

Translated English of Chinese Standard: GB/T3316-2019

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 45.060.10

S 42

GB/T 3316-2019

Replacing GB/T 3316-1982

Method of defining the power for diesel locomotives

内燃机车功率确定方法

Issued on: March 25, 2019

Implemented on: July 01, 2019

**Issued by: State Administration for Market Regulation;
Standardization Administration of the People's Republic of
China.**

Table of Contents

Foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions.....	4
4 Power determination	5

Method of defining the power for diesel locomotives

1 Scope

This Standard specifies the terms and definitions of power for diesel locomotive and the determination method of power by calculation.

This Standard applies to the determination of the calculated power at wheel rim of diesel-powered electric drive and hydraulic drive diesel locomotives (hereinafter referred to as "locomotives").

2 Normative references

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

GB/T 3314, General technical specifications for diesel locomotives

GB/T 3367.1-2018, Glossary of terms for diesel locomotive. Part 1: General terms

GB/T 3367.2-2018, Glossary of terms for diesel locomotive. Part 2: Diesel engine

GB/T 8170, Rules of rounding off for numerical values & expression and judgment of limiting values

3 Terms and definitions

Terms and definitions determined by GB/T 3314, GB/T 3367.1-2018 and GB/T 3367.2-2018, and the following ones are applicable to this document. For ease of use, some of the terms and definitions in GB/T 3367.1-2018 and GB/T 3367.2-2018 are repeated here.

3.1 Rated power, nominal power of diesel engine

The effective power that is calibrated on the label after the diesel engine manufacturer has completed the bench test to verify the performance of the diesel engine.

[GB/T 3367.2-2018, definition 5.2]

4.2 Determination of calculated power at wheel rim

The calculated power at wheel rim of the diesel locomotive is determined based on the loading power. When determining the calculated power at wheel rim of the diesel locomotive, the following power values shall be deducted from the loading power:

a) consumption of auxiliary power of locomotive:

- 1) when the diesel engine exerts the loading power, if the load is adjustable, take the value by 2/3 of its rated absorption power;
- 2) when the diesel engine exerts the loading power, if the load is not adjustable, take the value by its rated absorption power;
- 3) in the case where the diesel engine provides both traction and train power supply, the train power supply shall be deducted and shall be carried out in accordance with 4.2 a)1).

Note 1: short-term power loads, such as locomotive air compressors, are not counted.

b) the minimum power loss of the transmission system, when the diesel engine is performing its loading power, namely:

- 1) main generators, rectifiers, traction converters (if any) and traction motor systems for electric drive;
- 2) hydraulic transmission box and intermediate (condition) gearbox system for hydrodynamic drive.

c) power loss of the axle drive system.

Note 2: the diesel engine loading power that deducts the power consumption which is specified in 4.2 a) and 4.2 b), is the nominal power.

4.3 Power unit

The power is measured in kilowatts (kW), and its value is rounded to the ten-digit. The specific value is rounded according to GB/T 8170.

4.4 Power determination method diagram

The schematic diagram of the method for determining the calculated power at wheel rim of diesel locomotives is shown in Figure 1.

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----