

ICS 29.240.10

CCS K 43



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

GB/T 17467-2020

High-voltage/low-voltage prefabricated substation

Issued on: March 31, 2020

Implemented on: October 1, 2020

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

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

This standard replaces GB/T 17467-2010 "High-voltage/low-voltage prefabricated substation". Compared with GB/T 17467-2010, the main technology

The surgical changes are as follows.

--- Modified the main electrical components of the pre-installed substation (see Chapter 1, Chapter 1 of the.2010 edition);

--- Deleted the applicable requirements of non-prefabricated substations not related to this standard (see Chapter 1 of the.2010 edition);

--- Added "high voltage connection" "low voltage connection" "accessible type" "arc fault current" "arc fault duration" "arc

"Personal protection" and "arc ignition protection zone" under the circumstances; delete "IAC-A internal arc level" "IAC-B internal arc

"IAC-AB internal arc level" and other terms (see Chapter 3, Chapter 3 of the.2010 edition);

--- Increase the rating of the internal arc level (IAC) on the high voltage side and the rating of the protection level in the case of an arc on the low side

The manufacturer has regulations (see 5.102);

--- Increased the requirements for internal arc faults on the low voltage side (see 6.103);

--- Increased the requirements for electromagnetic fields (see 6.107);

--- Modified the type test type of EMC test and internal arc fault test, and changed it to "mandatory type test when applicable" (see

7.1.1, version 6.1 in.2010);

--- Increased power frequency withstand voltage test of low voltage connection line (see 7.2.102.3);

- Modify the test method of the temperature rise test, and give the test procedures according to the two cases of liquid immersed transformer and dry transformer (see 7.5.103, 2010 version 6.5);
 - Added additional tests for auxiliary and control circuits (see 7.10);
 - Added internal arc fault test (see 7.102);
 - Added the requirements for the internal arc fault test on the low voltage side (see 7.102.3);
 - Added the "measure or calculate the electromagnetic field generated by the prefabricated substation" test (see 7.103);
 - Added the test requirement of "Functional test for satisfactory operation" (see 7.104);
 - Added Chapter 13 "Product Impact on the Environment" (see Chapter 13);
 - Modified the height of the product in the layout of the internal arc fault test indicator, which was divided from 2m to 1.9m
- (See E.3.2, Appendix A of the 2010 edition).

This standard uses the redrafting method to modify and adopt IEC 62271-202..2014 "High Voltage Switchgear and Control Equipment Part 202.High

High-voltage/low-voltage prefabricated substation ".

Compared with IEC 62271-202..2014, this standard has more structural adjustments. Appendix A lists this standard and IEC 62271-

A list of the article number comparison for 202..2014.

The technical differences between this standard and IEC 62271-202..2014 and the reasons are as follows.

--- With regard to normative quotation documents, this standard has been adjusted with technical differences to adapt to my country's technical conditions and adjustments

The situation is reflected in Chapter 2 "Regulatory Reference Documents", with specific adjustments as follows.

* Replaced IEC 60076-1..2011 with GB/T 1094.1-2013 modified to adopt international standards;

* Replace IEC 60076-2..2011 with GB/T 1094.2-2013 which adopts the international standard.

* Replaced IEC 60076-5..2006 with GB/T 1094.5-2008 modified to adopt international standards;

- * Replaced IEC 60076-7..2005 with GB/T 1094.7-2008 modified to adopt international standards;
- * Replace IEC 60076-10..2001 with GB/T 1094.10-2003, which adopts international standards modified;
- * Replaced IEC 60076-11..2004 with GB/T 1094.11-2007 modified to adopt international standards;
- * Replaced IEC 60076-12..2008 with GB/T 1094.12-2013 modified to adopt international standards;
- * Replaced IEC 60050-441.1984 with GB/T 2900.20-2016, which adopts international standards.
- * Replaced IEC 62271-200..2011 with GB/T 3906-2020, which was modified to adopt international standards;
- * Replaced IEC 62271-1..2007 with GB/T 11022-2011, which adopts international standards.
- * Replaced IEC 60947-1..2011 with GB/T 14048.1-2012, which adopts international standards.
- * Replaced IEC 61180-1..1992 with GB/T 17627.1-1998 equivalent to the international standard;
- * Replaced ISO /IEC Guide51..1999 with GB/T 20002.4-2015 modified to adopt international standards;
- * Replaced IEC /T S60815-1..2008 with GB/T 26218.1-2010, which adopts international standards modified;
- * Replace the IEC /T R62271-208..2009 with the modified GB/T 33977-2017 that adopts international standards;
- * Deleted reference documents IEC 62271-201..2006, ISO 1052.1982, ISO 6508-1..2005, ISO 1716..2010;
- * Added reference documents GB/T 762-2002, GB/T 1408.1-2016, GB/T 2900.20-2016, GB/T 18859-2016, ISO 1716..2018;
- Modify the applicable voltage range and frequency range to meet the actual situation of my country's power grid (see Chapter 1);
- Removed the applicable requirements of non-prefabricated substations, which are not covered by this standard (see IEC 62271-202).

2014);

--- Added the terms "personal protection in the case of arc" and "arc ignition protection zone" to facilitate the use of this standard (see Chapter 3);

--- Increased the rated value of "rated pressure of compressed air source for controllable pressure system" to improve the rated value of the product (see 5.11);

--- Increased the rated value of "rated insulation level for insulation and/or opening and closing" to improve the rated value of the product (see 5.12);

--- Increased the rating of the protection level in the case of low-voltage side arcs, if the manufacturer has provisions to improve the safety of the pre-installed substation

Sexual requirements (see 5.102.3);

--- Move the external mechanical impact in "Protection of substations to mechanical stress" to "Protection level provided by the enclosure" because

External mechanical impact is part of the enclosure protection level;

--- Added 6.20 X-ray, 6.21 corrosion, consistent with GB/T 11022-2011 structure (see 6.20 and 6.21);

--- Increased the requirements for internal arc faults on the low-voltage side to improve the safety requirements of pre-installed substations (see 6.103 and

7.102.3);

--- Increased the requirements of the type test cycle to meet the specific reality of my country (see 7.1.1);

--- According to the relevant standards of low-voltage switchgear, the power frequency withstand voltage test of the low-voltage connection wire is added to the insulation test to improve the type test

Inspection items (see 7.2.102.3);

--- "Functional test for satisfactory operation" has been added to the type test, and the requirements have been clarified to improve the safety of pre-installed substations

Total requirements, increase operability (7.104);

--- Insulation test and grounding continuity test of low-voltage connection wires were added to the factory test to improve the safety requirements of pre-installed substations

Seeking (see 8.102 and 8.107);

--- D.4 in Appendix D of International Standards has been rewritten to suit the actual operation of our products.