

*Pavla Skrivankova*  
Head of Remote Sensing Section  
Czech Hydrometeorological Institute  
Prague, Czech Republic

# Quality assurance for peace of mind

Czech meteorological services check  
Vaisala radiosonde production quality

The Czech Hydrometeorological Institute (CHMI) and the Czech Military Weather Center (CMWC) have used Vaisala upper-air systems for more than 15 years. Both Czech meteorological services put great emphasis on ensuring the highest data quality and homogeneity of the time series. Several radiosonde validation trials were carried out in the Czech Republic before migrating from one radiosonde or sounding system generation to a newer one.

For over ten years, the ESCATEC factory in Penang Malaysia has delivered some printed boards used in Vaisala radiosondes. In 2006, Vaisala moved the final assembly of radiosondes to ESCATEC. The sensor and transducer units are produced and calibrated at the Vaisala factory in Helsinki and then delivered to Penang for final assembly.

Considering this change in the radiosonde production, Vaisala arranged a workshop at the Penang ESCATEC factory in June 2007. Several specialists from CHMI and CMWC, together with a delegate from OMNIPOL, the Vaisala representatives in the Czech Republic, were invited to participate in the workshop to check the radiosonde production quality systems at the ESCATEC factory in Penang.

Mr. Baharinshah Hussain, General Manager of the ESCATEC Penang factory, introduced the ESCATEC Group as a world-class, integrated contract manufacturer for electronic and mechatronic products. Workshop participants were informed

about the ESCATEC Group's 30-year history, structure and production.

### Carefully scrutinized processes

The most important part of the workshop was the presentation of the radiosonde production and the quality assurance system in the ESCATEC Penang factory certified to ISO 9001:2000 and ISO 13485. The electronic circuit production is fully automated. The components are mounted directly onto the surface of printed circuit boards by Surface Mount Technology and Chip On Board methods. The printed boards are tested by In-circuit test and X-ray inspection. The radiosondes are checked several times during the assembly process and 99% of radiosonde production is failure-free. The radiosondes are launched three times per week and all sounding data is carefully analyzed. The CHMI and CMWC do not expect any significant change in the consistency of upper-air measurement quality due to the radiosonde production transition.

During the trip to Malaysia the participants of the workshop visited the Vaisala office and the Malaysian Meteorological Department (MMD) in Kuala Lumpur, and exchanged views on the role of meteorological services. All participants agreed that the accuracy of meteorological measurements and the homogeneity of data series are very important for high-quality weather and climate prediction. ■



*Visit to the Malaysian Meteorological Department in Kuala Lumpur. From left down: Mr. Yap Kok Seng (MMD), Mr. Kurka Petr (CMWC), Mrs. Skrivankova (CHMI), Mr. Krmela Drahomir (CMWC), Mr. Vlk Vaclav (OMNIPOL), Mr. Paananen Jussi (Vaisala), Mr. Kovar Karel (CHMI).*