

Testing Times

A newsletter for the electrical construction and maintenance industry

Volume 6 No. 3

Specification Writing 101

Having been in the electrical testing business since the early 80's, we at Hood-Patterson & Dewar are keenly aware of the lack of information and understanding that exists in the construction industry regarding electrical testing. To begin with, electrical testing is often not specified by the owner or the engineer. Many projects include token testing to be performed by the electrical contractor in the presence of the engineer. These tests include meggering cables, checking phase rotation, and demonstrating that various systems and components are plan and code compliant. Although these steps are very important and should certainly be a part of a construction project, they should never be the **only** form of electrical testing.

The tests described above simply cannot come close to assuring the engineer and owner that all the electrical equipment was designed, built, shipped, installed, and wired as required. The only way to assure a high level of confidence in the operation of the electrical equipment is to perform extensive start-up testing. Even for the smallest project, a reasonable amount of testing might include testing the grounding system, the



The best place to locate the electrical testing specifications is in a separate section called "Testing"

main circuit breaker, the ground fault system and performing a visual inspection of the major system components. This testing should be performed by a qualified, independent electrical testing firm.

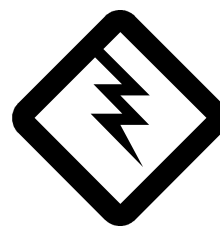
So now you've decided to include electrical testing in your project specifications. Where do you locate your testing specs? Generally, we see specs in three different locations:

- 1 At the end of each electrical equipment section
- 2 In a separate section labeled "Testing"

- 3 As a combination of the two (e.g., some testing is specified in the equipment sections and additional testing is specified in a separate testing section)

As an electrical testing firm, we are sensitive to the fact that our business is often forgotten. When projects are bid, the testing is simply missed by electrical contractors or they catch it at the last minute and call us two hours before bid time. Engineers can help us all avoid this situation by giving electrical testing its own section. It is simply too easy for everyone to

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News you can use!

Who does that?

Another way to avoid confusion in electrical testing specs is to clearly state who should perform each portion of the testing. Our preferred method includes a list at the beginning of the testing specification section that identifies the testing players and their testing responsibilities.

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HOOD - PATTERSON & DEWAR INCORPORATED
 ELECTRICAL ENGINEERING AND TESTING
 POST OFFICE BOX 1048 • DECATUR, GA 30031
 TELEPHONE (404) 296-5990 • FAX (404) 299-3542
www.hoodpd.com

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miss when it's spread out in multiple places (at the end of each equipment section) or even worse, when it's at the end of the equipment sections **and** included in a separate testing section. In this last case, which happened recently, when a contractor finds the testing in one of the two locations, he assumes he's found all the testing required. This scenario leads to a lot of last minute confusion! Engineers, please help us minimize this problem by putting all the electrical testing specifications in one place! The building industry will thank you. ❖

(Who does that?, Continued from page 1)

- M - Manufacturer
- C - Contractor
- T - Independent testing firm

The next portion of the specs includes the equipment to be tested along with the appropriate letter from the list above:

- Cables - C
- Grounding system - T
- Generators - M
- Switchboards - T
- Circuit breakers - T
- Transformers - T

Following these lists are the individual testing specs for this equipment. This method of organization leaves absolutely no confusion as to whom is responsible for what portion of the testing. It also lessens the chance that any of the testing will be overlooked. These simple steps can make a project go smoother every step of the way. ❖

Website News!

Hood-Patterson & Dewar's website is up and running. Check us out at:

www.hoodpd.com

In addition to general company information, we've included past Testing Times newsletter articles for your convenience.

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