



उत्पाद मैनुअल
भा. मा. 10613: 2014 के अनुसार
साइकिल - साइकिलों के लिए सुरक्षा अपेक्षाएं के लिए
दस्तावेज संख्या-पी एम/आई एस 10613/2/ फरवरी 2023

भारतीय मानक ब्यूरो की स्कीम-I (अनुरूपता मूल्यांकन) विनियम, 2018 के तहत यह उत्पाद मैनुअल प्रमाणीकरण के प्रचालन में रीति और पारिश्रिता की सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसी द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस प्रमाणीकरण लाइसेंस/प्रमाणपत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज का उपयोग किया जा सकता है।

**PRODUCT MANUAL FOR
CYCLES- SAFETY REQUIREMENTS FOR BICYCLES
ACCORDING to IS 10613:2014**

Document No.-PM/IS 10613/2/ February 2023

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.

भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS
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1.	Product	:	IS 10613: 2014
	Title	:	Cycles- Safety Requirements for Bicycles
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	Rims- as per IS 624 Tyres- IS 2414 Retro-Reflective devices- as per IS/ISO 6742-2 Retro-reflective Tapes- Grade 1 and pressure bonding type of IS 14221 Chain- as per IS 15511 Lighting system- as per ISO 6742-1 Bells- as per ISO 7636 <i>Retro-reflective devices as per IS/ISO 6742-2 are under mandatory BSI Certification and manufacturers shall ensure that only Retro-reflective devices used are ISI Marked and received with test certificate</i>
b)	Grouping guidelines	:	Please refer ANNEX –A
c)	Sample Size	:	3 Nos.
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	:	All tests
6.	Scope of the Licence:	:	Please refer ANNEX –D

BUREAU OF INDIAN STANDARDS

Manak Bhawan, 9, Bahadur Shah Zafar Marg, New Delhi – 110002

ANNEX A**Grouping Guidelines**

1. For the purpose of certification, following technical parameters are considered for classifications of Bicycles into different varieties as per IS 10613: 2014:

Sl. No.	Technical parameters	Classification based on technical parameters
1.	Saddle height	
2.	Frame type and dimensions	
3.	Front Fork dimensions	
4.	Rim size designations	Size designations as per IS 624
5.	Tyre size designation	Tyre size designations as per IS 2414
6.	Tube size designation	
7.	Braking system	Hand operated brakes/Back-pedal brakes
8.	Type of chainguard	Chain wheel disc conforming to Cl. 4.11.2/ Protective device conforming to Cl. 4.11.3/ Combined front gear chain guide and protective device conforming to Cl. 4.11.4 of IS 10613
9.	Whether with lighting system or without	

2. A variety may be defined as group of models having the same value of these technical parameters as above.
3. Each variety shall be tested for all the requirements for the purpose of GoL/CSoL All model name/numbers, along with their technical parameters as above, intended to be covered in the scope of licence, shall be declared by the manufacturer. Further, In addition to the models drawn for independent testing as per above guidelines, factory test report of all other models intended to be covered in scope shall also be submitted. BIS shall endorse the details of models also as an Annexure in the licence document.
4. During operation of the licence if any new model is intended to be covered within the existing scope of licence (due to changes in technical parameters other than those mentioned above), the parameters as per para 3 above for all such new model numbers will be declared by licensee to BIS for records. The declaration shall be submitted by the manufacturer as per APPENDIX I through Manakonline (communication window) and the information shall be noted by BIS and these additional models will be endorsed in the licence document by revising the Annexure to the licence document containing the list of models. After submission of the declaration to BIS Branch Office through Manakonline, the licensee may use the standard mark on such new models without waiting for BIS to endorse the models in the licence. (Licensee shall be able to produce documentary proof of having submitted this information to BIS).

However, in case any discrepancy is observed post-facto due to which it is viewed that the models are not to be endorsed in the scope (e.g. if the added models do not fall within granted scope), Head of BIS Branch Office concerned, may, after giving the licensee an opportunity to explain, direct the licensee to cease marking on such models, or in case the appliances are already marked and dispatched, issue directions for product recall.

5. 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.

APPENDIX –I
 FORMAT FOR DECLARATION FOR ADDING NEW MODELS WITHIN SCOPE
 OF LICENCE BY LICENSEE

Date:

To,
 Branch Office
 Bureau of Indian Standards

Sir/Madam

Subject: DECLARATION FOR ADDING NEW MODELS WITHIN SCOPE OF
 LICENCE

With reference to my existing licence for “Cycles- Safety requirements for Bicycles”
 (Licence No CM/L-.....), I request BIS to add the following new models in the scope of
 my licence:

List of new models intended to be covered in existing scope of licence

Model	Model 1	Model 2	Model 3
Technical parameter			
Saddle height			
Frame type and dimensions			
Front Fork dimensions			
Rim size designations			
Tyre size designation			
Tube size designation			
Braking system			
Type of chainguard			
Whether with lighting system or, without			

I declare that the above models, as indicated above, fall within the existing scope of my
 licence.

