

List of Standards for MRS1 project Annexure-1		
SI No.	Standard No.	Standard Description.
1	BS EN IEC 60332-3-21	TESTS ON ELECTRIC AND OPTICAL FIBRE CABLES UNDER FIRE CONDITIONS. TEST FOR VERTICAL FLAME SPREAD OF VERTICALLY-MOUNTED BUNCHED WIRES OR CABLES. CATEGORY A F/R
2	BS EN IEC 60332-3-24	TESTS ON ELECTRIC AND OPTICAL FIBRE CABLES UNDER FIRE CONDITIONS. TEST FOR VERTICAL FLAME SPREAD OF VERTICALLY-MOUNTED BUNCHED WIRES OR CABLES. CATEGORY C
3	BS EN IEC 60332-3-25	TESTS ON ELECTRIC AND OPTICAL FIBRE CABLES UNDER FIRE CONDITIONS. TEST FOR VERTICAL FLAME SPREAD OF VERTICALLY-MOUNTED BUNCHED WIRES OR CABLES. CATEGORY D
4	BS 6387	Test method of resistance to fire of cables required
5	BS-EN 3-10	PORTABLE FIRE EXTINGUISHERS. PROVISIONS FOR EVALUATING THE CONFORMITY OF A PORTABLE FIRE EXTINGUISHER TO EN 3-7
6	BS EN 3-7:	PORTABLE FIRE EXTINGUISHERS. CHARACTERISTICS, PERFORMANCE REQUIREMENTS AND TEST METHODS
7	EN 45545-5	Railway applications - Fire protection on railway vehicles.Part 5. Fire safety requirement including that of trolley buses, track guided and magnetic levitation vehicles.
8	EN 50121-1	Railway applications - Electromagnetic compatibility. Part 1.General
9	EN 50121-2	Railway applications - Electromagnetic compatibility.Part 2. Emission of the whole railway system to the outside world
10	EN 50121-3-1	Railway applications - Electromagnetic compatibility.Part 3.1 Rolling stock - Train and complete vehicle
11	EN 50121-3-2	Railway Applications – Electro-Magnetic Compatibility –Rolling Stock Apparatus
12	EN 50122-1	Railway Applications - fixed installations - part 1_protective provisions relationgto electrical safety and earthing
13	EN 50124-1	Railway applications - Insulation coordination Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment
14	EN 50124-2	Railway applications - Insulation coordination Part 2: Over voltage and related protection
15	EN 50125-1	Railway applications - Environmental conditions for equipment – Part 1: Equipment on board rolling stock
16	EN 50126-1	Railway Application – The specification and demonstration of reliability, availability, maintainability and safety (RAMS) Part1: Basic requirement and generic process
17	EN 50126-2	Railway Applications – Dependability for Guided Transport System – Part. 2 : Safety
18	EN 50128	Railway applications - Communications, Signalling and processing systems - software for railway control and protection systems
19	EN 50129	Railway Applications - communication, signaling and processing systems - safety related electronic systems for signaling
