

JIS

JAPANESE INDUSTRIAL STANDARD

**Design rules for safety and sanitation
of noodle making machinery**

JIS B 9656—1990

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Design rules for safety and sanitation of
noodle making machinery

B 9656-1990

1. Scope

This Japanese Industrial Standard specifies rules for safety and sanitation countermeasures of design, manufacture, installation and operation of noodle making machinery.

Remarks 1. The noodle making machine is the generic name of machinery used in general manufacturing process for noodle making by regulating, mixing, stirring (agitating), rolling, cutting out, forming, steam boiling, boiling up, frying and cooling of wheat powder and other raw materials and includes the lateral mixer, vertical mixer, feeder, noodle band making machine, composite noodle band making machine, continuous rolling machine, regulating quantity cutting-out machine, steaming machine and boiling machine.

2. The applicable Standard to this Standard is shown in the following:

JIS B 9650-General Design Rules for Safety and Sanitation
of Food Processing Machinery

2. Definitions

For the purposes of this Standard main definitions are in accordance with JIS B 9650 and in addition the following definitions apply:

- (1) lateral mixer A machine to make noodle basic substrate by mixing and agitating raw materials of liquid, viscous body, or solid and their mixtures, having lateral axial agitating vanes to be moved in bowl inside by power.
- (2) vertical mixer A machine to make noodle basic substrate by mixing and agitating raw materials of liquid, viscous body, or solid and their mixtures, having vertical axial agitating vanes to be moved in bowl inside by power.
- (3) feeder A machine to feed continuously the kneaded noodle basic substrate to the noodle making machinery.
- (4) noodle band making machine A machine to form the mixed noodle basic substrate to noodle band.
- (5) composite noodle band making machine A machine to form by rolling the noodle basic substrate with combining the noodle band making machine and rolling machine.
- (6) continuous rolling machine A machine to press-roll gradually by passing the noodle band through several step continuous rolls.
- (7) regulating quantity cutting-out machine A machine to cut out the noodle band of specific thickness to noodle line and to regulate the quantity.



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- (8) steaming machine A machine to regulate the quality by steaming the cut-out noodle lines.
- (9) boiling machine A machine to regulate the quality by boiling the cut-out noodle lines.

3. Safety and Sanitation Countermeasures in Division of Machine Type

3.1 Lateral Mixer

3.1.1 Safety Countermeasures The safety countermeasures shall be as follows:

- (1) Make the safety guard such structure that it is capable of opening and closing largely as required, and when the opening part has opened the power is shut off automatically.
- (2) In the case of (1), make the structure such that the power stopped once, even the opening part is closed, if the switch is not "closed" newly, does not actuate again
- (3) Make the lateral mixer having automatic or manual bowl overturning apparatus such structure that when the bowl is opened by $\frac{1}{5}$ or more, if the both hands of worker is not used, the stirrer can not start actuation.
- (4) Make the lateral mixer, provide with automatic overturning apparatus such structure that the opening state of bowl is not closed by $\frac{4}{5}$ or more of full open time and for sealing completely the bowl, further the worker operates the electric motor for overturning by using both hands.
- (5) In the case of setting a timer, use a humidity proof timer.
- (6) To the lateral mixer provide with respectively independent electric motor and control apparatus.

Further, provide with an operating switch attached with key so as the other worker not to be able to actuate during checking and cleaning of machine.

- (7) Let the attaching position of electric control operation board be a place where the worker can view sufficiently even the bowl is opened. Other than the stop switch, do not set in double the operating apparatus.
- (8) In the case where, when the cover is opened, there are works to view the state of bowl inside and to mix the additives, attach the safety guard of grid state at the inside of cover, and make the structure such that, when this safety guard is detached, the interlock mechanism so actuates that the agitating vanes do not rotate.
- (9) Attach the emergency stop button at the place nearest to the working range of worker.

3.1.2 Sanitation Countermeasures The sanitation center measures shall be as follows:

- (1) For materials of food contact parts, use in all the stainless steel or that having corrosion resistance equivalent thereto.
- (2) Make such structure that oils do not drop down to the food contact part by oozing out from the bearing part of agitating shaft or the like.
- (3) Make the parts of agitating vanes and agitating shafts such structure that their whole surfaces become effectively clean by ordinary washing method.
- (4) Allow the surface of shaft attached with seal ring to be in accordance with the specification of 4.1 of JIS B 9650.
- (5) Make the structure such that the end parts of agitating vanes contact with the bowl surface so as the contacting area to be smallest and all raw materials can be mixed suitably and further it is not apart more than required distance.
- (6) Make the inlet opening of raw material such suitable size to prevent the leakage of raw material and attach the collar to the inlet opening.

Further, attach the door and cover to the inlet opening of raw material without clearance.

Further, in the case where the door and cover is made hinge type, make the structure easily detachable and attach so as no clearance to be caused.

- (7) Make the wheat powder injection inlet such structure that it is detachable and the parts of injection inlet is also detachable.
- (8) Make the injection inlet of liquid raw material the sanitary structure and further detachable.

Further, make the injection inlet so as not to protrude into the bowl to attach the bowl and cover and do not use the suspending system.

3.2 Vertical Mixer

3.2.1 Safety Countermeasures The safety countermeasures shall be as follows:

- (1) Provide the following safety device to the mixer having vertical agitating shaft.
 - (a) Make the safety guard to be set at the upper part of bowl with enclosing the agitating shaft the such structure it is able to open and close largely as required and when the opening part is opened the power is shut off automatically.