

**BIDDING DOCUMENTS**  
**FOR**  
**DESIGN, MANUFACTURE, SUPPLY, TESTING, COMMISSIONING AND**  
**TRAINING OF 378 NOS. OF STANDARD GAUGE CARS**  
**FOR MUMBAI METRO PROJECT**

**BID NO. MRS1**

**ADDENDUM NO. 2**

## 'MRS1' Bid document: Addendum No. 2

<b>Part, Section, Clause, Description, Page, Location etc.</b>	<b>Amendments</b>
<ul style="list-style-type: none"> <li>• Part-I: Bidding Procedure,</li> <li>• Section-3: Evaluation and Qualification Criteria</li> <li>• Clause 2.2: Experience and Technical Capacity and Clause 2.3: Financial Situation</li> <li>• Page Page 5 of 19 to Page 16 of 19</li> </ul>	<p><b><u>REPLACE:</u></b></p> <p>“ Clause 2.2 and 2.3.”</p> <p><b><u>WITH:</u></b></p> <p>“ Attached Annexure-I.”</p>
<ul style="list-style-type: none"> <li>• Part-I: Bidding Procedure,</li> <li>• Section-2: Bid Data Sheet: Attachment BDS A-3</li> <li>• Clause 1.5: Evaluation of Qualifying Conditions: S.No. 7 and 8</li> <li>• Page 12 of 13</li> </ul>	<p><b><u>REPLACE:</u></b></p> <p>“</p> <p>7. include a “No” answer to the following question- “In case of a joint Venture/Consortium, has the proposed leader of the Joint Venture/Consortium for this project been a leader of any of the Joint Venture/Consortium in at least one Rolling Stock contract awarded against ICB in the last ten (10) years.; or</p> <p>8. include a “Yes” answer to the following question- “Is the applicant currently in the process of financial restructuring under corporate debt restructuring act?”</p> <p><b><u>WITH:</u></b></p> <p>“ 7 &amp; 8- Deleted.”</p>

## 2.2 Experience and Technical Capacity

### 2.2.1 Contractual Experience

Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
<p>Has the Bidder/Consortium/Joint Venture or its members, individually or jointly as a member of other Consortia/Joint Venture have manufactured minimum of total 190 cars (i.e. Metro, LRT, Sub-urban EMUs, Train Sets) during last ten (10) years.</p> <p>Out of the above, minimum no. of Cars manufactured by the eligible bidder with the specified material in at least one contract executed with supplies outside the Parent Company or the Group company:</p> <p>(a) minimum 95 cars including design of stainless steel/aluminium cars; or</p> <p>(b) minimum 95 cars comprising stainless steel/aluminium/corten steel/steel EMU/MEMU/Metro Car manufactured for either a Indian metro company(ies) or Indian Railways.</p> <p>These 95 cars must have been supplied in at least one (1) country other than the country of origin or in India.</p> <p><b>Note:</b></p> <p>1. For (b), the bidder should either have design experience or procure/ subcontract design from experienced designer or form JV with a company having design experience. The credential to this effect should be submitted with the Bid.</p> <p>In the case of a Joint Venture/Consortium, the evaluation for the criteria will be done in totality (algebraic aggregate of the evaluation of each member) and not as</p>	must meet requirement	must meet requirement	not applicable	not applicable	Section-4: Bidder's Qualification: Form EXP - 1

individual member.					
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### 2.2.2.1 Technical Experience- Operational Performance

Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
<p><b><u>Operation performance</u></b></p> <p>Out of 190 or more cars commissioned in accordance with 'Clause No. 2.2.1 of Section-3', have minimum of total 95 cars completed satisfactory revenue operation for more than three (3) years.</p> <p><b>Note:</b></p> <p>In the case of a Joint Venture/Consortium, the evaluation for the criteria will be done in totality (algebraic aggregate of the evaluation of each member) and not as individual member.</p>	must meet requirement	must meet requirement	not applicable	not applicable	Section-4: Bidder's Qualification: Form EXP – 2.1