20	BS EN 62676-4 :	VIDEO SURVEILLANCE SYSTEMS FOR USE IN SECURITY APPLICATIONS. APPLICATION GUIDELINES
21	EN 50153	Rolling stock: protective provisions relating To electrical hazards.
22	EN 50155	Railway applications - electronic equipment used on rolling stock
23	EN 50163	Railway applications - supply voltages of traction systems
24	EN 50200	Method of test for resistance to fire of unprotected small cables for use in emergency circuits
25	EN 50206-1	Railway applications —Rolling stock — Pantographs: Characteristics and tests: Part 1: Pantographs for main line vehicles
26	BS EN 61287-1	RAILWAY APPLICATIONS. POWER CONVERTORS INSTALLED ON BOARD ROLLING STOCK. CHARACTERISTICS AND TEST METHODS
27	EN 50264-1	Railway applications — Railway rolling stock _Power and control cables having special fire performance _part 1 general requirements
28	EN 50264-2-1	Railway applications — Railway rolling stock _Power and control cables having special fire performance _part 2-1 Cables with cross linked elastomeric insulation-Single core cables
29	EN 50264-2-2	Railway applications — Railway rolling stock _Power and control cables having special fire performance _part 2-1 Cables with cross linked elastomeric insulation-Multi core cables
30	EN 50305	Railway applications — Railway rolling stock cables having special fire performance — Test methods
31	EN 50306 -1	Railway Rolling Stock cables having special fire performance- Thin wall- Part1_ General requiremnts
32	EN 50306 -2	Railway Rolling Stock cables having special fire performance- Thin wall- Par2_Single core cables
33	EN 50306 -3	Railway Rolling Stock cables having special fire performance- Thin wall- Part3_Single core and multicore cables screened and thin wall sheathed

34	EN 50317	Current collection systems - Requirements for and validation of measurements of the dynamic interaction between pantograph and overhead contact line
35	EN 50343	Rolling stock-Rules for installation of cabling - Rules for installation of cabling
36	EN 50347	General purpose three-phase induction motors having standard dimensions and outputs
37	EN 50355	Rolling stock-cables having special fire performance-guide to use
38	EN 50388	Railway Applications. Power supply and rolling stock. Technical criteria for the coordination between power supply (substation) and rolling stock to achieve interoperability.
39	EN 50405	Railway applications - Current collection systems-Pantographs, testing methods for carbon contact strips
40	EN 50533	Railway applications - Three-phase train line voltage characteristics.
41	EN 50547	Railway applications. Batteries for auxiliary power supply systems.
42	EN 55011	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement
43	EN 60068-2-1	Environmental testing – Part 2-1: Tests – Test A: Cold
44	EN 60068-2-2	Basic environmental testing procedures—Part 2: Tests Tests B: Dry heat
45	EN 60068-2-7	Basic environmental testing procedures—part 2-7: Tests - Test GA and guidance: acceleration, steady state
46	EN 60068-2-11	Basic environmental testing procedures – Part 2-11: Tests – Test Ka: Salt mist
47	EN 60068-2-14	Environmental testing – Part 2-14: Tests – Test N: Change of temperature
48	EN 60068-2-27	Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock
49	EN 60068-2-30	Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)
50	EN 60068-2-48	Basic environmental testing procedures Part 2:Tests — Guidance on the application of the tests of IEC Publication 68 to simulate the effects of storage
51	EN 60068-2-75	Environmental testing –Part 2 -75: Tests – Test Eh: Hammer test
52	EN 60598-1	Luminaires. General requirements and tests
53	EN 62267	Railway applications: Automated urban guided transport (AUGT)- safety requirements
54	EN50206-2	Railway applications —Rolling stock — Pantographs: Characteristics and tests: Part 2: Pantographs for metros and light rail vehicles
55	IEC 61881-1	RAILWAY APPLICATIONS - ROLLING STOCK EQUIPMENT - CAPACITORS FOR POWER ELECTRONICS - PART 1: PAPER/PLASTIC FILM CAPACITORS
56	IEC 61881-2	RAILWAY APPLICATIONS - ROLLING STOCK EQUIPMENT - CAPACITORS FOR POWER ELECTRONICS - PART 2: ALUMINIUM ELECTROLYTIC CAPACITORS WITH NON-SOLID ELECTROLYTE
57	IEC 61881-3	RAILWAY APPLICATIONS - ROLLING STOCK EQUIPMENT - CAPACITORS FORPOWER ELECTRONICS - PART 3: ELECTRIC DOUBLE-LAYER CAPACITORS
58	IEC 62290-1	Railway applications—Urban guided transport management and command/control systems—Part 1: System principles and fundamental concepts.
