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Y. Ohki and S. Yasufuku

Activities of Investigation Committees, IEE Japan Committee for Electrical Insulation News in Asia

In the Institute of Electrical Engineers of Japan, there are several investigation committees related to dielectrics and electrical insulation. This article introduces some of their activities.

The EINA Committee, or the IEEJ Committee for Electrical Insulation News in Asia, is aiming to construct an international interactive channel to exchange information in the field of dielectrics and electrical insulation in the Pan-Pacific regions. It is currently providing an annual issue of the *EINA Magazine*, as well as an EINA Website.

The committee was first established by the late Professor M. Ieda, and was officially named the Cooperative Research Committee of the Asian Interlink of Dielectrics and Electrical Insulation. It played a starting role for the initiation of this kind of work from Jan. 1991 to Dec. 1992, by reviewing the status of scientific and technological co-operation in the field of dielectrics and electrical insulation in the Asian countries, and sought appropriate ways to promote informative interaction.

On the basis of the activities of this first committee, the “Cooperative Research Committee of Electrical Insulation News in Asia” was then set up by Professor H. Yamashita, Keio University, in April 1994. As one of its key activities, it issued a magazine called *Electrical Insulation News in*

Asia (EINA) from Sept. 1994 to Sept. 1999. This dedication certainly contributed much to the mutual understanding of electrical insulation activities in Asia.

Professor T. Tanaka of Waseda University took over this role in 2000, and has been trying to expand

Table I. Supporting Members of EINA Magazine Committee.

Toshikatsu Tanaka	Waseda University (Chairman)
Yoshio Maruyama	Furukawa Electric Co., Ltd. (Secretary)
Masahiro Kozako	Waseda University (Secretary)
Hiroshi Kaneiwa	Toshiba Corporation (Secretary)
Yoshihiro Furuoka	The Kansai Electric Power Company, Inc.
Masanori Hara	Kyushu University
Toshinari Hashizume	Yazaki Electric Wire Co., Ltd.
Kunihiko Hidaka	The University of Tokyo
Masaru Higaki	Kyushu Kyoritsu University
Masayuki Hirose	Sumitomo Electric Industries, Ltd.
Takashi Imakoma	NGK Insulators Ltd.
Yoshiyuki Inoue	Toshiba Corporation
Mitsugu Ishioka	Japan Polychem Corporation
Tsutomu Katasev	Chubu Electric Power Co.
Masamitsu Kosaki	Gifu National College of Technology
Takao Maeda	Fuji Electric Corporate R&D, Ltd.
Kenji Matsu-ura	Matsuura Electric Power Research Institute
Yoshitsugu Miyashita	Mitsubishi Cable Industries Ltd.
Teruyoshi Mizutani	Nagoya University
Hirofuka Muto	Mitsubishi Electric Corporation
Masayuki Nagao	Toyohashi University of Technology
Yoshimichi Ohki	Waseda University
Yosuke Sakai	Hokkaido University
Junichi Shinagawa	Showa Electric Wire & Cable Co., Ltd.
Ken-ichiro Soma	Hitachi Cable Ltd.
Tatsuo Takada	Musashi Institute of Technology
Tohru Takahashi	Fujikura Ltd.
Ryozo Takeuchi	Hitachi, Ltd.
Kazuyuki Tohyama	Numazu College of Technology
Atsushi Toya	Tokyo Electric Power Co.
Hisanao Yamashita	Keio University
Yongchang Zhu	Sankosha Corporation

Table II. Members of International EINA AdCom.

