(PREVIEW)

Indian Standard

INDUSTRIAL AC NETWORKS AFFECTED BY HARMONICS APPLICATION OF FILTERS AND SHUNT CAPACITORS

1.1 Scope and object

This International Standard gives guidance for the use of passive a.c. harmonic filters and shunt capacitors for the limitation of harmonics and power factor correction intended to be used in industrial applications, at low and high voltages. The measures proposed in this standard are applicable-to harmonic orders greater than 1 and up to and including 25.

The following capacitors are excluded from this standard:

– capacitors for inductive heat generating plants, operating at frequencies between 40 Hz and 24000 Hz (see IEC 60110 [1]*);
– series capacitors for power systems (see IEC 60143 [2]);
– coupling capacitors and capacitor dividers (see IEC 60358 [3]);
– power electronic capacitors (see IEC 61071 [4]);
– AC motor capacitors (see IEC 60252 [5]);
– capacitors for use in tubular fluorescent and other discharge lamp circuits (see IEC 61048 [6] and IEC 61049 [7]);
– capacitors for the suppression of radio interference;
– capacitors intended to be used in various types of electric equipment and thus considered as components;
– capacitors intended for use with d.c. voltage superimposed on a:c. voltage;
– capacitors intended for use with arc furnaces.

The object of this standard is to identify problems and give recommendations for general applications of capacitors and a.c. harmonic filters in a.c. power systems affected by the presence of harmonic voltages and currents.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subjected to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicate-d below. Members of IEC and ISO maintain registers of currently valid International Standards

IEC 60050(131) : 1978, International Electrotechnical Vocabulary (IEV) – Chapter 131: Electric and magnetic circuits