Rail Coach Factory, Kapurthala

MD35131 Date:10.06.2026

Sub: Issue of "Corrigendum Slip No. -1 to Specification No. RCF-MD-PS-2023-5, Rev. 05" for Purchase specification for design, development, verification, manufacture, validation & supply of bogie compatible for IR-LHB coaches

Please find "Corrigendum Slip No. -1 to Specification No. RCF-MD-PS-2023-5, Rev. 05"as detailed below for information and necessary action please:

Clause No.	Earlier	To be read as
3(i)(b)	**Scope of Work & Supply** Have a maintenance intervention free operational duration of 3 years or more or 1.2 million kilometers.	**Scope of Work & Supply** Have a maintenance intervention free operational duration of 3 years or 1.2 million kms, whichever is less.
4.4	**Fatigue / endurance life of bogie frame and other major items** Major modified items shall be subjected to fatigue/endurance tests as per EN13749 or other applicable ISO/EN standards to prove out the life of improved bogies. Intermittent reports shall also be shared. The testing shall be fully documented, reports to be prepared and submitted in hard & soft copy (PDF &editable). If new wheel set is designed & supplied then its wheel-wear performance shall be demonstrated to be not inferior to the existing LHB wheel profile system of Indian Railways, with comparison based on retention of profile within RDSO prescribed limits. Brake disc & CTRBs shall be procured from proven sources.	**Fatigue / endurance life of bogie frame and other major items** Major modified items shall be subjected to fatigue/endurance tests as per EN13749 or other applicable ISO/EN standards to prove out the life of improved bogies. Intermittent reports shall also be shared. The testing shall be fully documented, reports to be prepared and submitted in hard & soft copy (PDF &editable). If new wheel set is designed & supplied then its wheel-wear performance shall be demonstrated to be not inferior to the existing LHB wheel profile system of Indian Railways, with comparison based on retention of profile to RDSO Drg No. SK-91146. Wheel set, Brake disc & CTRBs shall be procured from proven sources.
6.1	**Acceptance Criteria and performance** **B10 Life or MFOP** The expected B10 life or MFOP (Maintenance Free Operation Period) shall be 3 years or 1.2 million kilometres. The overall bogie design, design of the wear components shall meet this requirement and the same shall be demonstrated via calculation and simulation. This criterion shall be the KPI for the extended field trial of 3 years (1.2 million kms) from fitment of the bogies on rolling stock. Atleast 90% of the population of improved bogies must perform. Failure of more than 20 % of the population at 3 years or 1.2 million kms shall be treated as epidemic failure. This shall require a review of the contract with the option for pre-closure.	**Acceptance Criteria and performance** **B10 Life or MFOP** The expected B10 life or MFOP (Maintenance Free Operation Period) shall be 3 years or 1.2 million kms, whichever is less. The overall bogie design, design of the wear components shall meet this requirement and the same shall be demonstrated via calculation and simulation. This criterion shall be the KPI for the extended field trial of 3 years or 1.2 million kms, whichever is less from fitment of the bogies on rolling stock. Atleast 90% of the population of improved bogies must perform. Failure of more than 20 % of the population at 3 years or 1.2 million kms, whichever is less shall be treated as epidemic failure. This shall require a review of the contract with the option for pre-closure.
6.2	**B50 Life of Bogies** The expected B50 life of bogies shall be 18 years of age or 7.2 million kms or more. This requirement shall be demonstrated in calculation and simulation for structural	**B50 Life of Bogies** The expected B50 life of bogies shall be 18 years of age or 7.2 million kms, whichever is less. This requirement shall be demonstrated in calculation and simulation for structural components/assemblies.

