

ADDENDUM -2

to

BEML SRM Tender no. 6300039357 dated 08.03.2025

Tendered Item / System: "AIR SUPPLY & BRAKE SYSTEM EQUIPMENTS" for
Standard Gauge High Speed Train Project.

- 1) Tender closing date is extended **from 25.03.2025 @ 3PM to 01.04.2025 @ 3PM**
- 2) Summary of Pre-Bid Meeting conducted on 19/03/2025 @ 1 PM is enclosed.

PRE-BID MEETING SUMMARY - CONDUCTED ON 19/03/2025 @ 13.00 HRS SRM E-Tender No: 6300039357 dated 08/03/2025 “Air Supply & Brake System Equipment’s” for Standard Gauge High Speed Train Project.				
SI.No	Clause No	Clause Description	Wabtec Queries Dated 17/03/2025	BEML response
1	4. IV	Supplier shall provide certificate of satisfactory performance for a period of three years or more from the High-Speed train operators/Rolling stock manufacturers shall be submitted along with technical offer.	WT requests BEML to consider minimum one project reference from operator/carbuilder.Further please confirm if PO copies will be accepted as valid credential?	Wabtec to follow the tender conditions.
2	5.1.11	AGTU Minimum free air delivery (FAD) and duty cycle to be calculated by Supplier. AGTU Cooling method shall be forced air cooling, compressor to be equipped with integrated fan. AGTU Max. Compressed air temperature at outlet fitting shall be 55°C. System shall include automatic drain dump valve after cooler.	The outlet temp is Ambient +15Deg C - Please clarify	To be discussed with NHSRCL and ECE during design stage.
3	5.3.1.2	All software to be developed or modified (re-engineered software) shall follow the standardization requirements of EN 50128.	This standard is to be replaced by EN50716. Please confirm	The alternative standard is acceptable with sufficient justification form Wabtec.
4	5.3.1.3 (5.3.1.10)	Software design and development shall also be carried out at Preliminary design stage by Supplier. It shall be possible for the Employer to modify/change various parameters/logics used in the software and implement the changes on trains. Full facilities including any software/hardware tools, simulation/test bench which are essential for this purpose shall be supplied within the quoted cost to each Maintenance Depot." So, Supplier have to adopt the design of "parameter changes" by using certain application software (e.g. maintenance terminal software) and Supplier have to submit the information of sets of software parameters such as description, default value, minimum / maximum values of each parameters and what effects is expected to parameter change and so on for NHSRCL's acceptance. Supplier must accept NHSRCL's preferring a set of software parameterization.	Wabtec strongly recommends not to make any change in the parameter settings as this will have direct impact on the safety. Any change in the Brake system will have to be done by Brake system supplier due to safety reasons. Please confirm	Wabtec to allow the parameters change with the authorization of the OEM.
5	5.4.2.7	Compliance with multiple-operation mode shall be defined	Not clear "what is multiple-operation mode". Please clarify	To be discusse with Medha during design stage.
6	6.5 d	These drawings and documents shall be delivered in English with the data format of, respectively, latest AutoCAD (2015) release. (Document - MS Word, spread sheet - MS excel, data base files - MS Access, Presentation file - MS Power Point).	We will provide in pdf format. Please confirm your acceptance.	Wabtec to follow the tender clause.
7	6.7.2.	Type Test, Compressed air supply system and brake system	Please confirm if valid type test reports from past projects will be accepted	Past projects type reports will be accepted subjected to NHSRCL approval. If NHSRCL is not agreed to waive of the type test, Wabtec to perform the project specific type test for all the brake equipments mentioned in the clause. Cost for the same to be included in the offer
8	PTS Annexure V	Annexure V: Train detection/ Sanding equipment - Requirement is given in ICF spec	It is not clear about this requirment in any other part of ICF / BEML spec	To be discussed and finalized. As a part of tender Wabtec to consider the sanding equipment.