59	ARGE Guidelines	Fire detection in rolling stock.
60	NF-F 01-281	Fibre reinforced thermosetting plastics
61	ORE C116/RP8	DB WZ Ride Index : Frequency Weighting Curves
62	UIC 410	Composition and calculation of the Weight and braking of passengers trains
63	Railway Group Standard GM/RT 2472	Requirements for Data Recorders on Trains.
64	Railway Group Standard GM/RT 2130	Vehicle Fire, Safety and Evacuation.
65	DIN 2096-1	Helical compression springs made of round wire and rod; Quality requirements for hot formed compression springs
66	DIN 7190-1	Interference fits - Part 1: Calculation and design rules for cylindrical self-locking pressfits.
67	DIN EN 15827	Railway applications - Requirements for bogies and running gears
68	DVS 1612	Design and endurance strength assessment of welded joints with steels in rail vehicle construction
69	VDI 2230 part 1	Systematic calculation of highly stressed bolted joints - Joints with one cylindrical bolt
70	VDI 2230 part 2	Systematic calculation of highly stressed bolted joints - Multi bolted joints
71	EN 50180-1	Bushing above 1 kv upto 52 kv and from 250A to 3.15 A for liquid filled trnsformers part1: General requirements for bushings
72	EN50180-2	Bushing above 1 kv upto 52 kv and from 250A to 3.15 A for liquid filled trnsformers part2: Requirements for bushing components
73	EN50180-3	Bushing above 1 kv upto 52 kv and from 250A to 3.15 A for liquid filled trnsformers part3: Requiremnts for bushing fixations

74	EN50181	Plug in type bushing above 1 kv upto 52 kv and from 250A to 2.50 A for equipment other than liquid filled trnsformers
75	JIS Z2248	Metallic materials-bend test
76	BS EN 50289-1-1	COMMUNICATION CABLES-SPECIFICATIONS FOR TEST METHODS PART 1.1: ELECTRICAL TEST METHODS-GENERAL REQUIREMENTS
77	BS EN 50289-3-1	COMMUNICATION CABLES-SPECIFICATIONS FOR TEST METHODS-PART 3.1: MECHANICAL TEST METHODS-GENERAL REQUIREMENTS
78	BS EN 50289-4-1	ENVIRONMENTAL TEST METHODS-GENERAL REQUIREMENTS
79	BS EN 50289-4-16	COMMUNICATION CABLES. SPECIFICATIONS FOR TEST METHODS. ENVIRONMENTAL TEST METHODS. CIRCUIT INTEGRITY UNDER FIRE CONDITIONS
80	EN 50318	Railway applications-Current collection systems - validation of simulation of the dynamic interaction between pantograph and overhead contact line
81	JIS G 4304 & AMD1	Stainless steel plates/sheets
82	BS EN 10293	STEEL CASTINGS. STEEL CASTINGS FOR GENERAL ENGINEERING USES
83	BS EN 10029	HOT-ROLLED STEEL PLATES 3 MM THICK OR ABOVE. TOLERANCES ON DIMENSIONS AND SHAPE
84	BS 7668	WELDABLE STRUCTURAL STEELS. HOT FINISHED STRUCTURAL HOLLOW SECTIONS IN WEATHER RESISTANT STEELS. SPECIFICATION
85	BS EN 10025-1	HOT ROLLED PRODUCTS OF STRUCTURAL STEELS. GENERAL TECHNICAL DELIVERY CONDITIONS
86	BS EN 10025-3	HOT ROLLED PRODUCTS OF STRUCTURAL STEELS. TECHNICAL DELIVERY CONDITIONS FOR NORMALIZED/NORMALIZED ROLLED WELDABLE FINE GRAIN STRUCTURAL STEELS
87	BS EN 10025-4	HOT ROLLED PRODUCTS OF STRUCTURAL STEELS. TECHNICAL DELIVERY CONDITIONS FOR THERMOMECHANICAL ROLLED WELDABLE FINE GRAIN STRUCTURAL STEELS
88	BS EN 10210-1	HOT FINISHED STRUCTURAL HOLLOW SECTIONS OF NON-ALLOY AND FINE GRAIN STRUCTURAL STEELS. TECHNICAL DELIVERY REQUIREMENTS
89	BS EN ISO 15614-1	SPECIFICATION AND QUALIFICATION OF WELDING PROCEDURES FOR METALLIC MATERIALS. WELDING PROCEDURE TEST. ARC AND GAS WELDING OF STEELS AND ARC WELDING OF NICKEL AND NICKEL ALLOYS
90	BS EN ISO 15614-2	SPECIFICATION AND QUALIFICATION OF WELDING PROCEDURES FOR METALLIC MATERIALS. WELDING PROCEDURE TEST. ARC WELDING OF ALUMINIUM AND ITS ALLOYS
