal at night time as laid in standard specifications at the time of excavation of trenches. The major leakages in the pipeline shall be paid separately in the item prescribed in the Part - II.

After removing the leakage from the pipeline the trench shall be refilled with excavated stuff.

For the operation and maintenance of rising main and gravity main following are the additional points which are to be observed by Contractor.

- a) Ensure that all the scour valves are closed.
- b) Ensure that the butterfly valve of various dia opened and closed as per instructions.
- c) Periodical cleaning of the line shall be done by opening the scour valves. For this all scour valves should be operated and closed once in a month or as directed by Engineer.
- d) The contractor shall maintain all the fixtures such as butterfly valve, air valve, expansion joints, scour valves in proper working conditions.
- e) At an intervals of every two months balls of air valves should be checked and replaced, if necessary. Replacement of air valve ball shall be paid separately.
- f) In case it is required to empty the pipeline for repairs, same shall be emptied very slowly, such that there shall not be any negative pressure in the pipeline. If such negative pressure is observed and the pipeline is damaged the contractor will be held responsible and he shall bear all the cost of replacement / rectification of the said portion.
- g) It is necessary to arrange for patrolling the pipeline twice in a shift for locating any leakage in it. The contractor representative shall inform to the Engineer of CIDCO the leakages in the pipeline in the various fixture and other abnormal events observed during his patrolling.
- h) The pipelines are resting either on masonry on RCC chairs. During the course of maintenance it shall be necessary to replace or repair chair which have been damaged. The contractor shall attend work of

replacement or rectification of damaged chairs on priority. The payment on account of this shall be made separately in Part - II.

- i) All the break down / repairs shall be attended without loss of time and shall be completed on war footing. This shall be paid separately in part - II.
- j) The grass / shrubs in vicinity or pipeline shall be cut, removed and disposed off by contractor as per directions of Engineer.
- k) Operation of chlorination at MBR, Vahal, taking level on MBR Vahal, BPT.
- l) Keeping manpower at intake structure at dam for day to day drawl from Irrigation to Dam.

The item also include to maintain and submit the various records of tapping points at various locations including finding residual chlorine as per the Additional General Conditions and as directed by Engineer.

The item also includes the collection of water sample from various points and submitting into laboratory at Konkan Bhavan, CBD and collect the test results from Laboratory, if necessary. The testing charges will be borne by CIDCO. The item also includes the connecting and disconnecting of various connections for consumers as per instructions of Engineer. The item also includes the cutting and welding of protection of M.S. cover boxes provided on pipe lines for safety of various appurtenances.

The operation and maintenance of various component under the item No. 1 is to be carried out by essential number of staff ad detailed

below. The staff mentioned below is obligatory. Contractor shall have to make his own arrangements of other staff for satisfactory. Operation and maintenance of various components mentioned above.

**The operation & maintenance of this system shall be 24 hours.**

The capacity of water supply of Hetawane Water Supply System is 150 MLD. The present water supply made is 100 MLD and likely to be increased upto 150 MLD, minimum staff essential for operation and maintenance of various component under Part - I to be deployed by contract is as under;

<b>Sr. No.</b>	<b>Category</b>	<b>Nos.</b>	<b>Location</b>
1.	Engineer	1 No.	Common for Part - I & Part - II.
2.	Supervisory	2 No.	Common for Part - I & Part - II.
3.	Fitter / Welder	2 No.	Raw water gravity main, Rising main and pure water gravity main.
4.	Electrician	1 No.	Common for Part – I & II.
5.	Helper / Mazdoor / Meter reader	5 No.	On pipeline patrolling & day to day meter reading to control villagers water supply.
6.	Operator	6 No.	Dam, Vahal MBR & PCB cabin.
7.	Watchman	7 No.	Dam, Vahal MBR, BPT @ Dighati & PCB cabin.

This shift duties for above workmen shall be finalized in consultations with Engineer.

