

BUREAU OF INDIAN STANDARDS
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Draft Indian Standard

FREQUENCIES FOR SPECIAL POWER APPLICATIONS
(First Revision of IS 7691)

(ICS 29.020)

Basic Electrotechnical Standards
Sectional Committee, ETD 01

Last date of comments:
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FOREWORD

(Formal clauses will be added later)

This draft Indian Standard (*First Revision*) will be adopted by the Bureau of Indian Standards, after the draft finalized by the Basic Electrotechnical Standards and Power Quality Sectional Committee had been approved by the Electrotechnical Division Council.

This standard was first published on 30 April 1975. The revision of this standard has been brought out to align it with the latest practices.

It is well known that in some special applications, such as in industries like ~~rayon and also for~~ traction systems, aircraft, machine tools, etc, special frequencies are required for control purposes. Keeping in mind that such applications are becoming increasingly common in this country owing to rapid industrialization, this standard has been drawn up to bring about uniformity in the frequencies adopted for such purposes.

In preparing this standard assistance has been derived from IEC ~~Pub 196-1965-60196: 2009~~ 'IEC standard frequencies', issued by the International Electrotechnical Commission.

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 (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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1 SCOPE

1.1 This standard prescribes standard frequencies required for special control applications required for single phase and three phase a.c. systems for installation in ships, for a.c. traction systems, machine tools, ~~rayon industry~~ and aircraft. This standard is limited to frequencies up to 10 000 Hz.

1.2 The standard frequencies for centralized control installations are not covered in this standard.

2 STANDARD FREQUENCIES

The standard frequencies for application specified in **1.1** shall be in accordance with Table 1.

Table 1 Standard Frequencies
(Clause 2)

| System and Installations in ships | Traction | Industrial Use (See Note 3) | Air Craft |
|--|-----------------|---------------------------------------|------------------|
| Hz | Hz | Hz | Hz |
| (1) | (2) | (3) | (4) |
| 50 | 50 | 50 | |
| 60 | | 100 | |
| | | 150 | |
| | | 200 | |
| | | 250 | |
| | | 300 | |
| | | 400 | 400 |
| | | 500 | |
| | | 600 | |
| | | 750 | |
| | | 1 000 | |
| | | 1 200 | |
| | | 1 500 | |
| | | 2 000 | |
| | | 2 400 | |
| | | 3 000 | |
| | | 4 000 | |
| | | 8 000 | |
| | | 10 000 | |

NOTES

- 1** When the frequencies are produced by rotating sets with induction motors, the real frequencies will be slightly lower than the values shown.
- 2** The values underlined in the 50 Hz series are recommended as preferred values for non-portable tools.
- 3** These recommendations are not applicable for the circuits of control devices of machine tools when these circuits form part only of a closed assembly peculiar to one machine-tool or to a combination of such machines.