



MINUTES

Orange Empire Division
International Association of Electrical Inspectors

Date: 04 Jan 2011.

Location: Santa Ana Elks Lodge, 212 S. Elk Lane, Santa Ana, California.

Called to order by Randy Buck at 11:40 a.m.

New attendees gave self introductions.

Acceptance of Minutes: Moved and accepted without dissent.

Announcements

None made.

Old Business

None conducted.

New Business

Saum Nour of Absolute Consulting Engineers announced that he was working with the County of Orange, Public Works and that, on February 2, 2011 from 8:15-12:15, a green-forum panel. The subject will be: How to Plan Check and Inspect the Green Codes. He added that the event will be announced through ICC; 180 person occupancy, RSVP.

Randy Buck announced that there is upcoming PV training by John Wiles; 8:00 a.m. check in at the County of Los Angeles Department of Public Works on Fremont, Tues, Wed and Thur, Jan 18, 19 and 20. A registration form was passed out.

Tom Griffith announced that: 1) Joe Jones is Education Chair for the Southern California Chapter and that their next meeting will be in Downey; the subject will be Conductor Ampacity Derating. 2) The Border Counties Division will be putting on a Thursday-or-Saturday training on 2008 NEC changes. 3) Go to iaeisocal.org to get on our mailing list.

Code Questions

Saum Nour asked about sizing a junction box same as pull box for U-bends? After some discussion, he was referred to NEC section 314.28(A)(2).

Bill Brownell asked who might approve landing a PV system in a fire pump section that is tapped ahead of main. Randy Buck expressed resistance because the design is for a fire pump; he suggested that a diagram be submitted and that Scott Davis be given a chance to look at it. Randy expressed concern about confusion of technicians working on either the PV or the fire-pump parts of the system.

Suzanne Acone, instructor at Long Beach City College asked for an interpretation of "major portion" as used in NEC section 310.15(B)4(c). Randy Buck asked for a show of hands of AHJs who would decide this issue on a case-by-case basis. Bill Brownell opined that "major portion" simply means more than 50%. Some discussion followed about the issue of derating a neutral conductor.

Cash Sutton, P.E. asked if fusing at a disconnect on the utility-company side of a PV inverter provides acceptable overcurrent protection for the conductors from the inverter to the load switchboard. The general answer was "yes" as long as the tap rules were followed. Mr. Sutton added that he was hoping to find something that specifically address the issue of overcurrent protection for the conductors on the utility side of a PV inverter. Randy Buck suggested that he submit the question in writing, with a diagram, so that it could be further researched.

Consultant Time

None taken.

Testing Lab Time

Jill Fisher with ETL spoke about a hyperbaric chamber red tagged by the City of Rancho Cucamonga; treats people with autism; oxygen; is not listed. She asked if inspectors would treat it as medical occupancy. Randy's answer was, "Yes." Discussion followed on the issues that must be considered, e. g., presence of oxygen, ability to egress without assistance, etc.

Contractor Time

Tom Griffith of Griffith Electric asked how many jurisdictions would require neutral-fault test before final even on very small jobs. Three attendees indicated that they would require such test. Tom added that there are often difficulties doing the test because the new loads and existing loads are in operation at the time of inspection. With regard to existing neutral faults,

an attendee pointed out that Building Code Chapter 34 requires the owner to maintain a building per Code used for construction. [*See section 3401.2.*]

Manufacturer Time

Dave Kadonoff with Ideal Industries spoke about combination arc-fault interrupters. He announced that updating of AFCI indicators is now available so that they will properly test Square D, Siemens and Cutler-Hammer AFCIs.

Steve Schinko of Eaton asked how many jurisdictions would not accept a NRTL other than UL? A poll of the thirteen jurisdictions present indicated that none would hold that position.

Utility Time

None taken

Inspector Time

None taken.

Treasurers Report

Treasurer's Report deferred to next month.

Membership Comm. Rep.

None given.

