two PTB220AD's are not used in the calibration process, but are operated in parallel ensuring a potential backup is available should the need arise.

Another aspect of the modernization of MetService calibration facility since 2000 has been the replacement of the ageing Macintosh computer system, which was becoming difficult to support, with a new PC-based system developed in LabVIEW™. This enabled a number of enhancements to be implemented.

Integrated with database

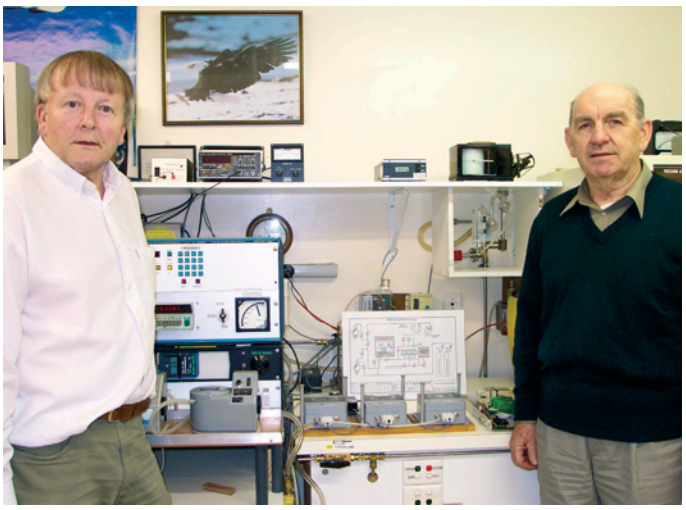
The LabVIEW™ DPA21 calibration program, written by Bob Heron, has been in operation since September 2003. The new program is integrated with the maintenance engineers' Modules Database, enabling the barometer and transducer serial numbers to be selected from the database and the calibration results to be passed back to the database along with a calibration history for each sensor. Calibration run results are archived electronically. This has eliminated the need to maintain any hand written records and, by backing up files off-site, removed the risk of record loss. Sensors that pass the calibration successfully are marked as serviceable on the database, while any that fail are flagged as unserviceable.

Another benefit of the new system is that the Ruska is no longer used as a working standard but simply as a pressure controller. The barometers being calibrated are now compared directly to the Primary Standard PTB220AD, rather than the Ruska, removing one step in the traceability chain. At present, only DPA21 barometers are calibrated with this new system, but enhancements for handling the PTB220 series, along with other intelligent barometers, are in the pipeline.

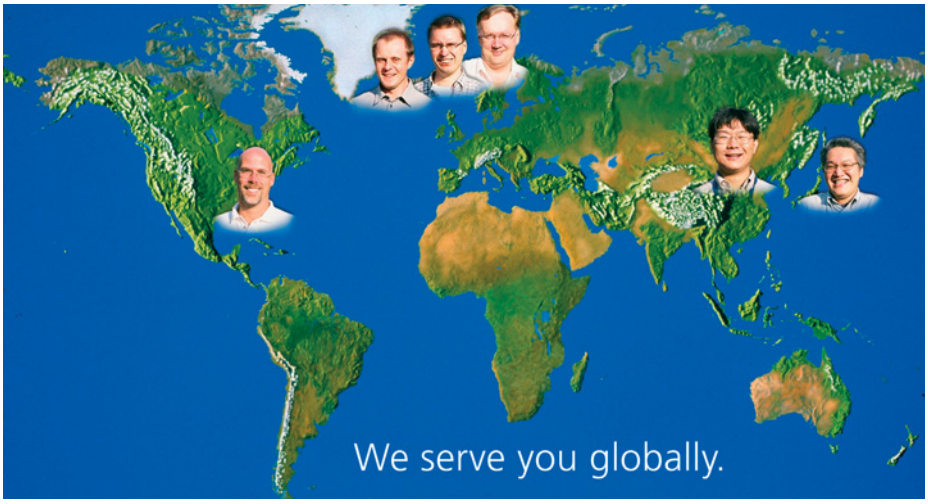
New pressure calibration system

MetService's Manager of Met-Data Services, Tony Quayle, is delighted with the advances achieved with the new calibration systems (Figure 3). Replacing the Hass mercury barometer with PTB220ADs as the primary standard has made for a safer workplace and removed the need for costly maintenance and recertification of the Hass. The PTB220s used at observing stations have also proved to be a cost-effective and reliable alternative to mercury barometers. ●

Figure 4. MetService engineers John Burman (left) and Bob Heron with the new pressure calibration system.



Irma Ylikangas
Sales Manager, (M.Sc., Chem.Eng.)
Maintenance Services
Vaisala Helsinki
Finland



Vaisala Service Centers Offer

Lifetime Accuracy to Your Instruments

When the day comes that your instrument needs calibration or maintenance what should you do? Should you perform the calibration yourself or do you want Vaisala Service Centers to do the job. Maintaining a dedicated calibration laboratory is time-consuming and costly. It is not only the investment costs of a laboratory, but it also means that the technical competence and experience of employees need to be kept at excellent level. The best know-how of an instrument and its performance is at manufacturer's site. This know-how is also used to choose the calibration and service equipment to meet todays standards. The Vaisala Service Centers offer customers a safe solution to confirm the lifetime accuracy of measurement instruments.

High-end Calibration Services

All technicians within Vaisala Instruments service teams are skilled and their standard calibration work conforms to the ISO9001 standard. Calibration means comparing the reading of an instrument to a valid reference value. If the reading is not in line with the reference value, instrument needs to be adjusted. Calibrated instrument leaves the factory with a calibration certificate. The certificates contain before adjustment (as received) data and after adjustment (as shipped) data. In many cases the adjustment is only possible at the manufacturer's laboratory.

Vaisala service centers also offer accredited calibrations for demanding applications conforming to ISO17025 standard. This accredited calibration has full traceability and also uncertainty calculations for the calibration. All working procedures are approved by third party organizations, which are confirmed by the name and logo of the local accrediting body appearing on report documentation.

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New way to order services for HMT330

For the Vaisala HUMICAP® Humidity and Temperature Transmitter HMT330 series, we have introduced a new way to order calibration, accredited calibration and maintenance contracts. These services have been attached to the order/configuration code. When a customer purchases a new HMT330 transmitter it is possible simultaneously order a calibration or an accredited calibration and additional maintenance contract. Subsequently, to confirm the order, e.g. the accredited calibration contract documentation will be sent to the customer together with the instrument. One of the HMT330 accredited calibrations has seven humidity points and one temperature point. These points are calibrated in room temperature. Customized calibrations and maintenance contracts are also available for HMT330.

Maintenance contracts

Vaisala offers maintenance contracts for a range of humidity, dewpoint, carbon dioxide, barometric pressure and wind instruments on a regularly scheduled basis. Most maintenance contracts are customized. They normally include one type of calibration, either ISO9001 calibration or ISO17025 accredited calibration . In addition, the maintenance contracts have different testing procedures e.g. testing of outputs or power consumption. All contracted customers are linked into a calibration reminder program.

Vaisala Service Centers aim is to continuosly improve our service offerings to our customers. When you are looking for a special calibration or maintenance service please let us know and we will help you to find a suitable solution. ●