उत्पाद मैन्यूअल
धातु काटने का बैंड आरी ब्लेड
भाग 2 अभिलक्षण एवं आयाम
आईएस 5030 (Part 2): 2016 / आईएसओ 4875 (भाग 2): 2006

PRODUCT MANUAL FOR
Metal Cutting Band Saw Blades
Part 2 Characteristics and Dimensions
ACCORDING TO IS 5030 (Part 2): 2016 / ISO 4875 (Part 2): 2006

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो) अनुरूपता मूल्यांकन (विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity 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.

1.	**मानक संख्या** **IS No.**	:	IS 5030 (Part 2): 2016 / ISO 4875 (Part 2): 2006
	शीर्षक **Title**	:	Metal Cutting Band Saw Blades Part 2 Characteristics and Dimensions
	संशोधनों की संख्या **No. of amendments**	:	Nil
2.	**नमूना दिशानिर्देश** **Sampling Guidelines**		
a)	**कच्चामाल** **Raw material**	:	Carbon steel band saw blade – as per Cl. 3.1 of IS 5030-2 Bimetal band saw blade, Friction-cutting band saw blade, Composite steel band saw blade – To be declared by the manufacturer
b)	**समूहीकरण दिशानिर्देश** **Grouping Guidelines**	:	Please refer **ANNEX – A**
c)	**नमूने का परिमाण** **Sample Quantity**	:	1 mtr

d)	**परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर** **Parameters to be Declared in Test Request**	:	• Type of Band Saw Blades • Sections Width Thickness • Tooth shape • No. of teeth per 25.4 mm length • Pitch • Tooth Set • Length
3.	**परीक्षण उपकरणों की सूची** **List of Test Equipment**	:	Please refer **ANNEX – B**
4.	**निरीक्षण और परीक्षण की स्कीम** **Scheme of Inspection and Testing**	:	Please refer **ANNEX – C**
5.	**एक दिन में संभावित परीक्षण** **Possible tests in a day**	:	All tests
6.	**लाइसेंस का दायरा /Scope of the Licence:**		

"License is granted to use Standard Mark as per ***IS 5030 (Part 2): 2016 / ISO 4875 (Part 2): 2006*** with the following scope:

Name of the product			Metal Cutting Band Saw Blades Part 2 Characteristics and Dimensions
Designation*	**Type of Band Saw Blades**		Carbon steel band saw blade / Bimetal band saw blade / Friction-cutting band saw blade / Composite steel band saw blade
	Sections	**Width**	As per Table 1 / Table 2 / Table 3 / Table 4 (whichever applicable)
		Thickness	
	Tooth shape		(to be declared by the manufacturer as per IS 5030-1)
	No. of teeth per 25.4 mm length		
	Pitch		Fixed Pitch / Variable pitch
	Tooth Set		(to be declared by the manufacturer)
	Length		(to be declared by the manufacturer)

* - For guidance refer example given in Cl. 6 of IS 5030 (Part 2): 2016 / ISO 4875 (Part 2): 2006

ANNEX -A

Grouping Guidelines

1. The variety of Metal Cutting Band Saw Blades are classified based on the following:

Designation*	**Type of Band Saw Blades**		Carbon steel band saw blade / Bimetal band saw blade / Friction-cutting band saw blade / Composite steel band saw blade
	Sections	**Width**	As per Table 1 / Table 2 / Table 3 / Table 4 (whichever applicable)
		Thickness	
	Tooth shape		(to be declared by the manufacturer as per IS 5030-1)
	No. of teeth per 25.4 mm length		
	Pitch		Fixed Pitch / Variable pitch
	Tooth Set		(to be declared by the manufacturer)
	Length		(to be declared by the manufacturer)

* - For guidance refer example given in Cl. 6 of IS 5030 (Part 2): 2016 / ISO 4875 (Part 2): 2006

2. For considering GoL / CSoL, sample of each designation of Metal Cutting Band Saw Blades A shall be tested.

3. However, the following relaxations may be considered for GoL/CSoL:

   i. Sample(s) of lowest width and highest width of Metal Cutting Band Saw Blades is to be tested to cover all the widths in that particular designation for which firm is having complete manufacturing and testing facilities.

   ii. Samples of smallest number of teeth per 25.4 mm and largest number of teeth per 25.4 mm of Metal Cutting Band Saw Blades is to be tested to cover all the number of teeth per 25.4 mm in that particular designation for which firm is having complete manufacturing and testing facilities.

   iii. Sample of any length (preferably the largest) of Metal Cutting Band Saw Blades is to be tested to cover all the length in that particular designation for which firm is having complete manufacturing and testing facilities.

