

JIS

JAPANESE INDUSTRIAL STANDARD

**Safety Standards for
Construction of Rip Saw
and Gang Rip Saw**

JIS B 6600—1978

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Safety Standards for Construction of
Rip Saw and Gang Rip Saw

B 6600-1978

1. Scope

This Japanese Industrial Standard specifies the safety standards for construction of rip saws and gang rip saws to be used for woodworking.

Remark: The rip saws⁽¹⁾ and gang rip saws shall comply not only with the requirements laid down in this standard but also with the Industrial Safety and Health Law (Industrial safety and Health regulations and the construction standards for woodworking circular saws and their devices for preventing the backward movement of workpieces and the contact with saw teeth).

Note (1) Refer to JIS B 6512.

2. Definitions

For the purposes of this standard, the following definitions apply:

- (1) pressing-device A device which has a junction to permit the carriage to feed workpieces securely and to prevent them from moving backward by pressing them from their upper side.
- (2) carriage A device which feeds workpieces automatically, carrying them on it and holding them together with the pressing device.
- (3) groove for saw A groove which is provided, in advance, at the centre of a caterpillar piece in order to permit the tooth tip of a circular saw to pass through it (see Fig. 1).
- (4) preventing claws Claws which act as a stopper to prevent the backward movement of workpieces by directly sticking into the surface of the workpieces which are liable to be pushed backward.
- (5) spring-back preventing claws Claws which act as a screen to protect operators against the spring-back of end pieces, wood chips and others.
- (6) upper claws Claws which act upon the surface of workpieces from their upper side.
- (7) lower claws Claw which act upon the surface of workpieces from their lower side.

Applicable Standards and Reference Standards are: See page 11.

3. Rip Saw

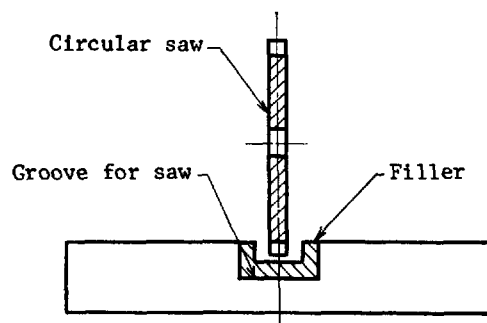
3.1 Pressing Device The rip saw shall be provided with a roll pressing device composed of pressing rollers, pressing springs, elevating mechanism and others, to hold workpieces and be as follows:

- (1) In a rip saw in which the saw spindle is located above the table, the pressing rollers shall be composed of main rollers and split rollers. At least two main rollers shall be provided, one at the front of the circular saw and the other at the rear, and at least 2 sets of the split rollers be arranged so as to interpose the saw blade between them.
- (2) In a rip saw in which the saw spindle is located below the table, at least each set of the two main rollers shall be provided at the front and the rear of the circular saw.
- (3) The length of the main rollers shall be decided on the basis of the width of the carriage and be long enough to press workpieces securely.
- (4) The interval between the split rollers and the saw blade shall not exceed 4 mm for the rip saw with saws of 350 mm or under in diameter, and 6 mm for the rip saw with saws of more than 350 mm in diameter.
- (5) The material of the pressing rollers shall be FC 20 specified in JIS G 5501 or that having equivalent or superior tensile strength to FC 20. However, rubber, synthetic resin and the like may be used for the surface material of the pressure rollers so as not to cause flaws on workpieces.
- (6) The pressing springs for the pressing rollers shall have such strength that these are capable of securely preventing workpieces from lifting.
- (7) With respect to pressing rollers, attention shall sufficiently be paid to the following items to make possible the certain feed of workpieces.
 - (a) Parallelism of the saw spindle with each of the pressing rollers.
 - (b) Parallelism of the caterpillar chain or the upper surface of feed rollers with each of pressure rollers.
 - (c) Parallelism of the feed direction of the carriage with the plane perpendicular to each of the axes of pressing rollers.
 - (d) Cylindricity of each of the pressing rollers.
- (8) The mechanism for elevating the pressing rollers shall be capable of adjusting the height according to the thickness of workpieces, and be so constructed that the ascending or descending amount of the pressing rollers can be read correctly and that the rollers can be fixed so as not to move upward and downward during the feed of workpieces.

3.2 Carriage The rip saw shall be provided with the equipment with caterpillar or feed rollers for carrying workpieces and be in accordance with the following.

- (1) The width of the caterpillar chain shall be such that it is capable of sufficiently holding and carrying workpieces together with the pressing device.
- (2) The material of the caterpillar pieces shall be FC 25 specified in JIS G 5501 or that having equivalent or superior tensile strength to FC 25, and shall be of high abrasion resistance. The requirement of the tensile strength, however, does not apply to the case of the rip saw with saws of 300 mm or under in diameter and with the feed motor having a rated output of 0.75 kW or under.
- (3) The surface of the caterpillar pieces shall be such construction as to cause no slip between the surface of the caterpillar pieces and the workpieces.
- (4) In the grooves on the caterpillar pieces provided for saws, fillers such as rubber, reinforced wood, lead or sealing material shall be embedded sufficiently and firmly as shown in Fig. 1. so that they do not fall off.

Fig. 1. Groove for Saw and Filler



- (5) With respect to the caterpillar chain, attention shall be paid to the following items, so that workpieces can be fed securely.
 - (a) Parallelism of the centre line of the saw spindle with the upper surface of the caterpillar chain.
 - (b) Parallelism of the centre line of the saw spindle with the travelling direction of the caterpillar chain.
 - (c) Perpendicularity of the upward and downward movement of the saw spindle with the upper surface of the caterpillar chain.
 - (d) Straightness of the travelling direction of the caterpillar chain.
 - (e) Height from the table surface to the upper surface of the caterpillar chain.