



**PRODUCT MANUAL FOR
PERFORMANCE REQUIREMENTS AND TEST METHODS FOR
WHEELS/RIMS FOR TRUCKS AND BUSES
ACCORDING TO IS 9438:2018**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 9438:2018
	Title	:	Performance Requirements and Test Methods for Wheels/Rims for Trucks and Buses
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	--
b)	Grouping guidelines	:	Please refer ANNEX –A
c)	Sample Size	:	2 Rims and 1 Tyre (Along with information as per Annex B of IS 9438)
3.	List of Test Equipment	:	Please refer ANNEX –B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX –C
5.	Possible tests in a day : Dynamic Cornering Fatigue Test (Cl. 5.1, Cl. 5.3)		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 9438:2018 with the following scope:		
	Name of the product	Performance Requirements and Test Methods for Wheels/Rims for Trucks and Buses	
	Material	Ferrous/ Aluminum	
	Load rating (N)	Up to and including...	
	Wheel Rim Category	Disc Wheel/Wheel with demountable Rim	

ANNEX A

Grouping Guidelines

1. Wheels/Rims for Trucks and Buses as per IS 9438:2018 are categorized into following for the purpose of GoL/CSoL:

(a) Based on Material of Wheel/Rim

- (i) Ferrous
- (ii) Aluminum

(b) Based on Category of Wheel Rim

- (i) Disc Wheel
- (ii) Wheel with demountable Rim

2. Wheels/Rims having Highest Load Rating for each Material and Wheel Rim Category shall be tested to cover the entire varieties of Wheels/Rims for that particular Material of Wheels/Rims and Wheel Rim Category, for Load Rating up to and including the Load Rating tested.

3. The Firm shall declare the varieties of Wheel/ Rims intended to be covered in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.

4. During the operation of the Licence, BO shall ensure that all the varieties covered in the Licence are tested in rotation, to the extent possible.

5. Only one Factory Sample and one Market Sample shall be drawn during an operative period of one year.

ANNEX A**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Dynamic Cornering Fatigue Test for Disc Wheel Rims (Clause 5.1)	Equipment as per Cl. 5.1 of IS 9438
2.	Dynamic Radial Fatigue Test for Disc Wheel Rims and Wheels with Demountable Rims (Clause 5.2)	Equipment as per Cl. 5.2 of IS 9438
3.	Dynamic Cornering Fatigue Test for Wheels with Demountable Rims (Clause 5.3)	Equipment as per Cl. 5.3 of IS 9438

The above list is indicative only and may not be treated as exhaustive.

ANNEX B

Scheme of Inspection And Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – Wheel/Rims shall be marked with Name or Trade Mark of Manufacturer and Size Designation.

4. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

4.1 All the production which conforms to the Indian Standard and covered by the licence should be marked with Standard Mark.

5. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
5.1	Dynamic Cornering Fatigue Test for Disc Wheel Rims	5.1, Annex-A & Table-1	IS 9438	S	One sample of each material and category	Once in a year or whenever there is any change as given in Annex C of IS 9438 except for change of material for which, the provisions of change in scope of Licence as given in Annex A of this Product Manual shall apply.	
5.2	Dynamic Radial Fatigue Test for Disc Wheel Rims and Wheels with Demountable Rims	5.2, Annex-A & Table-2	IS 9438	S			
5.3	Dynamic Cornering Fatigue Test for Wheels with Demountable Rims	5.3, Annex-A & Table-3	IS 9438	S			

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are obligatory, to which the licensee shall comply with.