### 2.2.2.2 Technical Experience- Propulsion System

Criteria	Compliance Requirements	Documents			
		Single Entity	Joint Venture		Submission Requirements
Requirement	Single Entity	All Partners Combined	Each Partner	One Partner	Submission Requirements
<p><b><u>Propulsion system</u></b></p> <p>Does any Member of the Consortium/Joint Venture individually or in aggregate have cumulative experience of minimum ten(10) years in the Design and Manufacturing of Propulsion Equipment (Traction Converter Inverter, Auxiliary Converter- Inverter and Traction Motor) for Metro rolling stock AND do the propulsion Equipment supplied have been in satisfactory</p>	must meet requirement	must meet requirement	not applicable	not applicable	Section-4: Bidder's Qualification: Form EXP – 2.2

**Section 3: Evaluation and Qualification Criteria**

<p>revenue operation for at least five (5) years in minimum aggregate 500 cars comprising of both powered and non-powered cars, supplied against minimum five(5) different contracts in the Metros (i.e. MRT, LRT, Sub-urban Railways or high speed railways) of minimum two(2) different countries outside the country of origin.</p> <p><b>OR</b></p> <p>Does the Manufacturer of the Propulsion Equipment (Traction Converter Inverter, Auxiliary Converter-Inverter and Traction Motor) proposed by the Bidder as a sub-contractor for supply of the Propulsion Equipment against this Bid, has minimum ten(10) years experience in the field of Design and Manufacturing of the Propulsion Equipment AND do the Propulsion Equipment Designed, Manufactured and Supplied by the said manufacturer have been in satisfactory revenue operation for at least five(5) years in minimum aggregate 500 cars comprising of both powered and non-powered cars, supplied against minimum five(5) different contracts in the Metros(i.e. MRT, LRT, Sub-urban Railways and high speed railways) of minimum two(2) different countries outside his country of origin.</p> <p><b>Note:</b> The criteria mentioned in this clause applies only to the manufacturer of the Propulsion Equipment, who can be either a member of the Consortium/JV or a sub-contractor.</p>					
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## 2.2.3 Production Capacity

Criteria	Compliance Requirements				Documents
	Requirement	Single Entity	Joint Venture		
All Partners Combined			Each Partner	One Partner	Submission Requirements
<p><b>Available Production Capacity</b></p> <p>As per below mentioned methodology.</p>	must meet requirement	must meet requirement	not applicable	not applicable	Section-4: Bidder's Qualification: Form EXP – 3.1, 3.2 and 3.3

**Methodology for working out the Available Bid Capacity Manufacturing (ABCM)**

The Available Bid Capacity-Manufacturing ABCM of the proposed manufacturing plant(s) for supply of cars against this Bid shall be equal to or more than the bided quantity.

The Bidders shall note that they shall have to meet both the ABCMs (ABCM<sub>O</sub> and ABCM<sub>C</sub>) calculated as per the methodology defined below independently and separately for both Offshore and Onshore manufacturing plants, failing which their bids shall be considered as 'FAIL' in the 'Evaluation and Qualification Criteria'.

ABCM will be calculated as under:

**I. ABCM considering the 'Ordered Quantity' (ABCM<sub>O</sub>):**

The ABCM<sub>O</sub> will be calculated as per the following formula

$$ABCM_O = (1.1 \times P \times N_M) - (Q)$$

**II. ABCM considering the 'Ordered Quantity' and 'Existing Commitments' (ABCM<sub>C</sub>):**

The ABCM<sub>C</sub> will be calculated as per the following formula

$$ABCM_C = (2 \times P \times N_M) - (Q+R)$$

Where,

**P** = Maximum no. of EMU cars (other than trams) manufactured in the proposed plant in any consecutive 12 months during the last five (5) years. In case the bidder proposes a new manufacturing plant, the value of 'P' shall be as declared by the bidder in the bid;

**N<sub>M</sub>** = No. of years in which supply is to be made [N<sub>M</sub> = 4.25 (1553 days) in this case];

**Q** = No. of EMU cars (other than trams) to be manufactured in the proposed manufacturing plant under existing on-going ordered quantity including orders being executed for its associated group of companies (works in hand) to be completed during next "4.25 years (1553 days)" starting from the twenty eight days prior to 'date for Bid submission'.