**Mode of Measurements for Item No. 1: -**

- 1) It shall be paid on per day basis, subject to production of certificate of payment and copy of pay role thereof. If agency fails to pay the same on or before 10<sup>th</sup> of every month, then penalty at Rs. 100/- per day will be imposed beyond the 10<sup>th</sup> of the month till the date of such payment is made to the employees to max. of Rs. 5000/ month.
- 2) If it is observed that working of system is hampered due to less number of staff, employed by contractor or other problems arises due to contractor's employees, the CIDCO shall levy the compensation to the extent of loss sustained from non supply of water or at 20% of Item No. 1, whichever is less. However, decision in this regard and negotiations in settlement of employee, decision of the Superintending Engineer shall be final and binding on the contractor, if employees have not gone with their cases in court of law.
- 3) The main motto of this tender is to provide uninterrupted and adequate water supply to consumer at minimum possible wastage and thereof, if leakages are not attended promptly by contractor then compensation in following way shall be made by Department.
  - a) Removal of leakages which do not require taking shut down and which are minor are required to be rectified within 24 hours from their occurrence. If they are not removed within 24 hours a compensation of Rs. 200 per day will be recovered.
  - b) Removal of leakages where shut down is required and which are major needs to be rectified within 12 hours from the time of

their shut down except the cases of breakdown. If not rectified within 12 hours, a compensation of Rs. 200 per hour of delay or part thereof will be recovered.

- c) The break down shall be resorted within 24 hours and if it is delayed beyond 24 hours, the losses due to delay shall be decided by Executive Engineer and his decision shall be final and binding on the Contractor.
- 4) Item includes gas cutting of M.S. pipes / plates of varying thickness as per requirement. Gas cutting set, oxygen and cooking gas cylinder are to be arranged by the contractor at his cost. No extra payment will be made on this account. The item includes welding as per requirements.
- 5) Item includes all labours, equipments, materials etc. required for welding purpose. This also includes transportation of labourers, equipments and material required for welding purpose. No extra payment will be made on this account.
- 6) Minimum staff required for item No. 1 as cited above. If contractor fails to employ then recovery per day per person will be made as under: -

1.	Engineer	-	Rs. 567 / person / day
2.	Supervisor	-	Rs. 309 / person / day
3.	Fitter / welder / operator / Watchman	-	Rs. 303 / person / day
4.	Helper / Mazdoor /	-	Rs. 294 / person / day

- 7) Item includes minor excavation in soft and hard strata as per requirement for rectification of leakages. Item also includes

dewatering during excavation and rectification. Additional dewatering sets are to be arranged by the Contractor. Payment of extra dewatering shall be paid in relevant Item in Part - II.

- 8) Materials as per Schedule "B" will be supplied free of cost by the department and contractor has to bring all other materials at his own cost as per Additional Special Conditions of Contract.
- 9) The item also include checking of residual chlorine at various point of pipeline as per direction of Engineer and maintaining its record in a register. For this required number of chloroscope and O.T. solution will have to be provided by contractor at his cost. Failure of this will be viewed very seriously and penalty of Rs. 100 per day will levied.
- 10) The item also includes providing a four wheeler in good conditions alongwith driver round the clock 24 hours even on holidays / festivals common for Part - I & Part - II. The failure of this will cause a recovery of Rs. 750 per day. The four wheeler will be used for operation and maintenance works of pipeline. The agency has to provide the same without any reservation without extra claims if Engineer instruct to use for delivering urgent messages / letters etc. to various authorities which are directly or indirectly related to smooth and uninterrupted water supply. In such cases Jeep may be used upto Hetawane Dam. Water Treatment Plant at Jite, MSEB offices at Pen, Khopoli, Pen Urban, MPCB offices at CBD, Mumbai CIDCO Offices at Panvel / Kalamboli / CBD / Turbhe / Vashi and JNPT office at Sheva. The decision of Executive Engineer in this regard of will be final and binding on agency. The programme of Jeep movement each



day shall be finalized in consultation with concerned Assistant Engineer / Assistant Executive Engineer.

- 11) The item also includes providing tools and tackles, labours (skilled + semiskilled + unskilled), welding generating sets, dewatering sets, during emergency / urgency / shutdown / break down as per requirement and as per direction of Engineer.
- 12) The item also includes providing necessary materials such as Brushes, Kharatas, Duster, Phenyl, Brooms, Washing solution, Detergents soaps, Aerosol spray etc. for routine cleaning as per requirement of works under this contract. Engineer should not get any complaint of non availability of these materials otherwise these materials will be purchased at risk and cost without giving any notice.
- 13) The agency has to submit the labour license as per Contract Labour act within one month from the date of work order, failing which this will be treated, as breach of contract and the appropriate action shall be taken as per contract provision. The agency also should renew the labour license well in advance i.e. prior to expiry of the existing license.

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Signature of Tenderer

Date :

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Additional Chief Engineer (II)

Date :