	components/assemblies.	
7	**Project Schedule** The proposed schedule for the execution is attached as Annexure 4 of this document. Approvals and sign-offs shall be required from RCF at various stages of the project. These are identified as the Hold and Witness Points. These approvals shall be sought on digitally signed PDF documents. These documents shall be submitted via email to the authorized persons and via the DMS of a project management system. The detailed process of submissions and approvals shall be mutually agreed and documented as a part of the agenda for the kick-off meeting. The approvals sought shall be replied within 2 weeks of submission. The time taken for approvals shall not be counted against the project schedule durations.	**Project Schedule** The proposed schedule for the execution is attached as Annexure 4 (Corrigendum Slip – 1) of this document. Approvals and sign-offs shall be required from RCF at various stages of the project. These are identified as the Hold and Witness Points. These approvals shall be sought on digitally signed PDF documents. These documents shall be submitted via email to the authorized persons and via the DMS of a project management system. The detailed process of submissions and approvals shall be mutually agreed and documented as a part of the agenda for the kick-off meeting. The approvals sought shall be replied within 4 weeks of submission. The time taken for approvals shall not be counted against the project schedule durations.
11	**Guarantee/Warranty** The contractor shall provide a comprehensive guarantee/warranty for the complete fully assembled bogie for a period of 36 months from the date of fitment or 48 months from the date of delivery, whichever is earlier. This provision shall be explicitly incorporated in the tender document.	**Guarantee/Warranty** The contractor shall provide a comprehensive guarantee/warranty for the complete fully assembled bogie for a period of 48 months from the date of delivery. This provision shall be explicitly incorporated in the tender document.
12	**Penalties while under warranty** 100% trouble free breakdown free operation of bogie is to be ensured in warranty period during running of train from Primary maintenance depot. In case of breakdown, a grace period of 72 hrs. shall be given from time of intimation, beyond which penalty of ₹10,000/- per coach-day downtime shall be levied till 60 days and thereafter action as per IRS rules shall be applicable.	**Penalties while under warranty** 100% trouble free breakdown free operation of bogie is to be ensured in warranty period during running of train from Primary maintenance depot. In case of breakdown, a grace period of 3 days shall be given from time of intimation to analyzing, finding & submitting root cause, and time period of 10 days shall be given for repair from date of intimation. If the firm fails to respond within three days (72 hours) a penalty of Rs. 10,000 per day will be imposed until a response is provided. If firm fails to rectify within 10 days (240 hours) a penalty of Rs. 10,000 per day will be imposed until the defect is rectified. In case a firm has neither responded nor rectified the defect within defined time limits, only one penalty will be levied at a time.

Annexure 4 **(Corrigendum Slip – 1)** has been revised and enclosed herewith

Dy.CME/BD

10/6/16
ADE/BD

CDE, CQM-I, CQM-II, CPLE, CWE/Fur, CWE/Shell, CMM/HSQ, CMM/TKJ

Dy.CMM/Fur/LHB, Dy.CMM/G, CMT, Dy.CPLE-I, Dy.CPLE-II, Dy.CPLE-III, Dy.CMM/Fur

SSE/Filing Section, SSE/Library, SSE/Records

Copy for kind information to:

Dy.CME/FD Dy. CME/SD

Annexure-4
(Corrigendum slip-1)

