



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

GB/T 20674.2-2020

Replacing GB/T 20674.2-2006

**Plastic pipes and fittings Polyethylene system welding
equipment - Part 2: Electrofusion connection**

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Foreword

GB/T 20674 "Plastic pipes and pipe fittings polyethylene system welding equipment" is divided into the following 4 parts.

---Part 1.Hot Fusion Butt;

---Part 2.Electrofusion connection;

---Part 3.Operator code;

---Part 4.Traceable coding.

This part is Part 2 of GB/T 20674.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 20674.2-2006 "Plastic pipes and pipe fittings polyethylene system welding equipment Part 2.Electrofusion

Next. Compared with GB/T 20674.2-2006, the main technical changes in this part are as follows.

--- Increased the input voltage range of the electric welding machine (see Chapter 1);

---Modified the normative references (see Chapter 2, Chapter 2 of the.2006 edition);

---Modified terms and definitions (see Chapter 3, Chapter 3 of the.2006 edition);

---Modified the content of Chapter 4; Added the corresponding description table of the names, features, and codes of different types of electric welding machines (see Chapter 4, Chapter 4 of the.2006 edition);

---Added the requirements for splice record content and splice data transmission format and other technical requirements (see 5.1.6.3);

--- Added appearance and safety requirements (see 5.2 and 5.3);

---Adjust the contents of the original Appendix B to Chapter 5 (see 5.7, Appendix B of the.2006 edition);

- Increase the resistance value deviation range (see 5.8);
- Added the total energy deviation range requirement (see 5.9.1);
- Adjust the technical requirements of "input voltage", "frequency" and "short circuit" to the necessary safety program modules, collectively referred to as safety program modules (see 5.10, 5.2.5.3.1, 5.2.5.3.2 and 5.2.5.3.3 of the.2006 edition);
- Adjust the contents of the original Chapter 6 to Chapter 5 (see 5.11, Chapter 6 of the.2006 edition);
- Added the ambient temperature compensation function (see 5.11.4.3);
- Added the requirements of the memory warning prompt and the monitoring content of the splicing process (see 5.12);
- Adjust the test conditions of shock performance and vibration performance to Chapter 5 and Chapter 7 (see 5.13 and 7.13, 5.3.1 of the.2006 edition

5.3.2 and 7.13, 7.14);

- Adjust the contents of the original Appendix C and Appendix D to Chapter 7 (see 7.13, Appendix C and Appendix D of the.2006 edition);
- Adjust the power requirements to Chapter 6, and increase the input power supply rated frequency deviation range requirements (see Chapter 6,.2006 edition 5.2.2);
- Increase the basic requirements inspection, and adjust the relevant content (see 7.1, 7.1 in the.2006 edition);
- The total quality inspection has been deleted, and the appearance inspection has been added (see 7.2, 7.2 in the.2006 edition);
- Added safety inspection (see 7.3);
- Modified the minimum measured resistance value in the "Electrofusion Welding Machine to Resistance Measurement Accuracy Inspection". Change "0.25ohm" to "0.4ohm" (see 7.8.1.2, 7.7.2 of the.2006 edition);
- Added the splicing process monitoring and inspection (see 7.12);
- Deleted technical documents (see Chapter 9 of the.2006 edition);
- Added random document requirements (see Chapter 8);
- Added maintenance requirements (see Chapter 9);
- Adjust the original Chapter 8 to Chapter 10, add periodic inspections and requirements,

and modify the relevant requirements for factory inspection and type inspection

(See Chapter 10, Chapter 8 of the 2006 edition);

---Divided the signs into permanent signs and other information, and added other information content (see Chapter 11, Chapter 10 of the 2006 edition);

---Added packaging, transportation and storage requirements (see Chapter 12);

---Added the feature code representation method of the electrofusion welding machine (see Appendix C);

---Added the technical requirements for the intelligent development of automatic electric fusion welding machines (see Appendix D).

This part uses the redrafting method to modify and adopt ISO 12176-2:2008 "Plastic pipes and pipe fittings polyethylene system welding equipment No.

Part 2. Electrofusion connection.

Compared with ISO 12176-2:2008, this part has many structural adjustments. Appendix A lists this part and ISO 12176-2.

The 2008 chapter number comparison list.

Compared with ISO 12176-2:2008, there are technical differences between this part and ISO 12176-2:2008. The clauses related to these differences have been passed on the outer margins.

The vertical single line (|) of the position is marked, and a list of the corresponding technical differences and their reasons is given in Appendix B.

This section also made the following editorial changes.

---The electric fusion welding machine is used for the prefabricated connection of gas/water supply components (such as valves, steel-plastic conversion, etc.) or for nuclear power pipes,

Instructions for connecting PE-RT pipes, industrial pipes, composite pipes, etc. for cold and hot water (see Note 2 in Chapter 1).

Please note that certain contents of this document may involve patents. The issuing agency of this document is not responsible for identifying these patents.

This part was proposed by the China National Light Industry Council.

This part is under the jurisdiction of the National Plastic Products Standardization Technical Committee (SAC/TC48).

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Co., Ltd., Smart Pipeline Co., Ltd. of Jilin Province.

1 Scope

This part of GB/T 20674 specifies the terminology and terms of polyethylene (PE) piping system electrofusion connection equipment (hereinafter referred to as "electrofusion welder")

Definition, classification, requirements, test methods, random documents, maintenance, inspection rules, marking, packaging, transportation and storage.

This part, together with other parts of GB/T 20674, is applicable to gas/water supply polyethylene pipes and pipe fittings with welding equipment. Polyethyl

The pipes and fittings for olefin gas meet the requirements of GB/T 15558 (all parts), and the pipes and fittings for drinking water and general pressure water delivery are

Meet the requirements of GB/T 13663 (all parts).

This section applies to electric fusion welding machines controlled by voltage or current, and electric fusion welding machines are suitable for pipe fittings heated by resistance wire.

The electric welding machine is divided into three input voltage levels. P1 voltage (SVLV, not greater than 50V); P2 voltage (LV, greater than 50V and not

Greater than 250V); P3 voltage (HV, greater than 250V and not greater than 400V).

The normal working environment temperature range of the electric welding machine is -10 degrees C~40 degrees C.

Note 1.If the ambient temperature is out of the range, it will be agreed upon by both parties.

Note 2.Electrofusion welding machine is used for prefabricated connection of gas/water supply components (such as valves, steel-plastic conversion, etc.) or used for nuclear power pipes, PE-RT pipes for cold and hot water,

When connecting industrial pipes, composite pipes, etc., the supply and demand parties shall negotiate and agree.