**R** = No. of EMU cars (other than trams) committed to be manufactured in the proposed manufacturing plant against existing Commitments i.e. bids already submitted but not finalized including the commitments made

by the associated group of companies, wherein 'EMU Cars' are to be sourced from the proposed manufacturing Plant excluding the 'Work in hand' (Q), to be completed during next "4.25 years (1553 days)" starting from the twenty eight days prior to 'date for Bid submission'. The commitments shall include the quantity committed in various Bids which are under evaluation.

**Both  $ABCM_O$  and  $ABCM_C$  calculated as per the above formulae shall be independently equal to or more than the bided quantity.**

**Note:**

**1. Value of 'P':**

The maximum no. of EMU cars (other than trams) manufactured in any consecutive 12 months during last five (5) years ('P' in the above formula) shall be the maximum no. of EMU cars manufactured in the Plant under consideration only in any consecutive 12 months during the last five (5) financial years. Financial year as applicable in the country of origin where proposed plant exists would be considered. The Maximum no. of EMU cars manufactured in the proposed plant during the last five (5) years to be furnished in response to 'Form EXP-3.1' shall be considered for evaluating the value 'P' in above formula and the details furnished by the applicant shall be supported by suitable documents.

**2. Value of 'Q':**

No. of EMU cars (other than trams) to be manufactured in the proposed plant under existing on-going ordered quantity including the orders being executed for its associated group of companies (Works in hand) to be completed during next "4.25 years (1553 days)" starting from the twenty eight days prior to 'date for Bid submission' to be furnished in response to 'Form EXP-3.2' shall be considered for evaluating the value 'Q' in above formula and the details furnished by the applicant shall be supported suitable documents.

The 'twenty eight days prior to date for Bid submission' means for eg: Say, if 'date for Bid submission' is 12.06.2018, then 'twenty eight days prior to date for Bid submission' will be 15.05.2018 and next "4.25 years (1553 days)" period will be period up to 15.08.2022.

**3. Value of 'R':**

No. of EMU cars (other than trams) committed to be manufactured in the proposed plant against existing Commitments made i.e. bids already submitted but not finalized including the commitments made by the associated group of companies, wherein 'EMU Cars' are to be sourced from the proposed manufacturing Plant excluding the 'Work in hand (Q)', to be completed during next "4.25 years (1553 days)" starting from the twenty eight days prior to 'date for Bid submission' to be furnished in response to 'Form EXP-3.3' shall be considered for evaluating the value 'R' in above formula and the details furnished by the applicant shall be supported suitable documents.

The 'twenty eight days prior to date for Bid submission' means for eg: Say, if 'date for Bid submission' is 12.06.2018, then 'twenty eight days prior to date for Bid submission' will be 15.05.2018 and next "4.25 years (1553 days)" period will be period up to 15.08.2022.

**4.** The  $ABCM$  calculated as per the defined formulae will be rounded up to the next higher integer.

**5.** In case the Bidder proposes to manufacture certain no. of cars in Offshore and balance cars in Onshore plants, the  $ABCM_O$  and  $ABCM_C$  for both offshore & onshore plants shall be calculated and given separately and the qualification of bidders shall be evaluated separately for offshore and onshore plants capacity. The Bidders shall have to meet both the  $ABCMs$  ( $ABCM_O$  and  $ABCM_C$ ) independently and separately for both Offshore and Onshore manufacturing plants.

**6.** The Bidder shall confirm that the Rolling Stock proposed to be supplied under the Contract shall be from the plant whose experience has been utilized for qualifying the tender conditions.

**Section 3: Evaluation and Qualification Criteria**

- i. In case multiple plants have been opted for getting qualified under the Evaluation and Qualification criteria (Section-3). The Rolling Stock proposed under the Contract shall be supplied from the plant having maximum percentage participation for meeting the Evaluation and Qualification criteria.
- ii. In case the proposed Rolling Stock is manufactured in a new plant to be established after award of the contract then the above stated condition shall not apply.