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9	General	Bogie model is required to evaluate the product offer suiting the Bogie. Brake calculation will have influence based on Caliper fixation.	Please provide at least preliminary version of Bogie model	Bogie model cut portion shared on 19.03.2025
10	ICF Spec	5.29.11. Brake Pipe (BP) controlled back-up system (if required) -	Do we need to keep Brake pipe or not ? Please clarify	Wabtec to consider the Single pipe configuration brake system.
11	General	Lower temperature limit given as -5 Deg C.	As we understand, Mumbai - Ahmedabad segment will not go to this temperature range. Please clarify if sub zero temperature to be considered (Addition of Heating elements were not provided)	This requirement is as per the ICF specification. Wabtec to follow the tender conditions.
12	General	Number of Toilets are not specified.	Can we consider one number for DTC & TC - and two numbers for MC? Please confirm	DTC - 1No. TC- 1No. MC - 2 No of toilets.
13	6.9	Supply of Spares and consumables		
14	2)	Overhauling Spares Overhauling Kits	As per ICF Spec., OH kits, spares needs to be provided while it is not asked in PTS. Please confirm the requirement of OH kits? Kindly differentiate between OH spares and OH kit requirement.	Both overhauling spares and kits required as a part of the project scope.
15	3)	Warranty- PTS- The spares shall carry a warranty of 36 months from the date of supply or 24 months from date of commissioning. ICF Spec- payable Spares provided by the Supplier under this Clause shall carry a warranty of 24 (twentyfour) months from the date of its supply,	There is a mismatch in the PTS warranty requirement and end customer document. However, we understand that ICF specs will supersede PTS, please confirm if our understanding is correct and ICF specs requirement will prevail?	Please refer NIT document: TABLE-3 (Serial Number 2) & Clause 10 (Warranty): DNP starts from date of supply of materials and ends after 30 months from the date of placement of trains into revenue service. Terms and conditions of Chapter 9 of ICF/MD/Spec-447 shall be complied.
16	6.11 6)	Supplier shall also provide technical support through permanent positioning of his staff/or through sister companies at Depots for meeting DNP obligations.	Since permanent positioning of resource only for two TS will have cost implications to BEML, we request BEML to replace the requirement of permanent positioning of staff and instead put the condition to OEM to attend the issue within 72 hours from the issue to work order/ Job card for Non-confirmity/ failure.	Wabtec to follow tendr conditions.
17	6.12 2)	In case the DNP extends beyond the 24-month period, the CAMC for 3rd year shall commence only after the extended period and CAMC shall be for the subsequent 15 years from the date of commencement.	If the DNP extend beyond 24 months period, CAMC should not be affected as CAMC relates to maintenance and that should remain firm for the agreed period of 15 years. Please confirm.	Completion of DNP may please be considered tentatively by 30 Jun 2029. CAMC period will start after completion of DNP (i.e., tentatively from 01 Jul 2029 onwards).
18	6.13.2 3)	Maintenance manuals- ORI manuals	Since maintenance will be in OEM scope, we request BEML to remove the requirement of Overhaul manuals and OH training.	Wabtec to follow the tender conditions.

