

Bi-Lateral Comparison between NIS-Egypt and NMISA-South Africa for the Calibration of an Optical Spectrum Analyzer

Authors : Osama Terra, Hatem Hussein, Adriaan Van Brakel

Abstract : Dense wavelength division multiplexing (DWDM) technology requires tight specification and therefore measurement of wavelength accuracy and stability of the telecommunication lasers. Thus, calibration of the used Optical Spectrum Analyzers (OSAs) that are used to measure wavelength is of a great importance. Proficiency testing must be performed on such measuring activity to insure the accuracy of the measurement results. In this paper, a new comparison scheme is introduced to test the performance of such calibrations. This comparison scheme is implemented between NIS-Egypt and NMISA-South Africa for the calibration of the wavelength scale of an OSA. Both institutes employ reference gas cell to calibrate OSA according to the standard IEC/ BS EN 62129 (2006). The result of this comparison is compiled in this paper.

Keywords : OSA calibration, HCN gas cell, DWDM technology, wavelength measurement

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