

Meeting Report  
ABYC Electrical Project Technical Committee  
Jacksonville, Florida  
January 12-13, 2016

1. Previous Committee Actions

- The bus bar subcommittee continues to work on identification of bus bar characteristics. Will use the wire ampacity tables. How to rate a commercial bus bar? How are manufacturers rating bus bars? May move this work over to the Electrical Component PTC.

2. Subcommittee Reports

- 3 Phase subcommittee – Developed a draft Technical Information Report on 3 phase power. Can and should be used in 3 phase systems by ABYC certified technicians. Next steps are: 1) Redo all the CAD drawings, 2) Review a reorganization of the report and, 3) Send to the entire PTC for review.
- AIC Rating subcommittee – Looking at fuses needed in marine craft battery banks. The subcommittee determined the Class T fuses rated at 20kA at 160V could be used in a 12V system with a 2x safety factor. There is still some concern about the robustness of Class T fuses used in the marine environment. There is a need for a fuse test standard that could result in a marine rating for fuses. The PTC will publish the SC report as an alternative to the AIC requirement.
- High Capacity Battery subcommittee – Developed an outline for a technical report on high cap batteries. It remains in the subcommittee for further development. Scope includes installation and battery management of Li ion batteries. Will look the Australian standard on Li ion batteries.

3. E-30, Electric Propulsion

- Created a new E-30 Electric Propulsion standard based on the third iteration of a parallel ISO standard. The IEC influence in later revisions made the current ISO standard unusable for ABYC use.
- Next action: The draft document will be sent out for public review.

4. TE-4, Lightning Protection Systems

- The PTC previously decided to keep the document as a Technical Information Report and send it through the usual review cycle.
- Added a section on surge protection devices.
- Revised the definition of air terminal.
- Removed the cone method of lightning protection and adopted the rolling sphere method for all sizes of boats.
- Next action: Send the document out for a very short committee review before consensus ballot.

5. E-10, Storage Batteries

- Noted in the Purpose that Lithium Ion batteries require special consideration not covered in the standard.
- Added links for marine cranking amperage and battery reserve capacity to E-11.
- Added a definition for battery cell and redefined storage battery.
- Added a note to orient the batteries on sailing boats to minimize the uncovering of battery plates while the boat is heeling.
- Added that a battery as installed must be restrained and pass the load test.
- Next action: The draft will be sent out for consensus ballot.

6. S-31, Environmental Considerations for Systems and Components Installed Onboard

- ABYC Staff to determine the correct SAE J1113 reference for validation testing for electric fuel pumps.
- Testing to a reference standard is accepted if the reference standard requirements are more stringent than those listed in S-31.
- Defined the amplification factor “Q” in vibration tests.

- The PTC discussed having another 3 year review because of the newness and complexity of the standard.
  - Next action: Clean up editorials and then send out for consensus ballot.
7. ABYC is looking to build an advanced electrical certification program. A two year timeline is being proposed. Soliciting volunteers for program development.
8. Request for Interpretation
- The PTC determined that metallic clamps or conduit are required on AC cables from shore power inlet to the main shore power breaker. This interpretation disallows use of plastic ties on this cable.
9. New Business
- 3 Phase Generator/Inverter Systems – Do the conductors between a generator and inverter require overcurrent protection? This arrangement is not covered in A-31 and should be addressed in E-11 or A-31 in the future.
  - Ignition protection in blade fuses – All Littelfuse ATO fuses are ignition protected and tested at IMANNA. All Bussman ATC fuses are ignition protected fuses, too. Recommended that maxi and mega fuses be sealed or installed in sealed compartments to maintain ignition protection.
  - The PTC received an electronic shock brochure created by [ElectricShockDrowning.org](http://ElectricShockDrowning.org).
10. The next meeting of the ABYC Electrical PTC is scheduled for January 2017.

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