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19	NIT	Bidders to note the following on CAMC:		
20		The Following details to be submitted as part of Commercial Bid.		
21	i.	Costs submitted towards CAMC (3 categories i.e., 1-5 years / 1-10 years / 1-15 years) will not be considered for arriving L1 status.	CAMC offer will be valid and binding subject to acceptance of OEM's Price variation formulae by BEML.	Price Variation formulae if any to be submitted / confirmed along with the Bid only. Any data outside tender will not be considered in due course. Weightage in Price Variation Formulae should have correct /required / proper references / justifications.
22	iii.	Offers having the following details will be submitted to end customer (ICF / NHRCL) for evaluation/ consideration separately.		
23	iv.	Order shall be placed by BEML on the successful bidder at a later date on as and when required basis.		
24	v.	Bidder is liable for acceptance of the order without fail. However, BEML reserves the right to place/ withdraw the option of placement of order towards CAMC.		
25	CAMC inputs - Annexure Z	The document having details of BoM with percentage of Value/ Price to be uploaded in the Commercial Bid Documents only.	WT requests BEML to consider the price of spares/ maintenance on the actual offer/ price quoted for CAMC and not to link with BOM price as percentage of value/ price.	The format given by BEML is for reference. Bidders can indicate the prices against the Spares / Maintenance items. However, please note that any additional items required (which are not declared in the CAMC offer) during CAMC period have to be arranged by bidders on their own at their cost. It is completely bidders responsibility to execute CAMC for 15 years if the order is placed / finalized by BEML.
26	NIT Pt. No. 8	Firm Price: Price Variation Clause (PVC) for CAMC	While, we understand that prices will remain firm for OE supplies, we request BEML to include PV clause for CAMC as price for 15 years of maintenance and spares cannot be fixed.	Bidders are requested to indicate / confirm the applicable Price Variation Formulae with correct /required / proper references. Please ensure that there is no ambiguity in Price Variation Formulae. Price variation formula will be subject to acceptance of NHRCL.
27	CAMC inputs	43. Placement of Order for Unit Exchange Spares (UES) and CAMC for (1-5 / 1-10 / 1-15) Years after DNP: Order shall be placed by BEML on the successful bidder at a later date (further to the M/s ICF order for CAMC) tentatively by June 2027. Bidder is liable for acceptance of the order without fail. However, BEML reserves the right to place / withdraw the option of placement of order.	CAMC offer will be valid and binding subject to acceptance of OEM's Price variation formulae by BEML. Further, withdrawal/termination of contract will be as per contractual agreement with BEML before PO release/contract sign off. Please confirm your acceptance.	CAMC offer should have validity till June 2027 to enable BEML to get concurrence of End Customer for acceptance / placement of PO. If PO is not finalized by June 2027, there is no binding on the bidders with respect to CAMC. BEML reserves the right to place the order (further to M/s ICF / NHRCL order for CAMC) tentatively by June 2027 / withdraw the option of placement of order.

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28	PTS: 6.12 5)	CAMC Scope: b) Consumable spares (including filters for compressor, brake pads & brake disc) for maintenance for all trains during commissioning, service trials and up to completion of CAMC period. f) Recommended list of consumable spares including lubricants required for maintenance, repairs and overhaul of trains	Please confirm the difference between requirements in point b) and Point f) of CAMC scope.	Point (b) includes the items mandatorily required to be replaced during scheduled maintenance of the trainset whereas, Point (f) includes the items required for operation & maintenance of the workshop facilities, if recommended to be installed in depot.
29	PTS: 6.12 5)	CAMC Scope: e) Testing & Diagnostic equipment g) Recommended list of Special Tools, Testing and Diagnostic Equipment separately for maintenance and diagnostics of various equipment	Please confirm the difference between requirement in point e) and Point g) of CAMC scope.	Point (e) refers to the service terminals and other tools required for troubleshooting and repairs on the trainset whereas Point (g) refers to the workshop facilities / equipments and/or labs if recommended to be installed in the depot.
30	NIT Pg. No. 8	Bidder has to quote for all the items. Commercial evaluation will be based on total bid value for all the items put together.	Our understanding is that BEML will place purchase order for total bid value of all five line items listed in the commercial bid. Please confirm	Please refer NIT document: TABLE-2 along with TABLE-1: <i>Unit Exchange Spares (UES) (quantities indicated against line item 1 to 3), Training (part of line item 5) & Consumable Spares (line item 4)</i> Order will be placed only after the confirmation / acceptance from ICF. If order is placed for UES, Supply of UES shall be before 3 months of start of revenue operation of cars.
31	NIT Pg. No. 12, CI #3	In cases of procurement for a value in excess of Rs.10 crores, Class-I local supplier / Class-II local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving percentage of local content	Since final procurement value will depend on the line items that will be finalised by BEML during PO placement stage, our understanding remains that self declaration certificate on local content will be accepted during bid submission stage. Please confirm your acceptance to the same.	Please submit certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving percentage of local content
32	4. I . Qualification Criteria	Intended Supplier should be a reputed OEM and an entity of Indian origin having experience in Design, Development, Manufacture and Supply of the proposed aggregate for HighSpeed trains (operating speed 249kmph and above) and should have capability to design, manufacture, testing & commissioning and training. Company profile and the infrastructure details shall be submitted by the firm.	Indian entity means an Entity formed and registered in India under the Companies Act, 1956 or 2013. Please confirm.	Noted

