

Calibration of STOLAB PL SYSTEM components by independent calibration services companies

Competent independent calibration service companies offer the convenience of local services, expertise in metrology, and documentation which satisfies the requirements of many standards such as the increasingly used ISO 9000, and therefore often seem like an attractive choice to maintain the calibration of PL SYSTEM components. In STOLAB's experience, the quality and reliability of independent or "3rd party" calibration labs varies from excellent to fraudulent. The purpose of this Application Note is to highlight some of the considerations for choosing a 3rd party calibration service. "**Buyer beware**" very much applies. The following are some of the areas that should be reviewed with a potential supplier of calibration services :

Familiarity with the STOLAB PL SYSTEM, a system designed for interchangeability of Type PL sensors and electronics, a design fundamentally different from the usual "RTD Digital Thermometer". STOLAB PL SYSTEM electronics cannot be calibrated by using "RTD sensor simulators", which are simply resistance decade boxes.

STOLAB recommends that PL SYSTEM electronics be always calibrated to the interchangeability standard, rather than "matched" to one sensor.

Accuracy of standards to be used to calibrate the STOLAB system. The required accuracy of resistance standards is often beyond the capability of most independent labs, as is the required accuracy of temperature measurement if sensor calibration is to be checked. The potential calibration services lab should supply a written statement of the uncertainties of the standards to be used, and an explanation of the relationship of these uncertainties to the accuracy of the STOLAB instrument and/or sensor to be calibrated.

Written procedures to be followed. STOLAB suggests that such procedures be obtained from the potential calibration services company. STOLAB will assist its customers with the review of such procedures if necessary.

If possible, the potential calibration services supplier should perform a **demonstration** of the proposed calibration procedure and equipment.

STOLAB does not authorize anyone to represent that their calibration of STOLAB products meets factory specifications.

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