
FACT SHEET FOR HARMONIC AUDIT

DATED: 01.04.2009

A) Introduction

Power harmonics are generated because of increasing use of non-linear loads like AC drives, DC drives, induction furnaces as so on The harmonics cause deterioration of the electrical components like capacitor, transformers, motors etc..... Therefore, it is necessary to measure the harmonic contents in the power supply either received from utility or generated within the plant. The harmonic audit is aimed that carrying out the harmonic measurements at various locations identified within the plant.

B) Pre-requisites

At the time of harmonic audit the following things are required from auditee's side.

- 1) Single line diagram of plant showing the power distribution to different connected Equipment. Please give separate letter mentioning names of points on which you like to do the Harmonic Audit.
- 2) Last 6 months electric bill showing the data about maximum demand, tariff and power Consumption.
- 3) At the time of audit one engineer from auditee's side is required who knows the locations of the power distribution point.

C) Equipments used for harmonic audit

- 1) Harmonic analyzer - **KRYKARD ALM 10** (1-Phase version)
- 2) Current probe, 1000A or 200A for current measurement.
- 3) Harmonic analyzer - **MICROVIP 3 Plus ELCONTROL** (3 Phase version)

D) Harmonic auditor

A person rich in experience of executing harmonic audit and having capability of doing the harmonic analysis and providing the recommendations to keep the harmonics within limits.

E) Reference standard

IEEE 519 – 1992 International standards for harmonics.

F) Time required

1 to 15 working days depending upon the size of the plant.

G) Harmonic audit report

After the harmonic audit the harmonic audit report will be furnished within two weeks. It will contain the following information:

- 1) Basics of Harmonic
- 2) Information about electrical power distribution in customer's plant.
- 3) Connect load details.
- 4) Single line diagram indicating points of harmonic measurements.
- 5) Harmonic measurements.
 - a) Voltage & current
 - b) Individual harmonics spectrum for Voltage and Current.
 - c) Standard IEEE: 519-1992 harmonic distortions limits, at the points of measurement.
- 6) Assumptions made during harmonic measurements.
- 7) Nomenclature and inter relationship between various parameters measured by harmonic analyzer.
- 8) Analysis / recommendations based on harmonic study.

H) Charges for harmonic audit

- 1) Audit fees : Rs. 15,000/- per day or Rs.3000/- per point, whichever is higher.
(2 days Audit Charge shall be Paid Advance with the Work Order)
Service Tax @ 10.30% extra.
- 2) Charges for audit report : Rs. 5,000/- or Rs. 100/- per page
Whichever is Higher Plus Service Tax.
- 3) To & Fro traveling expenses : By 2nd AC train / Luxury bus / Taxi from Gandhinagar to auditee's place for one person.

OR

By flight one person for distant places. (To be paid immediately on the completion of audit).

All the above payments are to be made by Cheque / D.D in favor of Suvik Electronics Pvt. Ltd. payable at Gandhinagar.

- 4) Local conveyance, boarding and lodging on auditee's account.

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