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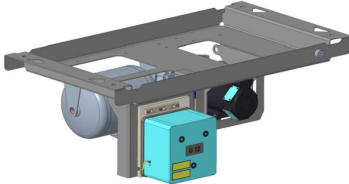
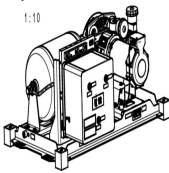
Category	Tender Stage- Requirement Description	KB Queries dated 18/03/2025	BEML REPLY
Tender Requirements			
Technical Bid submission Conditions	There will be additional requirement of Air Supply & Brake System Equipment’s for repair/replacement & overhauling during CAMC period (15 Years) after completion of DNP.. The supplier has to give concurrence with percentage of Value/Price for the following: i) 1-5 years CAMC after completion of DNP ii) 1-10 years CAMC after completion of DNP iii) 1-15 years CAMC after completion of DNP CAMC will start after successful completion of Defect Notification Period (DNP)	<p>Clarification on Percentage of Value/Price: The percentage of item price or complete value of LCC with respect to OE ? For instance, if referring to the CMC value, the percentage would be calculated based on the price of the CAMC relative to the total cost that includes the OE value.</p> <p>CAMC Pricing Clarification: Needs to be elaborated. For the following CAMC periods after the completion of DNP: i) 1-5 years CAMC: This would cover a 1-5 year maintenance period after DNP completion. ii) 1-10 years CAMC: This would cover a 1-10 year maintenance period after DNP completion. iii) 1-15 years CAMC: This would cover a 1-15 year maintenance period after DNP completion.</p> <p>LCC (Life Cycle Cost) for 15 Years: KB will provide the BUY version of the LCC for 15 years using the KB standard LCC template, which will include the following parameters.</p> <p>Preventive Maintenance (PM) and Corrective Maintenance (CM): - Position number - Part Description - Part Number - Activity Description like overhauling/repair/replacement/function test etc. - Scheduled Interval (for PM) and Failure Rate (for CM) - Mean Repair Time (MRT) - ON-Train/OFF-Train Material and labour Price</p>	<p>Percentage of Price: Price of a component / Price of OE x 100 If bidder wishes to quote for component price instead of percentage, the same can be indicated.</p> <p>Will be reviewed on receipt of the data and submitted to End Customer for perusal. In general Life Cycle Cost refers to cost of development, procurement, installation, operation and maintenance of a system irrespective of stake holders of the functional areas.</p>
Technical Bid submission Conditions	g. Detailed BoM to be provided for CAMC as per BEML document ref: “CAMC_Inputs-required_OEMs” [Appendix – K]	<p>Appendix-K refers to fill the Annexure-Y and Annexure-Z.</p> <p>Contradiction in the requirements mentioned in Appendix-Y and Appendix-Z: There is a contradiction in the requirements mentioned in Appendix-Y and Appendix-Z. The requirement (a) outlines the comprehensive annual maintenance contract (CAMC), where we are expected to provide buy LCC having details such as spares, consumables, repairs, and ON/OFF-Train PM & ON/OFF-Train CM . Whereas, requirements from (b) to (e) refer to the requirements, <u>such as special tools, Disposal of Waste Generated during repair & maintenance activity , Facilities required for storage & handling of consumables & spares for repair & maintenance activity, Testing and Repair Shop facility required for 15 years CAMC</u> etc which is normally part of make LCC and does not quoted in buy LCC. If KB is to perform the comprehensive maintenance, it is unclear why these additional requirements are included. Could you please clarify this or remove this requirements.</p> <p>Clarification on Percentage of Value/Price:</p>	<p>This is a developmental project. If we enter into CAMC for 15 years, it will be required to maintain the depot in a way to set standard for forthcoming projects. We need to handover the project to the prime employer after end of the project in such a condition that they can operate the system without any bottleneck.</p> <p>Further, availability of testing facilities of critical components at depot will eliminate the practice of trial and error method for component level troubleshooting and will help into high level of availability of the system with complete transparency.</p> <p>For this reason, we are expecting our partners to install such facilities at the depot and are seeking information of how much this system can impact commercially in setting up a depot. These facilities will be available to any stake holder whoever maintains this system on the ground.</p> <p>Hence, the requirement cannot be removed.</p>