For understanding ABCMs please refer to the example below:

Say Bidder 'X' propose manufacturing of 90 cars in Offshore plant and 288 cars in Onshore plant, the ABCM ( $ABCM_O$  and  $ABCM_C$ ) calculation sheet to be submitted by Bidder 'X' for Offshore and Onshore plants shall be as follows:

S. No	Manufacturing Plants	No. of cars proposed by bidder for manufacturing in Offshore/Onshore plant	P	Q	R	$N_M$ (in years)	$ABCM_O = (1.1 \times P \times N_M) - (Q)$ (rounded up to next higher integer)	$ABCM_C = (2 \times P \times N_M) - (Q + R)$ (rounded up to next higher integer)
1.	OFFSHORE PLANT	90 cars	95	100	50	4.25	345	658
2.	ONSHORE PLANT	288 cars	60	150	90	4.25	131	270

Therefore,

**ABCM for Offshore plant works out as under:**

- I.  $ABCM_O$  for Offshore Plant = 345, which is more than the proposed number of cars i.e. 90 cars and thus acceptable.
- II.  $ABCM_C$  for Offshore Plant = 658 cars, which is more than the proposed number of cars i.e. 90 cars and thus acceptable.

**ABCM for Onshore plant works out as under:**

- I.  $ABCM_O$  for Onshore Plant = 131, which is less than the proposed number of cars i.e. 288 cars and thus unacceptable.
- II.  $ABCM_C$  for Onshore Plant = 270 cars, which is less than the proposed number of cars i.e. 288 cars and thus unacceptable.

Therefore, Bidder 'X' is considered as '**FAIL**' as the  $ABCM_O$  and  $ABCM_C$  for Onshore plant are not met.

**Note:**

- i) For qualifying this criteria, Bidder 'X' has to meet the above committed plant capacities ( $ABCM_O$  and  $ABCM_C$ ) independently and separately for both proposed Offshore and Onshore manufactured cars.



- ii) It is entirely up to the Bidders to propose only offshore plants, only onshore plants or their combination. No Bidders shall be disqualified for the reason of proposing only offshore plant(s).

## 2.3 Financial Situation

### 2.3.1 Historical Financial Performance

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
<p><b>Net Worth</b></p> <p>The minimum requirements to 'Pass' this criteria is that the Balance sheets should indicate that the Net Worth of the applicant (to be obtained from latest audited Balance Sheet/ Form FIN -1: Historical Financial Performance mentioned above) shall be 'positive' in the audited statement of any 3 of the last 5 financial years.</p> <p>The financial year as applicable in the country of origin of the bidders would be considered. The 'last financial year' will be the latest financial year that ended on or before 31.03.2017.</p> <p>In case of a Joint Venture/Consortium, the above evaluation will be done in totality after applying pro-rata percentage participation of each member and not as individual member. For e.g., if there are three members in a Joint Venture/Consortium with pro-rata percentage participation of 'A%', 'B%' and 'C%' and the Net Worth of the respective members are 'X', 'Y' and 'Z', then the evaluation for the above criteria will be based on the pro-rata percentage applied algebraic aggregate i.e. 'AX+BY+CZ'.</p>	must meet requirement	must meet requirement as applicable	not applicable	not applicable	Section-4: Bidder's Qualification: Form FIN - 1

## 2.3.2 Size of Operation (Average Annual Turnover)

Criteria	Compliance Requirements			Documents	
	Single Entity	Joint Venture			
Requirement		All Partners Combined	Each Partner	One Partner	Submission Requirements
<p><b><u>Average Annual Turn Over</u></b></p> <p>The minimum requirements to 'Pass' this criteria is that the Average Annual Turn Over during the last five financial years (in terms of rupee equivalent adjusted to last date of the financial year that ended on or before 31.03.2017, by assuming 5% escalation for Indian Rupee and 2% for foreign currency per year) shall not be less than INR 9700 million.</p> <p>The value of annual turnover shall be calculated as total certified payments received for Contracts in progress and/or completed, within last Five Financial years divided by Five years.</p> <p>The financial year as applicable in the country of origin of the bidders would be considered. The 'last financial year' will be the latest financial year that ended on or before 31.03.2017.</p> <p>In case of a Joint Venture/Consortium, the above evaluation will be done in totality after applying pro-rata percentage participation of each member and not as individual member. For e.g., if there are three members in a Joint Venture/Consortium with pro-rata percentage participation of 'A%', 'B%' and 'C%' and the Average Annual Turnover of the respective members are 'X', 'Y' and 'Z', then the evaluation for the above criteria will be based on the pro-rata percentage applied algebraic aggregate i.e.</p>	must meet requirement	must meet requirement as applicable	not applicable	not applicable	Section-4: Bidder's Qualification: Form FIN - 2

