
IEEE-ICC EDUCATION COMMITTEE

Chair: Dr. S. Cherukupalli - B.C. Hydro

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“Nuclear Power Plants Cable Systems”

Spring Meeting – Scottsdale AZ

November 7, 2007

Session starts at 13:00 hrs



PROGRAM

- **Introductions**
- **Presentations**
- **House keeping items**
- **Background**
- **Feedback on topics for Future Education Sessions**



TOPICS and SPEAKERS

- (13:10 – 13:50) Condition Assessment of Installed Nuclear Power Plant (I&C) Cables by Dr. Anand Anandakumaran of Kinectrics**
- (14:00-14:40) Halogen Free Cables for Nuclear Power Plants by Lukas von Laue, NEXANS, France**
- (14:50-15:10) Coffee Break**
- (15:15-15:50) RFID Applications in Nuclear Plants Presentation by Mr. Kenji Araki, Hitachi, Ltd, Japan**
- (16:00-16:40) Insulated Cable Qualification: Nuclear vs Commercial by Jim Fitzgerald, Okonite Corp,**

Summary and feedback



ACKNOWLEDGEMENTS

- Speakers at this session
- Dr. Sarma Haridoss – Past Chair Education Committee
- Mr. Kent Brown – TVA
- Mr. John Merando – Bechtel Corporation



Housekeeping Issues

- **The IEEE policy regarding Copyright and Patent responsibilities can be found at ICC registration in a three ring binder for all members who wishes to review the document.**
- **During Q+A session please identify yourself by stating your name and affiliation.**
- **Please collect your Certificate of Attendance placed at the back of the room at the end of session.**
- **Please provide your feedback on prospective topics for Education at future ICC sessions.**



SOME STATISTICS

- **Energy is the vital force powering business, manufacturing, and the transportation of goods and services to serve the American and world economies.**
- **Energy supply and demand plays an increasingly vital role in our national security and the economic output of our nation.**
- **United States spends over 500 billion dollars annually on energy.**



BACKGROUND -1

- **New base load nuclear generating capacity is required to enhance U.S. energy supply diversity and energy security – National Energy Policy Objective**
- **The Nuclear Power 2010 program, unveiled in February 2002, is a joint government/industry cost-shared effort to identify sites for new nuclear power plants, develop and bring to market advanced nuclear plant technologies, evaluate the business case for building new nuclear power plants, and demonstrate untested regulatory processes**



BACKGROUND - 2

- **DOE believes US energy supply and new nuclear plants must be built in the next decade to address increasing concerns over air quality and to ease the pressures on natural gas supply**
- **There is very useful information in a DOE document titled “A Roadmap to Deploy New Nuclear Power Plants in the United States by 2010”**



FUTURE TOPICS

- **Transmission Cable Bonding and related issues**
- **Superconducting Cables and their applications**
- **DC Cable System – Design issues and some applications**
- **Submarine Cable Systems - Design issues and some applications**
- **Design Principles for Cable Accessories (Separable Connectors, Joints and Terminations)**
- **Basic Power Cable Design**
- **Basic Power Cable Design, Part II**
- **Dissolved Gas in Oil Analyses of SCFF and HPFF Cable Systems**
- **An Overview of Diagnostic Testing of Medium Voltage Power Cables (Non-PD Methodologies)**
- **Accelerated Cable Testing and Its Correlation to Field Testing**
- **URD Cable Design, Past, Present and Future**
- **An Overview of PILC Cables**
- **Statistical Analysis of UD Cable Failures**
- **Secondary Cable Technology**
- **EPR Insulated Cable**
- **Static and Dynamic Ratings of Cable Systems**



TOPICS FOR FUTURE SESSIONS

- Review the list of topics
- Please rank the top FIVE items you consider will be useful at future sessions.
- A score of 1- High
- A score of 5-Low