Prof. Zhicheng Guan	Tsinghua University
Prof. Hengkun Xie	Xian Jiaotong University
Prof. Koo Ja-Yoon	Hanyang University
Prof. Kee-Joe Lim	Chungbuk National University
Dr. David Allan	Powerlink Queensland
Prof. Ekram Husain	Aligarh Muslim University
Prof. Suwamo	Institut Teknologi Bandung
Mr. Junaizee Mohd Noor	TNB Transmission Network Sdn. Bhd.
Dr. Yafei Zhou	Industrial Research Ltd.
Dr. Mohammad Akbar	High Voltage Short Circuit Laboratory
Mr. Manuel M. Galvan	MERALCO
Prof. Che-Sau Chang	National Univ. of Singapore
Dr. Samruay Sangkasaad	Chulalongkorn University
Mr. Jin-Shyr Yang	Taiwan Power Company
Dr. Oleg L. Rezinkin	Kharkov State Polytechnic University
Mr. Yoshio Maruyama	Furukawa Electric Co. Ltd.
Prof. Toshikatsu Tanaka	Waseda University

its task to accommodate information flow from Asian countries and to facilitate more timely flow of uploading information to its Website. As you may know, the Committee held its international meetings in Xian Jiatong University in 2000 and in Nagoya in June, 2003, taking advantage of IEEE-DEIS ICPADM meetings to stimulate the sharing of information through person-to-person interaction, and to renew communications between its international members. It is worthwhile to note that the Committee has been financially supported from its start to the present mostly by many voluntary Japanese companies. The Society on Fundamentals and Materials, IEE Japan, has also been supporting the activities financially.

The present committee consists of the chairman, three secretaries and 28 members, as shown in Table I. One general meeting and three secretary meetings are held annually to plan, carry out, and monitor its activities. You can see some of the activities on the committee's Website, <http://www.eina.ws/>, which was created in March 2002.

The front cover of the November 2002 issue EINA Magazine is shown in Figure 1. The Committee is now preparing the tenth volume to be issued this November. The EINA International Advisory Committee, with the members listed in Table II, was also set up to strengthen the ac-

Electrical Insulation News in Asia

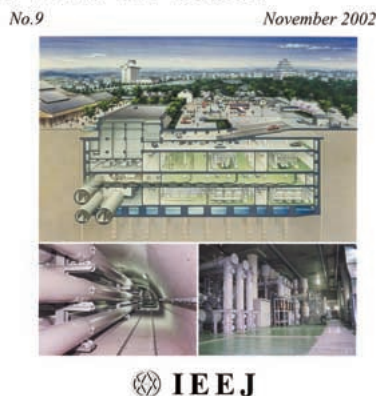


Figure 1. Front cover of EINA No. 9, issued in November 2002, showing Meijo 275-kV underground substation in Nagoya (reprinted with permission of the Institute of Electrical Engineers of Japan and Chubu Electric Power Company).

tivities by improving the services to EINA Magazine subscribers.

This article was completed in cooperation with the IEEEJ Committee for Electrical Insulation News in Asia and Chubu Electric Power Company.

—Y. Ohki

16th Annual EMC Exhibition Held Near Tokyo

EMC 2003, the 16th Exhibition for Solutions in Electromagnetic Interference, was held 16-18 April, 2003 at the Nippon Convention Center in Makuhari, Chiba-Prefecture, Japan. It was sponsored by the Japanese Management Association (JMA) and was held under the auspices of the Ministry of Economy, Trade and Industry (METI), the Ministry of Public Management, Home Affairs, Posts and Telecommunications, and the Ministry of Health, Labor and Welfare.

Some 87 companies and organizations participated, an 11.2% decrease compared to the 2002 exhibition. The attendance was down 3.8% from 2002, at approx. 20,300. The tendency toward slight decreases in both the participating companies/organizations and attendance in 2002 continued in 2003. It is a pity that both the participating companies/organizations and the attendance did not quite satisfy the forecast in 2003.

This exhibition is one of Japan's largest specialization-oriented exhibitions. It showcases components, materials, and systems for noise countermeasures, in order to prevent electromagnetic waves from affecting electronic equipment, electronic circuits, and people. Noise measuring equipment was also on display.