Education Program: Analysis of Changes, 2008 NEC

Randy explained the structure of the contents of the Analysis of Changes.

For the 2008 NEC, there were 3,688 Proposals and 2,349 Public Comments.

Randy touched on the following.

New section: Critical Operations Power Systems.

Four new articles 355, 522, 626, and 708.

90.1(A) Practical Safeguarding. The purpose of the NEC is to ensure that electrical systems are installed in a manner that protects people and property by minimizing the risks associated with the use of electricity.

90.1(B) Adequacy.

90.1(C) Intention. .. The NEC is not a design standard or instruction manual.

90.2 Scope of the NEC. (B) What isn't covered.

90.3 Code Arrangement.

90.4 Enforcement Interpretation of the Requirements. AHJ is responsible for interpreting the NEC, but his or her decisions must be based on a specific NEC requirement. Approval of Equipment and Materials. Only the AHJ has authority to approve the installation. NEC does not require all items be listed. It's the AHJ's responsibility to ensure that electrical equipment is installed in accordance with the equipment listing and / or labeling and instructions.

90.7.

Article 100 Definitions. Contains definitions used throughout multiple Code sections. Terms that are only in one section are defined in that section. Many existing definitions revised. The appropriate CMP is tasked with providing definitions for Art. 100.

Bonded: Connected to establish electrical continuity and conductivity.

Branch-Circuit Overcurrent Devices.

Clothes Closet

Device.

Ground: earth.

Grounded (Grounding): Connected to ...earth.

Intersystem Bonding Termination.

Kitchen.

Grounded Conductors (Not Neutrals) . A corner-grounded delta is not a neutral.

Neutral Point.

Qualified Person.

Short-Circuit Current Rating.

Surge Arrestors.

Ungrounded. (new definition)

110.11 Deteriorating Agents. Equipment must be protected during construction.

110.12(A) re: unused Openings.

110.16 Flash Protection

110.20 Enclosure Types. [*Relocated from 430.91.*]

110.22 Identification for Disconnecting Means. Series-rated, engineer-designed system for interrupting ratings.

110.26(C)(2), (3) Personnel Doors. 6 foot rule back in; Steve Shinko of Eaton/Cutler-Hammer noted that bus duct with a 100-A outlet would have implemented this rule without the added 6-ft. parameter. Steve added that The City of San Diego, for a 1600 A pull section connected to multiple 400-A switchboards, treated the installation as 1600 A.

110.26(G) Locked Electrical Rooms or Enclosures considered as accessible.

200.2(B) Continuity of a grounded conductor shall not depend on a connection to an enclosure.

210.4 Multiwire Branch Circuits - Handle tie or multi-pole circuit breaker is required.

210.4(D) Grouping of ungrounded and grounded conductors required in the panel for each multi-wire circuit. (One can use an Amprobe when loaded to assure proper grouping; sum = 0.)

210.5(C) Ungrounded Conductors ...identified by phase and system. ..at all termination connection and splice points. Means of identification must be posted on the panelboard.

210.8(A)(2) and (A)(5) Exceptions deleted; all outlets in garage need GFCI.

210.8(B)(4) Other than Dwelling Units.

210.8B(5) Sinks.

210.12(B) Dwelling Units. AFCIs for branch circuits supplying outlets installed in dwelling-unit family rooms, dining rooms..... Exception No. 2: FACPs. Discussion followed as to the functioning of a GFCI on the load side of an AFCI breaker.

210.19(A)(1), Exception No. 2. Grounded conductors that are not connected to overcurrent protection shall be permitted to be sized at 100 % of the continuous load.

210.52(B), Exception 3.

210.52(G) Basements and garages.

210.60 dorm room.

210.62 Show Windows.

215.2(A)(1), Ex. 2. Grounded conductors continuous loads at 100%.

215.6 Feeder Equipment Grounding conductor.

Meeting adjourned at 2:02 p.m.

Respectfully submitted by Dan Vaughan, 30 Jan 2011.