'AX+BY+CZ'.					
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### 2.3.3.1 Cash Flow Capacity

Criteria	Compliance Requirements			Documents	
	Requirement	Single Entity	Joint Venture		Submission Requirements
All Partners Combined			Each Partner	One Partner	
<p><b>Liquidity</b></p> <p>It is necessary that the firm can withstand the Cash Flow that the contract will require until payment received from Employer. Liquidity therefore becomes an important consideration.</p> <p>This can be seen from the balance sheets and/or from the banking reference. Net current assets {(Current assets + loans &amp; advances) – (current liabilities + provision)} or documents including banking reference, should show that the applicant has access to or has available liquid assets, lines of credit and other financial means to meet cash flow INR 1600 million for this contract, net of applicant's commitments for other Contracts. Banking reference should contain in clear terms the amount that bank will be in a position to lend for this work to the applicant/member of the Joint Venture/Consortium <b>in the form given in "Section-4, Form FIN - 3: Cash Flow Capacity"</b>. In case the Net Current Assets (as seen from the Balance Sheets) are negative, only the Banking references will be considered. Otherwise the aggregate of the Net Current Assets and submitted Banking references will be considered for working out</p>	must meet requirement	must meet requirement as applicable	not applicable	not applicable	Section-4: Bidder's Qualification: Form FIN-1 and FIN - 3

<p>the Liquidity.</p> <p>Liquidity of INR / 1600 million available: <b>Pass</b></p> <p>Liquidity of INR / 1600 million not available: <b>Fail</b></p> <p>In case of a Joint Venture/Consortium, the above evaluation will be done in totality after applying pro-rata percentage participation of each member and not as individual member. For e.g., if there are three members in a Joint Venture/Consortium with pro-rata percentage participation of 'A%', 'B%' and 'C%' and the calculated liquidity of the respective members are 'X', 'Y' and 'Z', then the evaluation for the above criteria will be based on the pro-rata percentage applied algebraic aggregate i.e. 'AX+BY+CZ'.</p>					
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### 2.3.3.2 Bid Capacity

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture		Submission Requirements	
		All Partners Combined	Each Partner	One Partner	
<p><b>Available Bid Capacity</b></p> <p>As per below mentioned methodology.</p>	must meet requirement	must meet requirement as applicable	not applicable	not applicable	Section-4: Bidder's Qualification: Form FIN-2 and FIN - 4

#### Methodology for Working out the Available Bid Capacity

The Bidders will be qualified only if their available bid capacity is more than the estimated cost of work. Available bid capacity will be calculated as under:

$$\text{Available Bid Capacity} = 2AN - B$$

Where,

**A** = Maximum value of Rolling Stock manufacture in any one (1) year during the last five (5) years;

**N** = No. of years in which supply and commissioning is to be done [N = 4.45 (1623 days) in this case];

**B** = Value [at price level as on the twenty eight days prior to 'date for Bid submission' (refer Form of Bid - Appendix FB-1)] of on-going works ('works in hand') to be completed during next "4.45" years or "1623 days" starting from the twenty eight days prior to 'date for Bid submission'.

The estimated cost of work may be taken as Rs. 39000 Million (excluding Taxes and duties).

**Note:**

1. In case of a Joint Venture/Consortium, the above formula will be applied to each member to the extent of his proposed percentage (%) participation in the execution of the work. The Bid Capacity of the Joint Venture/Consortium will be the sum total of the Bid Capacity of each member **who shall manufacture the Rolling Stock proposed to be supplied under the contract** of the Joint Venture/Consortium as calculated above.

