

SECTION-II

TECHNICAL SPECIFICATION

(i) Scope of Work:

- (1) Mormugao Port intends to hire 2 Nos locomotive for operations at Mormugao Port. The scope of work consists of two parts viz (i) Hiring of locomotive on yearly basis and (ii) Hiring of locomotive on hourly basis for a contract period of 3 years. The contractor can submit their offer for either one or both. For the hourly basis locomotive payment will be made for actual hours on monthly basis.
- (2) The locomotive on hire will be the property of the contractor but will remain in premises of MPT for round the clock basis for entire contract period of 3 years.
- (3) The contractor has to provide round the clock manning of the locomotive for operations at Mormugao Port.
- (4) Contractor shall maintain 90% availability of each locomotive after adjusting scheduled time during lean period of work.
- (5) The 90% availability of each locomotive shall be maintained on a average over a period of 3 months i.e out of 90 days on an average locomotive can have down time for 9 days. All efforts shall be made to carry out scheduled maintenance during the lean loading time barring breakdowns.

(ii) Specifications of the Locomotive:

Sr No	Description	Features
1	Class of Loco	WDS6
2	Type of Loco	Diesel Electric
3	Horse Power	1350 HP / 1400 HP
4	Traction Horse Power	1300 HP
5	Starting Tractive effort	34 t
6	Gear Ratio	74:18
7	Transmission	DC-DC / AC-DC
8	Engine	ALCO (6 Cyl. InLine)
10	SFC	165 ± 4 / 175±1 gm/bhp/hr
11	Consumption at Idling	16-18 litres/hr
12	Lube Oil Sump Capacity	530 Ltrs
13	Governor	WW Governor/MCBG
14	Wheel arrangement	Co-Co
15	No of axles	6
16	Weight in working order	120-126 tons
17	Bogies	Co-Co Tri-mount bogie for better negotiation on curves, cast/Fabricated.
18	Max. Axle Load	21 T
19	Length over head stock / buffer beam	15290 mm / 16150 mm
20	Bogie/Rigid frame wheel base	3810 mm
21	Loco wheel base	12224 mm / 12518 mm
22	Tractive Effort Maximum Continuous	34000 kg (27% Adhension) 30300 kg / 30000 kg
23	Speed Maximum	65 Km/H

	Continuous	7.85 Km/H
24	Diesel Engine Make Type HP Standard Site RPM Maximum Idle Turbo super Weight Dry	ALCO /DLW 251 D, 6 Cyl, Inline 1400 HP 1328 HP 1100 400 ALCO 10818 kg
25	Transmission Make	Electric BHEL/GE
26	Brake Loco Train	Air/Hand Air
27	Under Frame	Fabricated I-Beam Type
28	Fuel Tank Capacity	5000 Litre (Detachable)
29	Track Gauge	1676 mm
30	Compressor	200 cfm, 3CDB, ELGI/KPC make
31	Locomotive Drive	Left Hand with twin control desk
32	Rear Traction motor Blower	Sealed Housing type Bearing
33	FTMB	Alternator Gear Train Drive
34	Traction Motor	TM-4907
35	Cooling water capacity	645 Litre
36	Lubricating Oil sump capacity	530 Litre
37	Battery	Lead Acid
38	Control	Microprocessor control system with integrated Creep Control
39	Governor	Microprocessor controller based Governor (MCBG)
40	Min Radius of Curvature Negotiability	25° Max or Radius of 70 meter

(iii) Supply of Fuel and other lubricants:

- (a) Contractor shall provide all spare parts/ items/ assemblies/consumables/ Lube oil, greases required to be replaced on the locomotive during maintenance.
- (b) Fuel (High speed diesel) will be provided by the Port.
- (c) The average fuel consumption limit of 32 Ltrs per hour will be considered. If the consumption exceeds, same will be recovered from contractor monthly bills at the rate prevailing in the market on 1st of the month.