TENTATIVE PROJECT SCHEDULE

#	Activity	Planned Duration (Weeks)	Completion Milestone (Weeks)	Cumulative Weeks	Deliverables	Witness / Hold Mandate	Contractor	RCF	RDSO
0	Tender Finalization (Issue of Purchase Order)	START	D	0			S	R	I
1	Project Kick-Off Meeting	2	D+2	2			R	R	R
2	Sharing of all available information on bogie design and issues	2	D+4	4	All available information, models drawings, specifications etc to be provided		I	R	R
3	Conduct of instrumented run trails of existing bogies.	6	D+10	10	Report in Hard and Soft (editable & PDF) copy detailing the process and outcome of the trials	HOLD	R	S	R
4.	Review of existing bogie design and identification of areas for improvement	12	D+22	22	Report in Hard and Soft (editable & PDF) copy detailing the issues identified and the improvement proposed.	HOLD	R	S	S
5	Development of designs for modifications / improvements / new bogie to address the areas identified for improvement	20	D+42	42	CAD Models, drawings, specification, calculation sheets all design development artifacts. These shall be provided as soft copies.	HOLD	R	A	A
6.	Simulation based verification of the developed design for static / dynamic stress analysis. Fatigue life analysis Multi-body dynamic analysis for ride quality estimation	4	D+46	46	Reports of simulations in hard and soft copies. Digital Parametric Simulation Models files of improved bogie & bogie items. All configuration and simulation setup files in native formats. Details of software (with version numbers) used for simulation.	HOLD	R	A	A
7	Development of manufacturing bill of materials.	4	D+50	50	Bill of Materials in hard and soft copies (editable & PDF)	HOLD	R	A	A
8	Development of manufacturing design / documentation and tooling / fixtures for manufacturing of the new design of the bogie	4	D+54	54	Manufacturing drawings in hard and soft copies (editable & PDF), Manufacturing drawings of all jig / fixtures and tooling required in hard and soft copies (editable & PDF).	WITNESS	R	A	A
9	Development of purchase / quality assurance requirements documentation for bought out components and assemblies.	2	D+56	56	All documentation in hard & soft (editable & PDF copies).	WITNESS	R	A	A
10	Development of bogie assembly and quality assurance requirements documentation.	2	D+58	58	All documentation in hard & soft (editable & PDF copies).	WITNESS	R	A	A
11	Setting up the production setup at the manufacturing location of the contractor / consortium partner / design agency having MOU with bidder.	4	D+62	62	Setup manufacturing system. All documentation in hard & soft (editable & PDF) copies.	HOLD	R	A	A
12	Prototype manufacturing of the new design of bogies	4	D+66	66	Progress with prototype manufacture.	WITNESS	R	A	A
13	Installation and Commissioning of prototype bogies	2	D+68	68	Readiness of coach for trial	HOLD	R	R	I
14	Running oscillation trials and fatigue testing of bogies on IR.	4	D+72	72	Report in Hard and Soft (editable & PDF) copy	WITNESS	R	S	R
15	Review the trial results	4	D+76	76	Report in Hard and Soft (editable & PDF) copy	HOLD	R	A	A
16	Finalize the design of the bogies and update the required documentation	8	D+84	84	All modified documents / drawings /models etc in hard & soft (editable & PDF) copies.	HOLD	R	A	A
17	Manufacture and supply the bogies as per the contract schedule	64	D+148	148	Fully assembled bogies and maintenance spares as per agreed list.	WITNESS	R	S	C
18	Training of IR personnel in design, manufacturing, assembly, testing & commissioning, quality control, and maintenance and overhaul process. (Also to be	4	D+152	152	Training of identified personnel. This is expected to be done alongwith the progress of the project. All training materials shall be provided in hard and soft	HOLD	R	S	S

Annexure-4
(Corrigendum slip-1)

TENTATIVE PROJECT SCHEDULE

	scheduled alongside development and manufacturing activities)				(editable & PDF) copies.				
19	B10 (MFOP) review at 3 years (say 160 weeks) of first 1000 bogies {400 LWACCN+300 LWSCN+300 LWS}as per contract. Trial period expected to start after start of bogie manufacture and supply (#17 say D+148)	160	D+308	308	B10 life calculations and report, in Hard & Soft (editable & PDF) copies.	HOLD	R	R	R
20	Supply of balance 600 bogies, handing over of all pending deliverables and closure of project.	40	D+348	348	Handing over and confirmation check of all documents, drawings, models, check sheets, reports and all design artifacts.	HOLD	R	R	R

RASCI	Role Full Form	Description of the role
R	**RESPONSIBLE**	Responsible (also recommender) Those who do the work to complete the task. There is at least one role with a participation type of responsible, although others can be delegated to assist in the work required (see also RASCI below for separately identifying those who participate in a supporting role).
A	**ACCOUNTABLE / APPROVER**	Accountable (also approver or final approving authority) The one ultimately answerable for the correct and thorough completion of the deliverable or task, the one who ensures the prerequisites of the task are met and who delegates the work to those responsible. In other words, an accountable must sign off (approve) work that responsible provides. There must be only one accountable specified for each task or deliverable.
S	**SUPPORTING**	Support Resources allocated to responsible, unlike consulted, who may provide input to the task, support helps complete the task.
C	**CONSULTED**	Consulted (sometimes consultant or counsel) Those whose opinions are sought, typically subject – matter experts and with whom there is two – way communication.
I	**INFORMED**	Informed (also informee) Those who are kept up-to-date on progress, often Only on completion of the task or deliverable and with whom there is just one-way communication.

Witness / Hold Mandate	Description
WITNESS	A Witness point is an identified point in the work process where the contract administrator may review, witness, inspect or undertake tests on any component, method or process of works. The contractor is required to notify the contract administrator who may or may not take the opportunity. The subsequent activity however, may proceed.
HOLD	A Hold point is a mandatory verification point beyond which a work process cannot proceed without authorization by the contract administrator. Hold points are usually assigned to those critical aspects of the work that cannot be inspected or corrected at a later stage because they will no longer be accessible. The relevant work cannot proceed until the contract administrator is able to verify the quality of the completed work and releases the Hold point.