

JB

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JB/T 8539-1997

Plastics extrusion blow moulding machines

塑料挤出吹塑中空成型机

(English Translation)

Issued on: April 15, 1997

Implemented on: January 1, 1998

**Issued by: Ministry of Industry and Information Technology of the
People's Republic of China**

Table of Contents

Foreword	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Types and basic parameters	6
4.1 Types	6
4.2 Maximum product volume series of molding machines	6
4.3 Basic parameters	6
5 Requirements	7
5.1 General requirements	7
5.2 Parison requirements	8
5.3 Safety protection	8
5.4 Appearance	9
6 Test methods	9
6.1 Mold clamping force test	9
6.2 Plasticizing capacity test	11
6.3 Storage amount test	11
6.4 Hydraulic system test	12
6.5 Electrical system test	13
6.6 Parison quality uniformity test	13
6.7 Parison control device test	13
6.8 Safety interlocking device test	13
6.9 Noise test	14
7 Inspection rules	14
7.1 Exit-factory inspection	14
7.2 Type test	15
8 Marking, packaging, transportation and storage	15
8.1 Marking	15
8.2 Packaging	16
8.3 Transportation	16
8.4 Storage	16
Table 1 - Basic parameters	7

Figure 1 - Standard test method for mold clamping force	9
Figure 2 - Reference method I for mold clamping force	10
Figure 3 - Reference method II for mold clamping force test	11
Figure 4 - Storage head	12
Figure 5 - Noise test	14

1 Scope

This Standard specifies the types and basic parameters, requirements, test methods, inspection rules, marking, packaging, transportation and storage for plastic extrusion blow molding machines.

This Standard applies to the molding machines which produces plastic hollow products using the extrusion-blow method (hereinafter referred to as the molding machines); this Standard can be referred to for the molding machines for other special purposes.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition dated applies to this document. For undated references, the latest edition of the referenced documents (including all amendments) applies to this document.

GB/T 191, Packaging - Pictorial marking for handling of goods

GB/T 3766, Hydraulic fluid power - General rules and safety requirements for systems and their components

GB/T 3785 (all parts), Electroacoustics - Sound level meters

GB 5226.1-2008, Electrical safety of machinery - Electrical equipment of machines - Part 1. General requirements

GB 17888.3, Safety of machinery - Permanent means of access to machinery - Part 3. Stairs, stepladders and guard-rails

GB/T 6388, Transport package shipping mark

GB/T 7932, Pneumatic fluid power - General rules relating to systems

GB/T 9969, General principles for preparation of instructions for use of industrial products

GB/T 12783, Editorial nominating method for the model designation of rubber and plastics machinery 5.1.7 The hydraulic, pneumatic and cooling systems and other components shall not have leakage of oil, gas or water; the cooling liquid shall not be mixed into the hydraulic

system.

5.1.8

The molding machines shall operate stably and reliably during normal operation; the control system shall be highly responsive, with clear and accurate indication.

5.1.9

For the molding machines equipped with the multi-point parison wall thickness control device, the repeated positioning accuracy of die opening amount shall be less than 0.1 mm.

5.2.1

The parison shall be smooth, well plasticized.

5.2.2

For the molding machines equipped with a storage head (hereinafter referred to as the storage type molding machines), at any set value, the quality uniformity of injection parison shall not be greater than 3%.

5.2.3

For continuous extrusion molding machines (hereinafter referred to as continuous molding machines), within the same time interval, the quality uniformity of extrusion parison shall not be greater than 5%.

5.3.1

If the operating conditions of the components, instruments and accessories of the molding machines, 2 m above the ground, need to be observed, it needs to provide skidproof foot rests, platforms or ladders as well as reliable fence and handrail, as specified in GB 17888.3.

5.3.2

Safety protective devices shall be provided around the molding machines on which molds are installed. If safety doors are installed as protective devices, they shall be fixed reliably without opening itself. If photoelectric protective devices are used, it shall be ensured that they operate reliably and are provided with visible warning signs. The mold clamping part shall be provided with a reliable safety interlocking system. In normal operating conditions, the safety doors shall not be closed or block the photoelectric device; the mold clamping part shall not be closed.

5.3.3

The storage type molding machines shall give alarms when the storage amount achieves the limit value and the extruding machines shall stop operating.

5.3.4

The molding machines shall have emergency stop buttons and rapid mold opening buttons. Press the emergency stop button and then the extruding machines and oil pumps stop operating; and then the other actions stop. Press the rapid mold opening button, and then the template immediately opens.

5.3.5

The molding machines shall be free from any abnormal scream or impact sound. The accompanied by a quality certificate. Before the delivery of each molding machine, the continuous idle operation test for not less than 4 h shall be carried out (with the extruding device and head in idle); check the specifications in 5.1.5, 5.1.6, 5.3.1 and 5.4 before the test; and during the test, check the specifications of 5.1.2 ~ 5.1.4, 5.1.7,

5.1.8, 5.1.9 and 5.3.2 ~ 5.3.4.

7.2 Type test

During the type test, carry out sampling inspection. Take 1 sample each time. If one of the test items is a fail, then take another sample; if there is still any non-conformance item, then the type test is a fail. The continuous load test for not less than 8 h shall be carried out in the type test; during the test, check the specifications of 5.2.1 ~ 5.2.3 and 5.3.5.

In one of the following circumstances, the type test shall generally be carried out.

- during the trial-production pattern evaluation of a new product or an old product whose production is transferred to another location;
- in case of any significant change in structure, process or material after mass production, which may influence the product properties;
- at least 1 sample taken each year during normal production;
- when the production is resumed after a long term of production halt;
- when there is any significant difference between the results of an exit-factory inspection and those of the last type test;
- when a national quality supervision institution requires so;