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Category	Tender Stage- Requirement Description	KB Queries dated 18/03/2025	BEML REPLY
Technical Bid submission Conditions	h. Bidder to upload enclosures related to technical & other information deemed appropriate in respect of this tender on the letter head of the company, if any.	<p>The percentage of item price or complete value of LCC with respect to OE ? For instance, if referring to the CMC value, the percentage would be calculated based on the price of the CAMC relative to the total cost that includes the OE value.</p> <p>CAMC Pricing Clarification: Needs to be elaborated. For the following CAMC periods after the completion of DNP: i) 1-5 years CAMC: This would cover a 1-5 year maintenance period after DNP completion. ii) 1-10 years CAMC: This would cover a 1-10 year maintenance period after DNP completion. iii) 1-15 years CAMC: This would cover a 1-15 year maintenance period after DNP completion.</p> <p>LCC (Life Cycle Cost) for 15 Years: KB will provide the BUY version of the LCC for 15 years using the KB standard LCC template, which will include the following parameters.</p> <p>Preventive Maintenance (PM) and Corrective Maintenance (CM): - Position number - Part Description - Part Number</p>	Explained above
PURCHASE PREFERENCES :	The 'Class-I local supplier (Local content more than 50%) / Class-II local supplier (Local content more than 20% less than 50%) at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for Class-I local supplier / Class-II local supplier, as the case may be. They shall also give the details of the location(s) at which the local value addition is made.	Please refer the above comments provided in row no-24.	NIT condition holds good
	In cases of procurement for a value in excess of Rs.10 crores, Class I local supplier / Class-II local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving percentage of local content. Bidders to upload signed & sealed [Appendix - F]		NIT condition holds good
WARRANTY:	The said goods/stores shall be warrantied /guaranteed from date of supply of materials and ends after 30 months from the date of placement of trains into revenue service.		NIT condition holds good
Procurement Requirement Specification (FPIIC/TD/009)			
1.1.6	Track Parameters	Route information shall include: Distance vs. Altitude/Gradient and Distance vs. Speed Limit vs. Stops. (Already discussed with BEML on this topic)	Clarified the query in the separate meeting with KB on 19.03.2025, 4.00PM
5.4.2	Electrical/Communication Interface		
	12. Train level I/O & Communication interface :(Details Refer Annexure 1 sheet).	Annexure 1 sheet is not related to the communication Interface. This Annexure is missing.	PTS revised and added as Annexure 2. Please refer updated PTS Rev01

