



INTERNATIONAL SPEAKER FROM CIGRE

International Tutorial (Online)

Extrapolation of measured values of power frequency magnetic fields in the vicinity of power links

Under the aegis of CIGRE NSC C4 on Power System Technical Performance
3rd March 2021 at 16:30 hrs. (90 Minutes)



Mr. Patricio Munhoz, Brazil

Affiliation and Title: Prof. Patricio E. Munhoz-Rojas is a retired Professor and Researcher, and currently is an independent Consultant.

Education: He received his BSc in Electrical & Electronics Engineering and the Electrical Engineer Degree from the University of Chile, Santiago de Chile, in 1965 and 1968, respectively.

Career Summary and Expertise: From 1966 to 1975, he worked in the Department of Physics, FCFM, University of Chile, in Santiago, Chile, where he was mainly involved in plasma diagnostic using electromagnetic waves. From 1975 to 1999, he worked for COPEL (Parana State electric utility), in Curitiba, PR, Brazil, where he worked: in the Substations Department making projects of new substations and writing specifications of substation equipment's from 1975 to 1981, and in the Central Laboratory (LAC) from 1981 to 1999. At LAC, from 1981 to 1991, he was associated with the High Voltage Laboratory and, from 1991 to 1999, he was associated with the EMC Laboratory. From 1999, when LACTEC was created, until 2019, he worked



Mr. Zia Emin
Chairman CIGRE SC C4



Mr. B.B. Chauhan
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TAKEAWAYS

Nowadays, many countries have national regulations asking for magnetic field measurements in a certain reference condition. The principal motivation for such regulations is to provide an experimental confirmation that the human beings are adequately protected against the biological effects produced by the magnetic field originated from the electric power systems.

As the understanding of what is a magnetic field, and the perception of the health risk, is different in the different countries, the purpose of CIGRE TB 795, and of this presentation, is to provide a common framework for the experiences of the different countries. In order that any country, when dealing with this problem, can utilize not only its own experience but also the data gathered by other countries.

there in numerous R&D projects, either as a member or a project leader, that were related to lightning protection of HV and LV electrical networks, electromagnetic compatibility of electrical systems and, more generally, to the interaction between matter and electromagnetic fields. Also, from 1981 to 2013, he was a Professor at the Federal Technical University of Parana (UTFPR), in Curitiba, PR, Brazil, teaching mainly Electromagnetism. Prof. Patricio Munhoz current research interests include electromagnetic theory, interaction between electromagnetic fields and matter, circuit theory, electromagnetic fields and highvoltage measurements, and electromagnetic compatibility; areas in which he has published in several journals, conferences, and symposiums.

Awards and Professional Activities: He is a Chartered Engineer in Chile and Brazil. In COPEL, he was promoted to the rank of Consulting Engineer in 1995 and, in CIGRE, he obtained the CIGRE Distinguished Member Award in 2010. In COBEI (Electrical branch of the Brazilian Standards Institution), he was a member and chairman of TC 28 – “Insulation Coordination”. In CIGRE-Brazil, from 1989 to 2016, he was a member of the Technical Committee of SNPTEE (Brazilian CIGRE Session). In CIGRE, he has contributed to numerous Working Groups, either as a member or convenor, including WG 33-03 “High Voltage Testing and Measuring Techniques”, WG 36-04 and WG C4.208 “EMC in Power Plants and Substations”, WG C4.408 “Protection of MV and LV Networks against Lightning”, WG C4.30 “EMC in Wind Energy Systems” and WG C4.28 “Extrapolation of measured values of power frequency magnetic fields in the vicinity of power links”. Nowadays, he is a member of WG C4.44 “EMC for Large Photovoltaic Systems”. Also, he is a reviewer of IEEE and PERS publications, as well as of the “Electric Power Systems Research” journal.

ABOUT CIGRE AND CIGRE-India

The International Council on Large Electric Systems (CIGRE), with its Headquarters at Paris deals in the field of Transmission and Generation. It functions through 16 Study Committees formed for various disciplines of Power Systems. Each Study Committee comprises about 30 experts drawn from various countries. In addition, some more experts are members of the Working Groups/Task Forces formed by these Study Committees. It is a matter of pride that India is represented in all the 16 CIGRE Study Committees as regular member.

CIGRE (Paris) has about 14000 members from 100 countries. Wherever there are more than 40 equivalent members in any country a National Committee is formed with the following aims:

- To disseminate the technical information to the members of the national committee.
 - To propose papers for presentation at CIGRE sessions
 - To encourage membership of CIGRE
 - To organize representation in CIGRE session / symposia
- CIGRE (India) is an affiliate of Central Board of Irrigation and Power. It is the Indian National Committee of CIGRE and is a registered society. It co-ordinates the activities of CIGRE in India, through a number of National Study Committees and disseminates the information about the activities of the CIGRE Study Committees and Working Groups to various organization in India. From India there were 820 equivalent members for CIGRE in the year 2019.

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The perspective participants, desirous of attending the above training may register themselves by sending the following details to CIGRE-India along with necessary facilitation charges:

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