91	BS EN ISO 15614-8	SPECIFICATION AND QUALIFICATION OF WELDING PROCEDURES FOR METALLIC MATERIALS. WELDING PROCEDURE TEST. WELDING OF TUBES TO TUBE-PLATE JOINTS
92	BS EN ISO 14732	WELDING PERSONNEL. QUALIFICATION TESTING OF WELDING OPERATORS AND WELD SETTERS FOR MECHANIZED AND AUTOMATIC WELDING OF METALLIC MATERIALS
93	EN 10089	Hot rolled steels for quenched and tempered springs - Technical delivery conditions
94	BS EN 10025-5	HOT ROLLED PRODUCTS OF STRUCTURAL STEELS. TECHNICAL DELIVERY CONDITIONS FOR STRUCTURAL STEELS WITH IMPROVED ATMOSPHERIC CORROSION RESISTANCE
95	JIS G 3459	Stainless steel pipes
96	EN 16334	Railway applications — Passenger Alarm Systems — System requirements

97	EN 50553	Railway applications — Requirements for running capability in case of fire on board of rolling stock
98	DIN 5566-1	RAILWAY VEHICLES - DRIVER CABS - PART 1: GENERAL REQUIREMENTS
99	DIN 5566-2	RAILWAY VEHICLES - DRIVER CABS - PART 2: ADDITIONAL REQUIREMENTS FOR STANDARDS GAUGE RAILWAY VEHICLES
100	DIN 5566-3	RAILWAY VEHICLES - DRIVER CABS - PART 3: ADDITIONAL REQUIREMENTS FOR URBAN AND SUBURBAN ROLLING STOCK
101	ISO 34-1	Rubber, vulcanized or thermoplastic -- Determination of tear strength -- Part 1: Trouser, angle and crescent test pieces
102	ISO 37	Rubber, vulcanized or thermoplastic -- Determination of tensile stress-strain properties
103	ISO 105-B02	Textiles -- Tests for colour fastness -- Part B02: Colour fastness to artificial light: Xenon arc fading lamp test
104	ISO 7619-1	RUBBER, VULCANIZED OR THERMOPLASTIC -- DETERMINATION OF INDENTATION HARDNESS -- PART 1: DUROMETER METHOD (SHORE HARDNESS)
105	ISO 48-4	RUBBER, VULCANIZED OR THERMOPLASTIC -- DETERMINATION OF HARDNESS -- PART 4: INDENTATION HARDNESS BY DUROMETER METHOD (SHORE HARDNESS)
106	ISO 10140-3	Acoustics — Laboratory measurement of sound insulation of building elements — Part 3: Measurement of impact sound insulation
107	ISO 23999	Resilient floor coverings -- Determination of dimensional stability and curling after exposure to heat
108	ISO 24343-1	Resilient and laminate floor coverings -- Determination of indentation and residual indentation -- Part 1: Residual indentation
109	ISO 24344	Resilient floor coverings — Determination of flexibility and deflection
110	ISO 26987	Resilient floor coverings — Determination of staining and resistance to chemicals
111	EN 1399	Resilient floor coverings. Determination of resistance to stubbed and burning cigarettes
112	EN 1815	Resilient and laminate floor coverings. Assessment of static electrical propensity
113	DIN 51130	Testing of floor coverings - Determination of the anti-slip property - Workrooms and fields of activities with slip danger - Walking method - Ramp test
114	EN 13810-1	Wood-based panels. Floating floors. Performance specifications and requirements.
115	EN 13810-2	Wood-based panels. Floating floors. Test methods
116	ISO 12543-4	Glass in building - Laminated glass and Laminated safety glass - Part 4: Test methods for durability
117	EN 410	Glass in building. Determination of luminous and solar characteristics of glazing
118	EN 1279-2	Glass in building. Insulated glass units. Long term test method and requirements for moisture penetration.
119	EN 1279-3	Glass in building. Insulated glass units. Long term test method and requirements for gas leakage rate and for gas concentration tolerances.
