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FREQUENCIES FOR SPECIAL POWER APPLICATIONS

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FREQUENCIES FOR SPECIAL POWER APPLICATIONS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 April 1975, after the draft finalized by the Electrotechnical Standards Sectional Committee had been approved by the Electrotechnical Division Council.

0.2 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.

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

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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 ac systems for installation in ships, for ac 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

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

TABLE 1 STANDARD FREQUENCIES

(*Clause* 2.1)

SYSTEMS AND INSTALLATIONS IN SHIPS	TRACTION	INDUSTRIAL USE (*See* NOTE 3)	AIRCRAFT
(1)	(2)	(3)	(4)
Hz	Hz	Hz	Hz
50		50	
60	50	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	

NOTE 1 — When the frequencies are produced by rotating sets with induction motors, the real frequencies will be slightly lower than the values shown.

NOTE 2 — The values underlined in the 50 Hz series are recommended as preferred values for non-portable tools.

NOTE 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.

NOTE 4 — While following the IEC recommendations, the column ' Rayon Industry ' has been omitted since the two frequencies specified in that column have no significance as rated frequencies in the chemical fibre industry in India and the frequencies for this industry are determined by the technology in question.

INDIAN STANDARDS

ON

ELECTROTECHNICAL STANDARDS (GENERAL)

IS:

585-1962 Voltages and frequency for ac transmission and distribution systems (*revised*)

3599-1966 Method of measurement of cooling medium temperature for electrical apparatus

3722-1966 Letter symbols and signs used in electrical technology

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