2. **Value of 'A':**

The maximum value of Rolling Stock manufactured in any one year during last five (5) years ('A' in the above formula) shall be the maximum turnover of Rolling Stock manufactured in any one (1) financial year during the last five (5) financial years. Financial year as applicable in the country of origin of the bidders would be considered. The turnover of Rolling Stock manufactured to be furnished in response to "Form Fin-2: Size of Operation (Average Annual Turnover)" above shall be considered for evaluating the value 'A' in above formula and the details furnished by the applicant shall be supported with audited copies, duly certified by Independent chartered accountant/CPA, indicating Annual turnover of Rolling Stock only.

3. **Value of 'B':**

The value of on-going works ('works in hand' i.e. 'B' in the above formula) as furnished in response to "Form Fin-4: Available Bid Capacity" above. The 'twenty eight days prior to date for Bid submission' means for eg: Say, if 'date for Bid submission' is 12.06.2018, then 'twenty eight days prior to date for Bid submission' will be 15.05.2018 and next ("4.45" years or "1623 days" period will be period up to 24.10.2022.

Here 'Work in Hand' means Bidders and each member of JV/Consortium shall provide information on their current commitments on all Contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for Contracts approaching completion but for which an unqualified full completion certificate has yet to be issued.

**# Note:**

1. 'Ten (10) years'/'Last ten (10) years' means the period of last ten (10) years counted from the twenty eight days prior to 'date for Bid submission' (refer Form of Bid –Appendix FB-1). 'Five (5) years'/'Last five years' means the period of last five (5) years counted from the twenty-eight days prior to 'date for Bid submission'. 'Three (3) years'/'Last three years' means the period of last three (3) years counted from the twenty eight days prior to 'date for Bid submission'. eg: Say, if date for Bid submission is 12.06.2018, then 'twenty eight days prior to date for Bid submission' will be 15.05.2018 and last ten (10) years would mean from 15.05.2008 to 15.05.2018 and last five (5) years would mean from 15.05.2013 to 15.05.2018 and last three (3) years would mean from 16.05.2015 to 15.05.2018.  
In case of postponement(s) in 'date for Bid submission', if any, last ten (10) years would mean from 15.05.2008 to twenty eight days prior to postponed 'date for Bid submission' and last five (5) years would mean from 15.05.2013 to twenty eight days prior to postponed 'date for Bid submission' and last three (3) years would mean from 16.05.2015 to twenty eight days prior to postponed 'date for Bid submission'.
2. The 'Applicant' would include Joint Venture/ Consortium submitting the bid as well as members of such Joint Venture/ Consortium.
3. For a JV in accordance with ITB 4.1, the credentials (Technical as well as Financial) of all the member(s) having a minimum 15% participation each in JV will be required to be submitted by bidder and shall be considered for evaluation. In case of Net Worth, Liquidity & Turnover, the financial credentials will be considered based on the summation of weighted credential of individual members in proportionate to their share in JV. However, in case of technical eligibility, the credentials will be based on the algebraic aggregated credentials of each member. The credential (Technical as well as Financial) of a member who has a less than 15% participation in JV shall not be considered.
4. For the participation with credentials of other associated Company: Applicant in the capacity of an associated single entity is not permitted to use the credential of its associate Company/ Companies unless the Applicant participates in bid as JV with its associate Company/Companies as a member in the JV with minimum 5% participation each for such member(s). In case of the financial credentials, in case of a JV of a company with its subsidiaries, the consolidated numbers of the parent company will only be considered. However, in case of technical eligibility, the credentials will be based on the algebraic aggregated credentials of each member.
5. The bidder or the experienced designer, as stipulated in clause no. 2.2.1 of section-3 above, should have performed the train integration as well as interface with other systems like signaling, telecom, for the eligibility criteria as stipulated in clause no. 2.2.1 of section-3 above.
6. The bidder may propose indigenous manufacture of Propulsion System as a deviation.