



**PRODUCT MANUAL FOR
BICYCLE –FRAME
ACCORDING TO IS 623:2008**

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 623 :2008
	Title	:	BICYCLE –FRAME
	No. of Amendments	:	1
2.	Sampling Guidelines:		
a)	Raw material	:	Frame Tubes – IS 2039 (Part 1 to 3) Liners – Mild Steel (with sulphur and phosphorus content, each not exceeding 0.060 percent) Lugs - Mild Steel (with sulphur and phosphorus content, each not exceeding 0.060 percent) or Grade WM 350 of IS 14329
b)	Grouping guidelines	:	Each Type of frame as per Fig 1, Fig 2 and Fig 3 of IS 623:2003 shall be tested.
c)	Sample Size	:	One piece of Bicycle Frame
3.	List of Test Equipment	:	Please refer ANNEX – A.
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – B.
5.	Requirements which can be tested in a day :		
	i) Dimensions (<i>Clause 4</i>) ii) Trueness of Frame (<i>Clause 7.1</i>) iii) Impact Test on Frame –Fork Assembly (<i>Clause 7.2</i>) iv) Test for Finish (<i>Clause 7.3</i>)		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 623:2008 with the following scope:		
	Name of the product	Bicycle Frame	
	Type	Bicycle Frame (Fig 1), Ladies Bicycle Parallel Bar Frame (Fig 2) , Ladies Bicycle Curved Bar Frame (Fig 3)	

ANNEX - AList of Test Equipments**Major test equipment required to test as per the Indian Standard**

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Dimensions as per <i>clause 4</i>	a) Digital Vernier Caliper b) Micrometer c) Tube micrometer d) Scale e) Thread Ring Gauge f) Plug Gauge(GO/NO-GO) g) Height Gauge
2.	Manufacture as per <i>clause 5</i> Trueness of Frame per <i>clause 7.1</i>	a) Surface Plate b) Gauge Block c) Gauge Block Fixture d) Micrometer
3.	Impact Test (Falling Mass) as per <i>clause 7.2.1</i>	a) Mass 22.5 kg b) Scale c) Roller 1 kg Max.
4.	Impact Test (Falling Frame and Fork Assembly) as per <i>clause 7.2.2</i>	a) Mass 70 kg b) Scale
5.	Test of Finish as per <i>clause 7.3.1</i>	a) Solid Steel Ball b) Scale
	Chemical Test as per <i>clause 7.3.2</i>	a) Mild Steel Tank with rubber lining b) Thermocouple c) Temperature Controller d) Common salt solution e) Stop Watch

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 equipment.

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

3. LABELLING AND MARKING – As per the requirements of IS 623: 2008. In addition, each frame shall carry Batch number or code number for traceability.

4. CONTROL UNIT – All bicycle frame manufactured under identical conditions in a day shall constitute a control unit.

5. 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.

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

6. 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	Levels of Control			
Cl.	Requirement	Test Methods		R: required (or) S: Sub-contracting permitted	No. of Sample	Frequency	Remarks
		Clause	Reference				
3	Material	3	IS 623	S	—	Each Consignment	No further testing is required, if accompanied with test certificate or ISI marked
4	Dimension	4, Fig 1, Fig 2 Fig 3	IS 623 IS 2039 (Part 1 to Part 3)	R	—	Each Frame	
5	Manufacture	5	IS 623	R	—	Each Frame	—
6	Finish	6	IS 623	R		Each Frame	

7	TESTS						
7.1.	Trueness of Frame	7.1	IS 623	R	Three Frames	Every Control unit	
7.2.1	Impact Test (Falling Mass)	7.2.1	IS 623	R	One Frame	Every Control unit	
7.2.2	Impact Test (Falling Frame and Fork Assembly)	7.2.2	IS 623	R	One Frame	Every Control unit	
7.3	Test of Finish	7.3	IS 623	R	Three Frames	Every Control unit	

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 only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.