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5.3.1.15	The Supplier shall be obliged to take care of any software change if BEML and ICF/NHSRCL request the change for the correction of software during commissioning phase, commissioning and Warranty Period, etc. The change shall be implemented by the Supplier. In the event, when any non-conformity arises to the specified requirements, the Supplier shall take remedial measures at its own cost within the schedule to be agreed with BEML. The Supplier shall provide all tools, Laptop computer any special device to upload /download the software, TCMS data, equipment, manuals and training necessary for the Purchaser/Nominated Agency's Representative to maintain and re-configure all software provided under this Contract. The documentation of software may be supplied after the expiry of the DNP, under terms and conditions to be mutually agreed at Contract pre-award stage.	Being the standard items, do KB need to consider laptop computers to upload/download the software, as part of the KB scope?	KB to consider the Laptop and Software in the offer.
5.4.3	TCMS Interface		
	5.Before the Type Test, commissioning of complete car at the vehicle level, the Supplier shall meet the TCMS combination test between TCMS and their equipment as per to ICF-MD-SPEC-447. One or several equipments including connector, power, cables etc. should be delivered to TCMS supplier's test placement before the testing period by Supplier. Supplier's engineer should attend the combination test for technical support, for example software changes or equipment installation, in accordance with TCMS supplier's requirement.	Do KB need to consider interfacing cabling (in train) in scope of supply? In general, KB used to consider cabling in vehicle integrator's scope.	KB shall consider the wires and cables for the KB scope of supply equipment.
5.6.8	Wiring and Cables		
	a)All wires & cables shall comply to ICF-MD-SPEC-447 Clause 5.4.11. The insulation of all wires and cables including those used within equipment / subsystem shall be halogen-free flame-retardant and formulated to minimize generation of smoke, noxious emissions and corrosive fumes, in the case of overheating or fire in compliance with EN45545 Part 1 to 7 (Hazard level HL2) latest editions.	To be clarified if cabling is in KB scope?	KB shall consider the wires and cables for the KB scope of supply equipment.
5.8	EMC Requirements (ICF-MD-SPEC-447 Clause 4.17):		
	5.Emission (radiated and conducted) and immunity tests for all individual equipment provided by Supplier shall be performed under normal operating condition & degraded operating condition according to EN 5012-3-2 by Supplier. The test specification and test report shall be approved by BEML/NHSRCL/ICF.	to be clarified with the customer if there a need to do project specific EMC type test on BECU ?	Yes. Project specifica EMC type test for the BECU to considered in the offer
6.7.2	Type Test, Compressed air supply system and brake system		

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	The Supplier shall perform, as a minimum, the following test in accordance with the requirements specified in ICF-MD-SPEC-447 clause 7.3.2.3, 7.3.2.3.1 & 7.3.2.3.2. a) Compressor & Motor test b) Brake Equipment (Brake Caliper) Type test (ICF-MD-SPEC-447 Clause 7.3.2.3) c) Brake Lining test / Dynamometer test (ICF-MD-SPEC-447 Clause 7.3.2.3.1) d) Brake Control equipment test (Brake control unit) (ICF-MD-SPEC-447 Clause 7.3.2.3.2) e) Brake electronic control unit (BECU) (ICF-MD-SPEC-447 Clause 7.3.3.4) f) WSP UIC541-05 test (ICF-MD-SPEC-447 Clause 7.29.13) g) Air reservoir type test as per EN286-3 The Supplier shall include the cost of the above type tests in the quoted price.	1)to be clarified with the customer if there a need to do project specific type tests on BECU according to ICF-MD-SPEC-447 Clause 7.3.3.4 ? 2)to be clarified if project specific WSP type test will required to be performed as per UIC541-05	Project sepcific type tests for all the brake equipments mentioned PTS shall be considered in the offer
6	Scope of Supply		
MASU	1. Main air supply equipment with adequate quantity per train set with 3-phase 415V induction motor drive. (ICF-MD-SPEC-447 clause 5.30). a) Safety valves for air compressor (ICF-MD-SPEC-447 clause 5.30) b) Pressure switch (ICF-MD-SPEC-447 clause 5.30) c) Air drier and filtration components. (ICF-MD-SPEC-447 clause 5.30) d) Humidity Indicator (ICF-MD-SPEC-447 clause 5.30) e) A non-return valve between the compressor and main reservoir supply line. (ICF-MD-SPEC-447 clause 5.30) f) Pressure Sensor/Transducer for Intelligent Compressor Management (ICFMD-SPEC-447 clause 5.30) g) Automatic drain valve with silencer (ICF-MD-SPEC-447 clause 5.30)	This date is critical since some design work will be necessary and latest standard delivery time for existing compressor set needs to be respected. FAI required? Applicable Standards (e.g. UCI, TSI, GOST, AAR, NFF)? Air quality requirement? To be replaced with an air dryer with pressure switches, indicators cannot be monitored in an encapsulated application. Add an OEF to the existing design. Align on project specific installation space and adapt existing concept accordingly. Verify that existing direct mounted radial fan secures function of project specific temperature range (else costly electric fan might be the consequence) Warranty requirements need to be clarified.	OK FAI shall be part of tender. During design stage the same can be discussed Use of alternative standards agrred with proper justification from OEM. Air Quality requirement to be deifned by OEM in line with the EN standards for High Speed trains for safe operation of brake system, toilet system and Door operation Ok agreed. However to be discussed during design stage with NHSRCL. OEF can be added in the existing design. Agreed. Proven design to be offered by M/s KB Clarified in the pred bid Meeting
AASU	16. Equipments for Auxiliary Air Supply viz, Auxiliary Compressor with Cut off pressure 8 bar and Air delivery – 70l/min, Power Supply 110V DC, Nominal power Consumption <1KW, Air reservoir, Safety Valve, Pressure Governor, Isolation cocks, Check valve (ICF-MD-SPEC-447 clause 5.4.8, 5.29.14)	Air quality requirement? Clarify installation position (standing = machine room or hanging = underfloor in a shielded compartment). Hanging version KP5452541:  Standing version I1040191: 	To be defined during design stage in consultation with Pantograph supplier. To be discussed and finalized during design stage. However KB can suggest best mounting method for the high speed appliactions in order to reduce the vibrations, shock and noise.

