

Reasoned Document for Technical Specification for Rail Borne Maintenance Vehicle (RBMV) for Broad Gauge (1676 mm)

(Specification No. ~~TM/HM/RBMV/422 Rev.01 of 2019~~ **Rev.02 of 2022**)

Sr. No.	Clause no.	Provision of Draft Technical Specification for Rail Borne Maintenance Vehicle (RBMV) for Broad Gauge (1676 mm). (Specification No. TM/HM/RBMV/422 Rev.01 of 2019 Rev.02 of 2022). As up-loaded on 04.08.2022	Plasser & Theurer Export von Bahnbaumaschinen GmbH Johannesgasse 3 1010 Wien Austria	RDSO Remarks on the self review and on Firm's comments on uploaded specification	Modified Draft Technical Specification for Rail Borne Maintenance Vehicle (RBMV) for Broad Gauge (1676 mm). (Specification No. TM/HM/RBMV/422 Rev.01 of 2019 Rev.02 of 2022). As up-loaded on 04.08.2022 after Incorporating accepted comments.
1.0	2.22	The RBMV shall be capable of carrying pay load of 15 t. The description of crane, equipment storage space shall be such as to ensure equal axle loads. Design shall be such as to afford easy inspection and maintenance. Guiding principle in selection of assemblies should be the easy availability of wearing components	The RBMV shall be capable of carrying pay load of 15 t 10 t . The description of crane, equipment storage space shall be such as to ensure equal axle loads. Design shall be such as to afford easy inspection and maintenance. Guiding principle in selection of assemblies should be the easy availability of wearing components. As the vehicle is equipped with a crane and a lifting platform, the space for heavy equipment is very limited. A combination of the desired two 12 m rails with an additional 1:12 crossing weighs only 2.5 tonnes. Therefore, an additional total load of 10 tonnes would be more realistic.	Comment is not accepted. Not only rails and crossings, sleepers and equipments etc. are also to be carried on RBMV loading platform. So carrying pay load of 15 t is justified.	No change.

2.0	4.4	A radio remote control for traction is to be provided with the same functions as from the driver's desk. Not to be confused with radio remote control for crane/workman basket. The radio remote control traction receives a watchdog function. The crane, outriggers and outrigger extensions can be operated with the crane radio remote control and fixed control levers.	-----	During self review it was found clause 4.4 is contradictory to clause 4.1. Hence clause is modified accordingly.	A radio remote control for traction is to be provided with the same functions as from the driver's desk. Not to be confused with radio remote control for crane/workman basket. The radio remote control traction receives a watchdog function. The crane, outriggers and outrigger extensions can be operated with the crane radio remote control and fixed control levers.
3.0	4.6	The crane shall be designed in accordance with EN 280	The component safety of the crane shall be designed in accordance with EN 280 EN 13849, EN 61508 EN 50128. EN 280 refers to the lifting platform. EN 13849, EN 61508 EN 50128 refer to the component safety for the crane.	No need of this clause as the other clauses for crane are self explanatory.	The crane shall be designed in accordance with EN 280
4.0	4.8	The crane operation shall be arranged from both traction power packs and shall be operated with one of them at a time. Separate power pack preferably of indigenous make with its operating and control panel and operator's seat shall be provided for independent operation of crane. In case of power pack	The crane operation shall be arranged from both traction power packs and shall be operated with one of them at a time. Separate power pack preferably of indigenous make with its operating and control panel and operator's seat shall be provided for emergence operation of crane. In case of traction power pack	Comment is accepted. The installation of a separate engine to drive the crane during regular operation would reduce the available space on the	The crane operation shall be arranged from both traction power packs and shall be operated with one of them at a time. Normal operation of the crane is through traction power pack. In case of failure of traction power pack, a separate power pack preferably of indigenous make with its operating and control

		failure, an alternative provision shall also be made through traction power pack for uninterrupted operation of crane.	failure, an alternative provision shall also be made through the emergence power pack for uninterrupted operation of crane retreating the crane to the transfer position. The usual mode of operation should be via the main engine. The installation of a separate engine to drive the crane during regular operation would reduce the available space on the vehicle. An emergency generator should be available to retract the crane in case of a main engine failure.	vehicle. Hence clause is modified accordingly.	panel and operator's seat shall be provided for independent emergency operation of crane and in case of power traction pack failure, an alternative provision shall also be made through traction emergence power pack for uninterrupted operation of crane retreating the crane to the transfer position.
5.0	6.8	The exhaust pipe is to be provided with thermal insulation, which has good thermal insulation properties. The exhaust gases of the diesel engine must be discharged above roof level and swirled (no formation of heat spots). The protective earth connects all metallic parts (e.g. apparatus housing, machine body, work equipment) to the earth potential. To protect the axle bearings from current flow, the current is transmitted to the wheel set via earth brushes. The earth brushes shall be arranged in such a way that protective earthing	The exhaust pipe is to be provided with thermal insulation, which has good thermal insulation properties. The exhaust gases of the diesel engine must be discharged above roof level at the level of the undercarriage to the left or right side and swirled (no formation of heat spots). It shall be possible to switch between the left or right or both exhaust via a button in the main cabin. The protective earth connects all metallic parts (e.g. apparatus housing, machine body, work equipment) to the earth potential. To protect the axle bearings from current flow, the current is transmitted to the wheel set via earth brushes. The earth brushes shall be arranged in such	Comment is accepted. As the machine will be equipped with a lifting platform, the exhaust gases should not be discharged at roof level, but safely at bogie level. Hence clause is modified accordingly.	The exhaust pipe is to be provided with thermal insulation, which has good thermal insulation properties. The exhaust gases of the diesel engine must be discharged above roof level at the level of the undercarriage to the left or right side and swirled (no formation of heat spots). It shall be possible to switch between the left or right or both exhaust via a button in the main cabin. The protective earth connects all metallic parts (e.g. apparatus housing, machine body, work equipment) to the earth potential. To protect the axle bearings from current flow,

		<p>via two wheels is ensured even in the case of tracks insulated on one side (track vacancy detection device). The earthing concept shall be documented</p>	<p>a way that protective earthing via two wheels is ensured even in the case of tracks insulated on one side (track vacancy detection device). The earthing concept shall be documented.</p> <p>As the machine will be equipped with a lifting platform, the exhaust gases should not be discharged at roof level, but safely at bogie level.</p>		<p>the current is transmitted to the wheel set via earth brushes. The earth brushes shall be arranged in such a way that protective earthing via two wheels is ensured even in the case of tracks insulated on one side (track vacancy detection device). The earthing concept shall be documented.</p>
6.0	Annexure-X/A and X/B		<p>Could you please verify that all the numbers on the list are correct as some items have unusual dimensions or weights, for example:</p> <p>No. 7 Rail welding equipment of which two should be on the vehicle is 450 cm long and weight 785 kg per unit</p> <p>No. 13.2 600 rollers have a box height of 312 cm and weight 1500 kg</p> <p>No 4.1 Crow bar weight is 35 kg per unit</p> <p>Etc.</p>	<p>The items in annexure X/A and X/B do not have unusual dimensions or weights. These are indicative for provision of storage space on the machine.</p>	