The exhibition theme was "EMC Technology—New Tide Supporting the Internet Society." A broad range of exhibits and displays included:

- Components and materials for noise countermeasures (noise filters, noise cutout transformers, coils, ferrite cores, beads, surge absorbers, varistors, ca-

pacitors, spark killers, connectors and cables).

- Electromagnetic wave-shielding materials and systems (metallic materials, high polymers, electroconductive resins, paints and tapes, shielding plating, metal-coated fabric materials, gaskets, shielding films, microwave absorbers and shielding boxes).
- Electromagnetic wave-shielding construction materials and systems.
- Electromagnetic wave-measuring facilities, including electromagnetic wave anechoic rooms.
- Noise-measuring equipment and systems.
- Noise countermeasure-related products such as shielding wear.
- Electrostatic countermeasure-related equipment and products.
- Equipment for lightning surge countermeasures.
- Software for EMC countermeasures.
- EMC-related businesses.
- EMC-related publications.

Some interesting topics at the exhibition were:

- It is imperative that EMC-related components and materials are environmentally friendly; presently, the practical application of halogen-free compo-

nents and materials is in full swing in Japan. The practical application of lead-free solders, already mentioned in an earlier "News from Japan" column entitled "Printed Wiring Board Technology Featured at the JPCA Show," is also successful.

- The largest manufacturer of oil-sealing products in Japan has entered the new business of electromagnetic wave-shielding materials and systems, by combining its special capability of producing sealing materials with its developing power of producing electromagnetic wave-shielding materials. This company has succeeded in combining both properties, by supplying a variety of O-rings and gaskets that satisfy the above-mentioned conditions at the request of customers.
- There was a new entry for carbon microcoils (CMCs) from a technology licensing organization (TLO) in Japan. CMCs were recently discovered by Prof. S. Motojima of Gifu University, by thermally decomposing a gaseous mixture of acetylene, hydrogen and a small amount of thiophene at 750 °C - 800 °C to accumulate decomposed carbon products on a substrate. CMCs are characterized by such features as a 98%

carbon composition, a double spiral structure, fiber diameters of 0.01 to 1 μ m, coil lengths of about 5mm, coil elongations of 300 to 500 % or more, a density of 1.81 to 1.88g/cm³, and a bulk electric resistance of 0.1 to 10 ohm-cm. After CMCs were mixed with thermoplastic/thermosetting resins in the shape of pellets and molded, it was discovered that they behave as excellent microwave absorbers between 1 to 100 GHz. Since they have extraordinary characteristics of both high elasticity and excellent electroconductivity, the development of new industrial applications, including microwave absorbers, is strongly anticipated in the near future in Japan.

The sub-theme of the exhibition was "Noise Countermeasures Technical Exhibition." Countermeasures against noise were extensively displayed, mainly for electronic and information apparatus. The 2003 technical Symposium about EMC and Countermeasures Against Noise was held in conjunction with the exhibition, as it is every year.

The 17th Annual EMC Exhibition—EMC Japan 2004—will be held 21-23 April 2004 at the same venue.

—S. Yasufuku
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EIC NEWS

(Continued from page 66)

list of contributions to our organization is his service as the 1993 General Conference Chairman.

The EIC/EMCW Expo is time-tested and I find the volunteer factor is true to form...genuine people, dedication remains strong. And, as we crossed the 2003 finishing line in Indianapolis, it is the volunteer corps that got us there successfully. This in-

dustry continues to be a *Winner* and our event continues to be a true *Winners' Circle* all taking place at the *One Place the One Time*.

As I have said in this column before, every year our event gets better and you are invited to join with us and go *Running with the Winners* when our industry gathers next time at the EIC/EMCW Expo Indianapo-

lis, Indiana.

If you have any ideas for enhancing our Exposition or just want to learn more about the EIC/EMCW Expo, contact me through *EI*, or at DuPont by phone at 804 383 3300, by fax at 804/383-2009, or by e-mail at

Roger.C.Wicks@usa.dupont.com.
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