4. The Scope of License may be restricted based on the Manufacturing and testing capabilities of the manufacturer.

5. During the operation of License, it shall be ensured that all the varieties covered in the License are tested in rotation, to the extent possible

ANNEX- B
List of Test Equipment & Documents
Major test equipment required to test as per the Indian Standard

Sr No	Tests used in with clause reference	Test equipment
1.	Dimension, Cl. 4 Usual Section, Cl. 4.1 Length, Cl. 4.2 Pitch and teeth per unit length, Cl. 4.3 Tooth set, Cl. 4.4 Flatness, Cl. 4.5	 Micrometer Scale Vernier Caliper Profile projector Arrangement for measuring tooth set
2.	Specifications, Cl. 5 Hardness Speed	 UTM Hardness Tester (Rockwell Hardness tester / Vickers Hardness tester) Optical Microscope Spectrometer Test plate as per ISO 6507-1, IS 6508-1 Tachometer

ANNEX C
Scheme of Inspection and Testing

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Control Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Control system defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.5.

1.3 **RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT**:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: *Metal Cutting Band Saw Blades of same designation manufactured in a day under similar process condition from the same consignment of raw materials* shall constitute a control unit.

1.3.2 As mentioned above, recommended levels of control are given in **Table 1 for guidance only**.

1.3.3 The tests as indicated in Table 1 and at the levels of control in column 3 of Table 1 or the Quality Assurance Plan as submitted by the manufacturer to BIS may be carried out on the whole production of the factory which is covered by this plan and records maintained in accordance with para 2.5.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates where test equipment is required in house i.e "R" or whether it can be subcontracted as "S". Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

2.2 **For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility is optional.**

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 **Large Scale manufacturers (including foreign manufacturers) shall maintain an in-house laboratory,** which shall be suitably equipped (as given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement

a calibration plan for the test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, these manufacturers can also utilize the provisions of Sharing of testing facilities as per the Annexure-X (Relaxation in test facilities) of the guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process)

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall be marked legibly and indelibly on the packaging of Metal Cutting Band Saw Blades provided always that the blades so marked conforms to each requirement of the specification.

3.1 Marking on the packaging of Metal Cutting Band Saw Blades shall be done as per Cl. 6 of IS 5030 (Part 2): 2016 / ISO 4875 (Part 2): 2006.

3.2 **Additional Marking requirements**: The following additional requirement shall also be marked on the packaging of the Metal Cutting Band Saw Blades:

a) "For BIS certification details please visit www.bis.gov.in"

3.3 All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark.

4. HYGIENIC CONDITIONS (if applicable) – NA.

5. REJECTION - 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**				
	Materials			S	One	Each Consignment	No further testing is required, if accompanied with test certificate or ISI marked.
4	Basic Dimensions						
	Usual Section (Width and Thickness)	4.1		Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity			
	Carbon steel band saw blades	4.1.1 Table 1	IS 5030 (Part 2)				
	Bimetal band saw blades	4.1.2 Table 2	IS 5030 (Part 2)				
	Friction-cutting band saw blades	4.1.3 Table 3	IS 5030 (Part 2)				
	Composite steel band saw blades	4.1.4 Table 4	IS 5030 (Part 2)				
	Length	4.2	IS 5030 (Part 2)				
	Pitch and teeth per unit length						
	Fixed pitch	4.3.1 Table 5	IS 5030 (Part 2)				
	Variable pitch	4.3.2 Table 6	IS 5030 (Part 2)				
	Tooth Set	4.4	IS 5030 (Part 2)				
	Flatness	4.5	IS 5030 (Part 2)				
5	Specifications (Hardness)	5					
5.1	Carbon steel band Tooth Point		ISO 6508-1 / IS 1586 (Part 1)	R	One	Each Control Unit	

	saw blades	Body		ISO 6507-1 / IS 1501 (Part 1)				
5.2	Bimetal band saw blades	Tooth Point		ISO 6508-1 /IS 1586 (Part 1)	R	One	Each Control Unit	
		Body		ISO 6507-1 / IS 1501 (Part 1)				
	Friction band saw blades		5.3	IS 5030 (Part 2)	R	One	Each Control Unit	