

JIS

JAPANESE INDUSTRIAL STANDARD

**Test methods for
performance and accuracy of
band saw machines
and feed equipments**

JIS B 6509—1990

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In the event of any doubt arising,
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Test methods for performance and accuracy
of band saw machines and feed equipments

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1. Scope

This Japanese Industrial Standard specifies the testing methods related to functions, running performances and rigidities and the inspecting methods on accuracies and working accuracies of the band saw machines and caterpillar-feed band saw machines, hereafter referred to as the "band saw machines", and feed equipments (as regards the feed carriages of which effective openings of head block are 500 mm or over to 1500 mm or under) given in Table 1, among the band saw machines of 800 mm or over to 2100 mm or under in saw wheel diameter specified in JIS B 0114.

Table 1. Band Saw Machines

Name of machine
Table band saw machine
Band resaw with rollers
Horizontal band resaw with rollers
Band saw machine with feed carriage
Twin band saw machine

Reference Standards:

JIS B 0905-Balance Quality Requirements of Rigid Rotors

JIS B 6501-Test Code for Performance and Accuracy of Wood Working Machinery

JIS B 7737-Balancing Machines

JIS Z 8203-S1 Units and the Use of their Multiples and of Certain other Units

Remarks 1. The applicable Standards to this Standard are as given in the following:

JIS B 0114 Glossary of Terms for Wood Working Machinery

JIS B 6507 General Code of Safety for Wood Working Machinery

JIS B 6521 Methods of Measurement for Noise Emitted by Wood Working Machinery

JIS B 6605 Safety Standards for Construction of Table Band Resaws

JIS B 6606 Safety Standards for Construction of Band Resaws with Feed Rollers

JIS B 6607 Safety Standards for Construction of Band Saw Machines with Feed Carriages

2. The units and numerical values given in { } in this Standard are based on the traditional unit system and are appended for informative reference.

2. Methods for Functional Tests

The functional tests for the band saw machine and feed equipment shall be in accordance with Table 2.

Table 2. Functional Tests

No.	Test item	Test method
1.	Electric equipment	Before and after the running test, examine the insulating condition once each.
2.	Adjusting operation of band saw	Stretch the band saw and allow the saw wheel to rotate in normal and reverse directions manually to examine the smoothness and reliability of the adjusting device for the stretching force and setting of the band saw.
3.	Operation of straining device of band saw	Examine the smoothness of function, sensitivity and reliability of indication for stretching degree.
4.	Operation of trap device	Examine the smoothness and reliability of the function.
5.	Operation of upper saw wheel tilting device	Allow the saw wheel to start and examine the reliability of the adjusting function for going in and out of tooth tips of band saw.
6.	Operations of start, stop of saw wheel and braking device	Mount the band saw, repeat several times of start and stop operations and allow the braking device to act to examine the smoothness and reliability of actions thereof.
7.	Adjusting operations of ruler	Examine the smoothness and reliability of the adjusting device of the rectangularity of the ruler to the table and the parallelism of the ruler to the feed direction and the adjusting device of sawing width.
8.	Automatic roller feeder	Examine the smoothness and reliability of actions of the holding and feeding of workpiece of the feed roller.
9.	Caterpillar feeder	Examine the smoothness and reliability of the action of caterpillar feeding.
10.	Operation of feeder of horizontal band resaw with roller and operation of positioning of band saw	Examine the smoothness of actions of the feed roller and caterpillar chain type feed and the smoothness and reliability of the adjusting device of sawn material thickness.
11.	Operation of automatic positioning device of twin band saw machine	Set the positions of left and right band saw machines by power feed to examine the smoothness and reliability of its action.

Table 2 (Continued)

No.	Test item	Test method
12.	Operation of automatic offset device of twin band saw machine	Examine the smoothness and reliability of actions whether the carriage or workpiece is not liable to be in contact with the band saws due to widening of interval between the left and right band saws before the carriage retreats and enters between the two band saws.
13.	Operation of travel control equipment of twin band saw machine	Examine the smoothness and reliability of actions on the control of travelling speed being set in accordance with the position of carriage and the control of set stopping position.
14.	Operation of reciprocating motion of carriage	Examine the smoothness and reliability of functions of the adjusting device of feed speed, reciprocating motion device and off-setting device.
15.	Operation of advancing and retreating device of head block of carriage	Examine the smoothness of functions and reliability of indications.
16.	Operation of sheeting device	Examine the smoothness and reliability of functions.
17.	Operations of workpiece holding and attaching and detaching	The smoothness and reliability of functions of holding and attaching/detaching of the workpiece of carriage.
18.	Safety device	Examine the reliability of safety function for operator and protecting function for machine (See JIS B 6507, JIS B 6605, JIS B 6606 and JIS B 6607).
19.	Lubricating equipment	Examine the reliability of such functions as oiltightness and adequate distribution of oil quantity.
20.	Oil hydraulic pressure equipment	Examine the reliability of such functions as oiltightness and pressure regulation.
21.	Pneumatic pressure equipment	Examine the reliability of such functions as airtightness and pressure regulation.
22.	Accessories	Examine the reliability of functions

- Remarks 1. The band saw used shall be that recommended by the manufacturer.
2. For a band saw machine which is not provided with the said function, the corresponding test item to this in Table 2 shall be omitted.