

A Survey of Harmonic Current at Several Industries in Sri Lanka

Gajanayake, C.J., Ramtharan, G., Samaraweera, G.K., Atputharajah, A. and Ekanayake, J.B.

Abstract

In Sri Lanka, since early 1980s there has been rapid growth in electrical demand for the industrial and domestic consumers. As a result, various types of electrical, electronic and computer equipment, that either polluting the electrical system or which are sensitive to the various electromagnetic phenomena, were brought into the country. One of the major issues emerged due to these loads is introduction of harmonics into the power system. In this paper, consequence of high level of harmonics in the power system is discussed. Measurements on individual loads and a number of industries were used to demonstrate that the harmonic levels present in our power system are approaching the limits specified in international standards such as IEEE 519 and G5/3. In order to minimize the consequence of this upward trend in harmonic pollution, long term and short-term suggestions are discussed.