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6.1	2. EP - Brake control equipment and logic (ICF-MD-SPEC-447 clause 5.29) a) EP Brake control (ICF-MD-SPEC-447 clause 5.29.4) b) EP Brake control unit (ICF-MD-SPEC-447 clause 5.29.6, 5.29.7, 5.29.9) c) Pressure governor (ICF-MD-SPEC-447 clause 5.5.2) d) Impulse Magnetic valve operated parking brake (ICF-MD-SPEC-447 clause 5.29.12) e) Test fittings f) EP Friction braking with blending (ICF-MD-SPEC-447 clause 5.29.6) g) Emergency Braking (ICF-MD-SPEC-447 clause 5.29.8) h) Emergency Brake Valve (ICF-MD-SPEC-447 clause 5.29.8 (ix))	To be clarified with customer for Pressure controller redundancy requirement	KB to consider Pressure controller redundancy for this project
	4. Wheel slide protection equipment a) Anti-skid valve (ICF-MD-SPEC-447 clause 5.29.13) b) Speed sensor (ICF-MD-SPEC-447 clause 5.29.13) c) Device for monitoring dump valve (ICF-MD-SPEC-447 clause 5.29.13) d) Wheel rotation monitoring system (WRM) as per UIC541-05.	To be clarified with customer for WSP redundancy requirement (on monitoring and controlling).	KB to consider WSP redundancy for this project.
	3. Brake Caliper unit (Service & Parking), Wheel mounted Brake discs and Brake Pads (ERTS 11.4.6, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.4.11, 11.4.12 & 11.4.13).	ERTS requirement to be checked with BEML	PTS Modified and updated. KB to consider the ICF-MD-SPEC-447 Clause 5.29.6 and 5.29.12 for Brake Caliper unit (Service & Parking), Wheel mounted Brake discs and Brake Pads
	11. Burst hose protection (ICF-MD-SPEC-447 clause 5.29.15)	To be clarified with customer whether hose burst protection is required for High speed train.	KB to consider Burst hose protection for MR line and armoured hoses for the Parking brake line.
6.5	l) Wheel Caliper Interaction Report	Does it mean Dyno test?	This is not related to Dyno test. It is a separate test to be performed by Brake System OEM's for their Wheel caliper design. Details to be discussed with NHRCL during design stage.
5.6	RAMS requirements		
	The Supplier shall comply every aspect with the requirements of RAMS (Reliability, Availability, Maintainability and Safety) as per ICF-MD-SPEC-447 and EN50126/IEC62278. During warranty period (standard purchase warranty), the values of the RAMS target shall be calculated from the records of all faults and service failures. In the event that the target is not achieved, the supplier shall, at his own expense, take whatever action necessary to meet the target specified. Also, the Supplier shall provide all information related to the RAMS requirements. The Supplier shall comply with, but not limited to, the following ICF-MD-SPEC-447 requirements:	<p>See following comments KB is certified according to EN50126</p> <p>RAM demonstration is part of train builder responsibility. KB has the right to obtain all valued data. All maintenance must be fulfilled by well trained personnel at the recommended intervals. This must be proved to KB (completely documented). Validation must be made plausible to KB, which means that KB must be integrated in the data/failure review board. Only mutual agreed data/failures will be counted as chargeable failures. No fault found failures and epidemic failures are excluded.</p>	To be discussed with NHRCL during design stage.