(iv) Payment Terms

Payment shall be made at the end of each calendar month after submission of daily check engine log book of the locos against the certification of the MPT Engineer-In-Charge. The drivers of the locos should maintain daily engine logbook as per format designed by MPT. The monthly bills shall be submitted in triplicate to MPT after certification of CME's representative of Engineer-In-Charge.

(v) **Terms and Conditions**

1. Contractor shall provide one driver and one shunting man/greaser (experience in Railways) per locomotive round the clock, 7 days a week, in each shift required for operation of the locomotive. Suitable persons or undertaking the services in conformity with general accepted norms and sound standards of engineering practices shall be deployed by contractor. One dedicated road vehicle (Jeep) shall be maintained by contractor, round the clock at the site for mounting day to day locomotive operations and to attend emergencies.
2. The drivers of the locomotive shall be responsible for safe working as per working norms in vogue. They will ensure safety of the locomotive, wagons being shunted and other installations where the loco will be working.
3. Leave reserve and rest giver for staff for operation of each locomotive shall be provided by contractor as per requirement.
4. Statutory laws of safety shall be obeyed by the contractor.
5. Contractor shall maintain safety measures strictly as per Government rules and regulations.
6. Locomotive along with the staff shall be covered under comprehensive insurance the cost of which shall be borne by the contractor.
7. The locomotive proposed to be supplied by contractor shall be rail worthy condition, within its life norms i.e less than 20 years from the date of manufacturing by DLW/Indian Railways and a load test certificate issued by the concerned Railway Authority for ensuring hauling capacity as and when required.
8. The staff deployed on the locomotive shall be covered under Workmen Compensation Act and other statutory Acts.
9. Space for locomotive will be earmarked as per the convenience of MPT on chargeable basis.

(vi) **Liability**

- a) Contractor shall provide all the expert technical advice and services required and shall Provide suitable personnel for undertaking the services in conformity with the General accepted norms and sound standards of Indian Railways.
- b) Contractor shall arrange at their own cost, employees liability. Insurance for their Personnel deputed site as per statutory rules and regulations.
- c) Contractor shall submit all reports to the controlling officer along with the running bills as per the requirement of the Engineer-in-charge
- d) Contractor shall not have any liability in the matter of delay in receipt or dispatch of incoming or outgoing traffic or any other inconvenience or loss to the siding owners which may be caused by loco ineffective, derailment, accidents etc.
- e) MPT shall provide standards fuelling facility foe locomotive. Schedule Maintenance / cut of course repairs of leased locomotive will be done in MPT Premises with the existing in fractural facilities without hindrance of MPT locos maintenance
- f) The operational staff or leased/hired locos may be allowed to use existing canteen facilities on par with MPT staff on payments basis.
- g) MPT shall extend medical aid to the personnel of operational staff and their families during their assignment at project site at par with MPT staff on payments basis.

(vii) **Penalties**

- (a) If during a quarter (3 months period) contractor is not able to manage the loco availability of 90% due to loco ineffective or non availability of driver, lease charges of the downtime in excess of 10% (calculated on hourly basis) shall be deducted from the contractor invoice. Apart from the above deduction a penalty of 10% of the deducted amount will be levied. However in case there is planned long downtime for which contractor give a notice of 7 days to MPT no lease charges shall be payable after the notice period, for which MPT shall make their own arrangements. In this case the contract shall be held in abeyance and shall be restored only on mutual consent.
 - (b) If the leased loco gets involved in any sort of accident/derailment taking toll of life or material or both or creating dislocation owing to inadvertent operations or loss of alertness, contractor shall submit a detailed report of the accident enumerating its cause to the MPT. The MPT in turn shall verify the above submission. If necessary, by forming a small committee in which one representative of Contractor will be there. In case of the Driver/Loco being responsible for such accident as may be opined by the committee as aforesaid, the penalty will be limited to 1% of the total billing of that locomotive for that month or the actual cost of restoration/damage rectification, whichever is less.
 - (c) In any case, total of all penalties shall not exceed 3% of the total billing in a month.
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