I declare that the above information is true and correct to the best of my knowledge
 and undertake that incase my declaration is found defective or incorrect BIS may take
 action as deemed appropriate as per the BIS Act, Rules and Regulations which we
 shall comply with including recall of such products from the market.

Signature with date of Firm's authorized signatory

Name and designation

ANNEX B**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
6.	General requirements of sub-assemblies, Cl. 4.1, Dimensions as per various clauses	Scale, Vernier caliper, micrometer
7.	Strength of brake system, Cl. 4.2.4	Test loads and testing fixture as per Cl. 6.2 rigs as per IS 17570-2/ ISO 16890-2 and as per IS 17570-4/ ISO 16890-4
8.	Braking performance, Cl. 4.2.5	Test track, anemometer, speedometer/tachometer, distance recording system, Water spray system, brake actuation indicating system, test loads, as per Cl. 6.3 of IS 10613
9.	Strength of steering assembly, Cl. 4.3.5	Test bar, Torque wrench, test fixture, test loads as per Cl. 6.5.1 and Cl. 6.5.2 of IS 10613
10.	Fatigue test on handle bar and Stem assembly as per Cl. 4.3.6	Test fixture, test loads, Cycle counter as per Cl. 6.5.4 of IS 10613
11.	Impact test (Falling mass), Cl. 4.4.1	Test fixture, Vernier caliper AND LOAD as per Cl. 6.6.1 of IS 10613
12.	Impact test (falling frame-fork assembly), Cl. 4.4.2	Test fixture, as per Cl. 6.6.2 of IS 10613
13.	Fatigue strength of Fork, Cl. 4.5	Test fixture, test load, cycle counter as per Cl. 6.6.3 of IS 10613
14.	Rotational trueness of wheels, Cl. 4.6.1 and Clearance , Cl. 4.6.2	Vernier caliper or micrometer or feeler gauge
15.	Static load test, Cl. 4.6.3	Test fixture and Test loads as per Cl. 4.6.3 of IS 10613
16.	Wheel retention, Cl. 4.6.4	Test fixture and Test loads as per Cl. 4.6.4 of IS 10613
17.	Compatibility of tyre, tube and rim, Cl. 4.7	Pressure gauge
18.	Drive system static load test, Cl. 4.8.3	Test assembly, test fixture, test loads as per Cl. 6.8.1 of IS 10613
19.	Pedal dynamic durability test, Cl. 4.8.4	Test assembly, test fixture, test loads as per Cl. 6.8.2 of IS 10613

20.	Fatigue test on crank assembly	Test assembly, test fixture, test loads, Cycle counter as per Cl. 6.8.3 of IS 10613
21.	Static load test (saddle and saddle pillar), Cl. 4.9.3	Test fixture, test loads as per Cl. 6.9.1 of IS 10613
22.	Saddle strength, Cl. 4.9.5	Test fixture, test loads as per Cl. 6.9.2 of IS 10613
23.	Fatigue strength test, Cl. 4.9.6	Test fixture, test loads as per Cl. 6.9.3 of IS 10613
24.	Road test, Cl. 5.1	Test track as per Cl. 6.10 of IS 10613

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

ANNEX C

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 – Each cycle shall be legibly and permanently marked with the Model name/number in addition to the requirements of IS 10613: 2014.

The BIS Standard Mark, as given in the Schedule of the licence, shall be marked on each Bicycle provided always that the product thus marked conforms to all the requirement of the specification. In addition, the licence no. CM/L-_____ and details of BIS website shall be marked at an appropriate place as follows: “For details of BIS certification please visit www.bis.gov.in”.

4. CONTROL UNIT- Quantity of Bicycles with same model number produced in one shift of production 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 Standards 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 R: required (or) S: Sub- contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
4	Components/Sub-assemblies	4	IS 10613 IS 624 IS 2414 IS/ISO 6742-2 ISO 6742-1 ISO 7636 IS 15511 IS 14221	S	One	Each Consignment	Components used shall be declared and conformity to declared parameters and Specifications shall be submitted by manufacturer. Retro-reflective devices as per IS/ISO 6742-2 are under mandatory BSI Certification and manufacturers shall ensure that only Retro-reflective devices used are ISI Marked and received with test certificate For other components, no further testing is required in case received with test certificates or is ISI Marked
4.1	General requirements of sub-assemblies	4.1, 4.1.1, 4.1.2	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained.		
4.2	Brakes						

