

Section 1010
PEARL Calibration Standard

PEARL Reconditioning Standards			
PEARL CALIBRATION STANDARD	Revision		
	Standard	Number	Date
	1010	5	11-2008

1 GENERAL

1.1 SUITABILITY OF TEST EQUIPMENT

- 1.1.1** All test equipment shall be in good mechanical and electrical condition.
- 1.1.2** Split-core current transformers and clamp-on or tong-type ammeters require careful consideration of the following in regard to accuracy:
 - 1.1.2.1** Position of the conductor within the core
 - 1.1.2.2** Clean, tight fit of the core pole faces
 - 1.1.2.3** Presence of external fields
- 1.1.3** Selection of metering equipment should be based on knowledge of the waveform of the variable being measured. Digital multi-meters may be average or RMS sensing and may include or exclude the dc component. When the variable contains harmonics or dc offset and, in general, any deviation from a pure sine wave, average sensing RMS scaled meters may be misleading.
- 1.1.4** Field test metering used to check power system meter calibration must have accuracy higher than that of the instrument being checked.
- 1.1.5** Accuracy of metering in test equipment shall be appropriate for the test being performed but not in excess of two percent of the scale used.

1.2 TEST INSTRUMENT CALIBRATION

- 1.2.1** The PEARL member firm shall have a calibration program, which assures that all applicable test instruments are maintained within rated accuracy.
- 1.2.2** The accuracy shall be directly traceable to the National Institute of Standards and Technology (NIST).
- 1.2.3** All equipment tested to conform to PEARL standard must be tested and documented with test equipment maintained in calibration and repair to this standard. PEARL quality seals may only be applied to equipment tested to PEARL recommended standards with calibrated equipment that meets this standard.

1.3 INSTRUMENTS SHALL BE CALIBRATED IN ACCORDANCE WITH THE FOLLOWING FREQUENCY SCHEDULE:

- 1.3.1** Field instruments: Analog, 6 months maximum; Digital, 12 months maximum
- 1.3.2** General Shop instruments: 12 months
- 1.3.3** Leased equipment: 12 months
- 1.3.4** All borrowed equipment used to meet PEARL standard must be supplied with a copy of calibration. This certificate should be copied and attached to a file copy of the test report.
- 1.3.5** All equipment sent out to approved testing companies must be supplied with a test report on PEARL format and with proof of tractability of test instruments to at least PEARL standard.

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1.3.5.1 Approved testing companies:

1.3.5.1.1 All PEARL members capable of performing tests to PEARL standard

1.3.5.1.2 All full NETA member firms willing to test to PEARL standard and use PEARL file format

1.3.5.1.3 General Electric ISE engineering service

1.3.6 Dated calibration labels shall be visible on all test equipment.

1.3.7 Records must be maintained which show the date and results of instruments calibrated or tested.

1.3.8 In-house calibration is permitted if standard is traceable and maintained in good repair.

1.3.9 Calibrating standard shall be of higher accuracy than that of the instrument tested.

2 CALIBRATION RECORDS

2.1 THE TEST REPORT SHALL INCLUDE THE FOLLOWING:

2.1.1 Serial number or identification for record

2.1.2 Description of equipment tested

2.1.3 Description of test

2.1.4 Tolerance or expected result

2.1.5 Test results

2.1.6 Analysis and recommendations

2.2 FURNISH A COPY OR COPIES OF THE COMPLETE REPORT TO INSPECTOR OR CLIENT UPON REQUEST. THIS INFORMATION SHOULD BE STORED ON PREMISES AND BE AVAILABLE FOR REVIEW AT ALL TIMES