PRE-BID MEETING SUMMARY - CONDUCTED ON 19/03/2025 @ 13.00 HRS
SRM E-Tender No: 6300039357 dated 08/03/2025
“Air Supply & Brake System Equipment’s” for Standard Gauge High Speed Train Project.

Category	Tender Stage- Requirement Description	KB Queries dated 18/03/2025	BEML REPLY
6.12	<p>b) During Comprehensive maintenance period, the supplier shall at its own cost and expense, maintain sufficient stock of all spares & consumables required to meet the comprehensive maintenance obligations at all times, this shall include but not be limited to the following.</p> <p>a) Unit Exchange Spares.</p> <p>b) Consumable spares (including filters for compressor, brake pads & brake disc) for maintenance for all trains during commissioning, service trials and up to completion of CAMC period.</p> <p>c) Mandatory Spares</p> <p>d) Overhauling Spares</p> <p>e) Testing & Diagnostic equipment</p> <p>f) Recommended list of consumable spares including lubricants required for maintenance, repairs and overhaul of trains</p> <p>g) Recommended list of Special Tools, Testing and Diagnostic Equipment separately for maintenance and diagnostics of various equipment</p> <p>h) Recommended list of Special Jigs, Fixture and Gauges for maintenance repair overhaul of the trains. and diagnostics of various equipment</p> <p>i) Special tools, Testing and Diagnostic equipment & any other items required for maintenance.</p> <p>j) Rotational spares required for each depot to meet the train availability requirements as per shall be ensured for performing overhauling of equipments and delivery of the equipment after overhaul & testing to BEML depot staff at respective depots.</p> <p>k) The drawings, manuals and full operating instructions.</p> <p>l) The means and instructions which describe the parameters of each item of Special tools, Testing and Diagnostic Equipment</p>	<p>Contradiction in the requirements mentioned:</p> <p>There is a contradiction in the requirements mentioned. The requirement outlines the comprehensive annual maintenance contract (CAMC), where we are expected to provide buy LCC having details such as spares, consumables, repairs, and ON/OFF-Train PM & ON/OFF-Train CM . Whereas, requirements from (e, g, h, i, k, l) refer to the requirements, such as Testing & Diagnostic equipment, special tools, jigs etc. required for 15 years CAMC etc which is normally part of make LCC and does not quoted in buy LCC.</p> <p>If KB is to perform the comprehensive maintenance, it is unclear why these additional requirements are included. Could you please clarify this or remove this requirements.</p>	<p>This is a developmental project. If we enter into CAMC for 15 years, it will be required to maintain the depot in a way to set standard for forthcoming projects. We need to handover the project to the prime employer after end of the project in such a condition that they can operate the system without any bottleneck.</p> <p>Further, availability of testing facilities of critical components at depot will eliminate the practice of trial and error method for component level troubleshooting and will help into high level of availability of the system with complete transparency.</p> <p>For this reason, we are expecting our partners to install such facilities at the depot and are seeking information of how much this system can impact commercially in setting up a depot. These facilities will be available to any stake holder whoever maintains this system on the ground.</p> <p>Hence, the requirement cannot be removed.</p>
6.15	<p>Warranty</p> <p>Please refer to GTC.</p>	<p>For OE, Warranty will be 30 months from the date of supply or 24 months from the date of commissioning whichever is earlier.</p>	<p>NIT condition holds good.</p> <p>Bidders are requested to comply for the warranty period (DNP) starts from date of supply of materials and ends after 30 months from the date of placement of trains into revenue service. (Tentative date for completion of DNP may please be considered as 30 June 2029)</p>