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

GB/T 17386-2025

Replacing GB/T 17386-2009

Sizing and selection of electric submersible pump installations

潜油电泵装置的规格选用

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 17386-2009 "Specifications and Selection of Submersible Electric Pump Units". Compared with GB/T 17386-2009, except for the structure... Aside from adjustments and editorial changes, the main technical changes are as follows:

- a) Added terms and definitions (see Chapter 3);
- b) Added "Selection Principles" (see 4.1);
- c) The selected flowchart has been changed, and the flowchart description has been removed (see 4.2, Chapter 4 of the.2009 edition);
- d) The content of oil and water well data collection has been changed (see Chapter 5, 5.2 of the.2009 edition);
- e) The section "Assessing the operating requirements of submersible electric pumps" has been removed (see section 5.3 of the.2009 edition);
- f) Added "Basic Parameter Determination" (see Chapter 6);
- g) The "Proofreading List" has been removed (see sections 6.3, 7.3, 8.3, 9.5, and 10.4 in the.2009 edition);
- h) The selection process and requirements for submersible pumps have been revised (see

7.1,

6.2 in the 2009 version);

1 Scope

GB/T 17386-2025 is the Chinese national standard on sizing and selection of electric submersible pump installations, in the field of petroleum and related technologies. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 2 December 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2026. Classification: ICS 75.180.10, CCS E92. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the selection principles and procedures for submersible electric pump (ESP) unit specifications, oil and water well data collection, basic parameter determination, equipment selection, and auxiliary procedures. Assist in equipment selection and reporting. This document applies to the selection of specifications for submersible electric pump units for oil and water wells.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 14549 Power Quality - Harmonics in Public Power Grids

GB/T 16750 Submersible Electric Pump Unit

GB/T 17389 Application of Submersible Electric Pump Cable Systems SY/T 5745-2024 Terminology for Oil and Gas Production Engineering SY/T 5904 Selection Principles and Design Methods for Submersible Electric Pumps

3 Terms and Definitions

The terms and definitions defined in SY/T 5745-2024, as well as the following terms and definitions, apply to this document.

3.1 Gas-oil ratio (GOR) The ratio of natural gas production to crude oil production under

standard conditions.

Note. The unit is cubic meters per cubic meter (m^3/m^3) or cubic meters per ton (m^3/t).

[Source: SY/T 5745-2024, 5.1.17, with modifications]

3.2 Gas holdup of intake Under actual reservoir temperature and pressure conditions, the percentage of free gas phase volume at the pump inlet relative to the total volume of oil, gas, and water phases.

3.3 The relationship curve between oil (gas) well production and bottom hole flowing pressure. [Source: SY/T 5745-2024, 5.1.49, with modifications]

3.4 Pump head The submersible pump lifts the liquid to a certain height. [Source: SY/T 5745-2024, 5.4.13, with modifications]