4.2.1	Braking system	4.2.1, 4.2.5	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.2.2.1	Brake lever position	4.2.2.1	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained.		
4.2.2.2	Brake lever dimensions	4.2.2.2	IS 10613	R			
4.2.2.3	Attachment of brake assembly	4.2.2.3	IS 10613	R			
4.2.2.5	Brake adjustment	4.2.2.5	IS 10613	R			
4.2.2.4	Brake block assembly	4.2.2.4, 6.1	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.2.3	Back pedal brakes	4.2.3	IS 10613	S			
4.2.4.1	Strength of hand operated brakes	4.2.4.1, 6.2.1	IS 10613	S			
4.2.4.2	Strength of Back-pedal brakes	4.2.4.2, 6.2.2	IS 10613	S			
4.2.5.1	Braking under dry conditions	4.2.5.1, 6.3	IS 10613	S			
4.2.5.2	Braking under wet conditions	4.2.5.2, 6.3	IS 10613	S			
4.2.5.3	Extension Levers	4.2.5.3	IS 10613	S			
4.2.5.4	Linearity of back-pedal brake	4.2.5.4, 6.4	IS 10613	S			
4.3	<i>Steering</i>						

4.3.1	Handlebars	4.3.1	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained.		
4.3.2	Handlebar stem	4.3.2	IS 10613	R			
4.3.3	Expander Bolt for Handlebar stem	4.3.3	IS 10613	R			
4.3.4	Steering stability	4.3.4	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.3.5	Strength of steering assembly	4.3.5, 6.5.1.1, 6.5.1.2, 6.5.2, 6.5.3	IS 10613	S			
4.3.6	Fatigue test on handle bar and stem assembly	4.3.6, 6.5.4	IS 10613	S	One	Once in 6 months	Testing shall be done in such a way that sample of all model numbers produced in 6 months is tested at least once in 6 months
4.4.1	Impact test (falling mass)	4.4.1, 6.6.1	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.4.2	Impact test (falling frame-fork assembly)	4.4.2, 6.6.2	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.5	Front Fork						
4.5.1	Means of location	4.5.1	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained.		

4.5.2	Fatigue strength of fork	4.5.2, 6.6.3	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.6	<i>Wheels</i>						
4.6.1	Rotational trueness	4.6.1.1, 4.6.1.2	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained.		
4.6.2	Clearance	4.6.2	IS 10613	R			
4.6.3	Static load test	4.6.3, 6.7	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.6.4	Wheel retention	4.6.4.1, 4.6.4.2, 4.6.4.3, 4.6.4.4	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.6.5	Quick release mechanism	4.6.5	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.7	<i>Rims, Tyres and Tubes</i>						
4.7.1	Inflation pressure	4.7.1	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained.		
4.7.2	Compatibility	4.7.2	IS 10613	R			

4.8	<i>Pedals and Pedal/Crank drive system</i>						
4.8.1	Pedal tread	4.8.1	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained		
4.8.2	Pedal clearance	4.8.2	IS 10613	R			
4.8.3	Drive system static load test	4.8.3, 6.8.1	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.8.4	Drive system dynamic load test	4.8.4, 6.8.2	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.8.5	Fatigue test on crank assembly	4.8.5, 6.8.3	IS 10613	S	One	Once in 6 months	Testing shall be done in such a way that sample of all model numbers produced in 6 months is tested at least once in 6 months
4.9	<i>Saddle</i>						
4.9.1	Limiting dimensions	4.9.1	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained		
4.9.2	Saddle pillar	4.9.2	IS 10613	R			
4.9.3	Saddles with adjustment clamps	4.9.3, 6.9.1	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months

4.9.4	Saddles without adjustment clamps	4.9.4, 6.9.1	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.9.5	Saddle strength	4.9.5, 6.9.2	IS 10613	S	One	Once in 3 months	Testing shall be done in such a way that sample of all model numbers produced in 3 months is tested at least once in 3 months
4.9.6	Fatigue test on saddle pillar	4.9.6, 6.9.3	IS 10613	S	One	Once in 6 months	Testing shall be done in such a way that sample of all model numbers produced in 6 months is tested at least once in 6 months
4.10	Chain	4.10	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained.		
4.11	Chainguard	4.11.1, 4.11.2, 4.11.3	IS 10613	R			
4.12	Spoke protector	4.12	IS 10613	R			
4.13	Lighting	4.13.1, 4.13.2	IS 10613	R			
4.14	Reflectors	4.14	IS 10613	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be retained.		
4.15	Retro-reflective tapes	4.15	IS 10613 IS 14221	R			
4.16	Warning device	4.16	IS 10613 ISO 7636	R			

5	Road test	5.1, 6.10	IS 10613	S	One	Once in 6 months	Testing shall be done in such a way that sample of all model numbers produced in a month is tested at least once in 6 months
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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.

ANNEX D

Scope of Licence

“Licence is granted to use Standard Mark as per IS 10613: 2014 with the following scope:	
Name of the product	Cycles- safety requirements for bicycles
Saddle height	
Frame type and dimensions	
Front Fork dimensions	
Rim size designations	
Tyre size designation	
Tube size designation	
Braking system	
Type of chainguard	
Whether with lighting system or, without	

Annexure to Scope of licence-List of models covered in scope of licence

Model	Model 1	Model 2	Model 3
Technical parameter			
Saddle height			
Frame type and dimensions			
Front Fork dimensions			
Rim size designations			
Tyre size designation			
Tube size designation			
Braking system			
Type of chainguard			
Whether with lighting system or, without			