



Short - Term Course on
Power Quality and Energy Management Perspectives
in Indian Industries



Report

The proliferation of electronic loads in industrial commercial and domestic sectors has substantially increased the apprehension about the quality of power. The poor Power Quality of electrical supply causes significant problems in internal electrical distribution systems, production chain interruption, higher electricity bills, reduced productivity and heavy fiscal losses to the management. The issues of Power Quality are poised to become a figure-of merit and the awareness to solve the Power Quality problems is now increasing among the power utilities and equipment manufacturers. Thus it is imperative to be aware of Power Quality issues and to understand the importance of technological advancements in the field of Power Quality and Energy Management. In order to fulfill those requirements, this Short - term course on **“Power Quality and Energy Management Perspectives in Indian Industries”** was organised by the Department of Electrical and Electronics Engineering jointly with CDAC, Thiruvananthapuram, under the aegis of National Mission on Power Electronics and Technology (NaMPET) during 24-25th July 2009 at Coimbatore Institute of Technology, Coimbatore-14, Tamil Nadu. This two day short-term course has provided an excellent opportunity to listen to the experts in this field and also to discuss various Power Quality issues. Further this short-term course was aimed to share the knowledge of all researchers, scientists, engineers and policy makers towards attaining universal supremacy in technology and innovation in this area.

The response to participate this short-term course was overwhelming from all the parts of the nation, a total number of 123 participants have participated which includes 22 participants from leading industrial organizations, 43 participants from academic institutions, 4 participants from research organizations, 17 student participants from neighbouring institutions, 21 faculty and 15 students from our institution.

The short-term course was inaugurated on 24th July 2009 by Prof.V.Ramanarayanan, Professor, and Department of Electrical Engineering, Indian Institute of Science, Bangalore. He stressed for doing our best things. He insisted the audience to perform any work which is better than yesterdays' work. The other dignitaries who attended this inaugural session were, Dr.R.Prabhakar, Secretary, Coimbatore Institute of Technology, Dr.V.Selladurai, Principal, Coimbatore Institute of Technology, Shri.A.K.Unnikrishnan, Additional Director, CDAC, Thiruvananthapuram and Coordinator of this short-term course, Dr.S.Shanmugam, Administrative Officer, Coimbatore Institute of Technology, Dr.V.Jagannathan, Professor and Head, Department of EEE, Coimbatore Institute of Technology and

Dr.E.Chandra Sekaran, Coordinator of this short-term course, Department of EEE, Coimbatore Institute of Technology.

The first session on 24.07.2009 was handled by **Prof.V.Ramanarayanan, Professor and Department of Electrical Engineering, Indian Institute of Science, Bangalore** on the topic **“Power Quality –Concepts and Performance”**.

Dr.S.Ashok, Department of Electrical and Electronics Engineering, NIT, Calicut, delivered the expert lecture on **“Industrial Energy Audit and Energy Management Techniques”**

The final session on 24.07.2009 has been handled by **Shri.Aby Joseph, Deputy Director, CDAC, and Thiruvananthapuram** on **“Active Filter based PQ Solutions”**

The first session on the second day was handled by **Shri.K.Prabakar Tiruvingadame, Manager, Technical Services, Baron Power Limited** on **“Harmonic Mitigation for Technological Excellence in Industrial Applications”**

Dr.Mukul Chandorkar, Professor, Department of Electrical Engineering, Indian Institute of Technology, Mumbai delivered an expert lecture on **“Reference Frame Transformations in the Analysis and Mitigation of Power Quality Issues”**

The final session of the two short day programme has been handled by **Dr.E.Chandra Sekaran, Department of Electrical and Electronics Engineering, Coimbatore Institute of Technology** on **“Power Quality Study and Energy Auditing- Case Study”**.

A panel discussion was conducted on 25th July 2009 on **“Active Power Filter Solutions and Harmonic Mitigation”** The composition of the panel members was 5 invited speakers and 3 participants. The panel discussion was chaired by **Prof.V.Ramanarayanan, Professor and Department of Electrical Engineering, Indian Institute of Science, Bangalore**.

The valedictory function was conducted on 25th July 2009. Smt.K.A.Fathima, Senior Director CDAC, Thiruvananthapuram was the Chief Guest of the function. She stressed the importance of academic institutions working together with the industries in this globalized economy for the betterment of society.

Benefits of the Short-Term Course:

- **One Volume of the proceedings was presented to the participants. This volume will enhance the knowledge and understanding in the use of latest techniques and further they will act a catalyst for further research work in this field.**

- All the Invited talks were well attended by participants and there was a very good interaction by the participants with the invited speakers.
- The topics were very useful to the participants. This information is based on the feedback received from the participants.
- Young research scholars had a very good opportunity to interact with senior experts in their field of interest.

We express our sincere thanks to all the members of the organizing committee and various other committees. We would like to thank all the experts of various sessions and participants in making this conference a rich technical forum beyond the planned expectations. We do certainly hope that this short-term course will provide a unique opportunity for useful exchange of technical ideas among professionals that would result in forging fruitful global collaborations. We are sure that this short-term course will help to identify the future directions in the multifaceted field that would enable knowledge enrichment and innovation in Power Electronics and Power Quality. It is also expected that the student community would benefit from the short-term course in learning and understanding the latest technology.

TECHNO EXHIBITION

The star event of this short-term course that attracted all the delegates and participants was the **"Techno-Exhibition" by leading engineering industries**. The following organizations were participated in the exhibition.

- Department of EEE, CIT,Coimbatore
- Sintec Automation, Coimbatore
- VI Microsystems, Chennai
- Industrial Controls and Drives, Chennai
- Digitech systems, Chennai
- ANDS light, Coimbatore
- Infotec, Coimbatore
- Monaco Energy Solutions Pvt. Limited, Coimbatore
- Thulasi Associates, Coimbatore

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