120	EN 673	Glass in building. Determination thermal transmittance calculation method
121	ISO 3537	Road vehicles - Safety glazing materials-mechanical tests
122	EN 2155-9	Specification for test methods for transparent materials for aircraft glazing. Determination of haze.
123	ISO 10140-2	Acoustics-Laboratory measurement of sound insulation of building elements-Part 2: Measurement of airborne sound insulation.
124	ASTM D5420	Standard test method for impact resistance of flat rigid plastic specimen by means of a striker impacted by a falling weight (Gardener Impact)
125	ISO 3864-1	Graphical symbols safety colours and safety signs- part 1 design principles for safety signs and safety markings
126	SAE J 1455	Recommended environmental practices for electronic equipment design in heavy-duty vehicle applications
127	BS EN 12127	Textiles--Fabrics, Determination of mass per unit area using small samples
128	BS 4051	Method for determination of thickness of textiles floor coverings
129	ISO 13934-1	Textiles--Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip method
130	ISO 13937-2	Textiles--Tear properties of fabric, Determination of tear force of trouser-shaped test specimen (single tear method)
131	ISO 12945-2	Textiles--Determination of fabric propensity to surface fuzzing and to pilling-Part 2: Modified Martindale method

132	ISO 354	Acoustics measurement of sound absorption
133	ISO 12945-4	Textiles--Determination of fabric propensity to surface, pilling, fuzzing or matting- Part 4: Assessment of pilling, fuzzing or matting by visual analysis
134	ISO 105-X12	Textiles -- Tests for colour fastness - Part X12-Colour fastness to rubbing
135	ISO 105-E01	Textiles -- Tests for colour fastness - Part E01-Colour fastness to water
136	UIC533	Protection by the earthing of metal parts of vehicle
137	IS:7888	Method of test for flexible polyurethane foam
138	ISO:2440	Flexible & rigid cellular polymeric materials-Accelerated ageing test
139	ISO:8067	Flexible cellular polymeric materials-Determination of tear strength
140	ISO:8307	Flexible cellular polymeric materials-Determination of resilience by ball rebound
141	EN 13501-1	Fire classification of construction products and building elements Part-1: Classification using data from reaction to fire tests
142	EN 61310-1	Safety of Machinery - indication, marking and actuation Part-1: requirements for visual, acoustic and tactile signals.
143	ISO 8013	Rubber, vulcanized - Determination of creep in compression or shear
144	BS EN ISO 29862	SELF ADHESIVE TAPES. DETERMINATION OF PEEL ADHESION PROPERTIES
145	ASTM C 518	Standard test method for steady - state thermal transmission properties by means of the heat flow meter apparatus
146	SAE J 2236	Standard method for determining continuous upper temperature resistance of elastomers
147	EN 1364-1	Fire resistance tests for non-loadbearing elements- Part 1 : Walls
148	EN 1364-2	Fire resistance tests for non-loadbearing elements- Part 1 : Ceiling
149	ISO 24346	Resilient floor coverings - Determination of overall thickness
150	ISO 23997	Resilient floor coverings - Determination of mass per unit area
151	DIN 2089 T1	Helical compression springs made from round wire and rod
152	DIN 908	PLUGS WITH HEXAGONAL SOCKET
153	DIN 7603	GASKETS
154	JIS G 3101	Rolled steels for general structure
155	JIS G 3131	COMMERCIAL HOT ROLLED STEEL
156	IEC 62580	On-board multimedia and telematic subsystems for railways
157	UIC B55 RP 8	CONDITIONS FOR NEGOTIATING TRACK TWISTS - RECOMMENDED VALUES FOR THE TRACK TWIST AND CANT - CALCULATION AND MEASUREMENT OF THE RELEVANT VEHICLE PARAMETERS - VEHICLE TESTING (FINAL REPORT)
158	IEC 60840	Power cables with extruded insulation and their accessories for rated voltages above 30 KV upto 150 KV - Test methods and requirements.
159	IEC 61156-6	Multicore and symmetrical pair/quad cables for digital communication. Part 6: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz – Work area wiring – Sectional specification