***भारतीय मानक***

***Indian Standard***

 **TED 02 (23613) F**

**IS/ISO 8528 (Part 5): 2022**

**प्रत्यागामी आंतरिक दहन इंजन चालित प्रत्यागामी धारा उदभवन करने वाले सेट**

**भाग 5 उदभवन करने वाले सेट**

 (*दूसरा पुनरीक्षण*)

**Reciprocating Internal Combustion Engine Driven Alternating Current Generating Sets**

**Part 5 Generating Sets**

(*Second Revision*)

 ICS 27.020; 29.160.40

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BUREAU OF INDIAN STANDARDS

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 **January 2024 Price Group**

Automotive Prime Movers, Transmissions Systems and Internal Combustion Engines Sectional Committee, TED 02

NATIONAL FOREWORD

This Indian Standard (*Second Revision*) (Part 5) which is identical with ISO 8528-5:2022 ‘Reciprocating Internal Combustion Engine Driven Alternating Current Generating Sets — Part 5: Generating sets’ issued by International Organization for Standardization (ISO), was adopted by the Bureau of Indian Standards on the recommendations of Automotive Prime Movers, Transmissions Systems and Internal Combustion Engines Sectional Committee and approval of the Transport Engineering Division Council.

This standard was originally published in 2012 which was identical with ISO 8528-5: 2005. The first revision of this standard was taken up to align it with ISO 8528-5: 2018. This second revision of the standard has been undertaken to align it with ISO 8528-5:2022.

The major changes in this revision are as follows:

1. *Clause* **3** has been revised;
2. A list of symbols has been added in **3.2**;
3. Mistakes have been corrected in Table 4;
4. Previous Figures 3, 7, 8, 14 and 16 have been modified and renumbered;
5. Previous Figures 1 and 17 have been deleted; and
6. Annex A has been deleted.

This standard is one of the series of the standards published on Reciprocating Internal Combustion Engine driven Alternating Current Generating Sets. Other standards in this series are:

1. Part 1 Applications, ratings and performance
2. Part 2 Engines
3. Part 3 Alternating current generators for generating sets
4. Part 4 Control gear and switch gear
5. Part 6 Test methods
6. Part 7 Technical declaration for specification and design
7. Part 8 Requirements and tests for low-power generating sets
8. Part 9 Measurement and evaluation of mechanical vibrations
9. Part 10 Measurement of airborne noise by the enveloping surface method
10. Part 12 Emergency power supply to safety services

The text of the ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

* 1. Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
	2. Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated:

|  |  |  |
| --- | --- | --- |
| *International Standard* | *Corresponding Indian Standard* | *Degree of Equivalence* |
| IEC 60034-1: 2022Rotating electrical machines — Part 1: Rating and performance | IS 15999 (Part 1): 2021/IEC 60034-1: 2017Rotating electrical machines — Part 1: Rating and performance (*Second**Revision*) | Identical under dual numbering |
| ISO 8528-3: 2020Reciprocating internal combustion engine driven alternating current generating sets — Part 3: Alternating current generators for generating sets | IS/ISO 8528-3: 2020Reciprocating internal combustion engine driven alternating current generating sets — Part 3: Alternating current generators for generating sets | Identical under single numbering |
| ISO 8528-1: 2018Reciprocating internal combustion engine driven alternating current generating sets — Part 1: Application,ratings and performance | IS/ISO 8528-1: 2018Reciprocating internal combustion engine driven alternating current generating sets — Part 1: application, ratings and performance (*First Revision*) | Identical under single numbering |

The technical committee has reviewed the provisions of following International Standards referred in this adopted standard and has decided that they are acceptable for use in conjunction with this standard:

|  |  |
| --- | --- |
| *International Standard* | *Title* |
| ISO 3046-5: 2001 | Reciprocating internal combustion engines — Performance —Part 5: Torsional vibrations |

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. The Bureau of Indian Standards shall not be held responsible for identifying any or all such patent rights.

The standard also makes a reference to the BIS Certification Marking of the product. Details of which are given in National Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

## NATIONAL ANNEX A

(*National Foreword*)

## A-1 BIS CERTIFICATION MARKING

The Reciprocating Internal Combustion Engine driven AC Generating Sets may also be marked with the Standard Mark.

**A-1.1** The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.