

## TRAINING COURSE INFORMATION

### Temperature, Humidity and Dew Point *Calibration and Measurement Uncertainty*

Dear Colleague,

You and your colleagues are invited to attend our hands-on **Temperature, Humidity and Dew Point Measurement, Calibration and Measurement Uncertainty Training Course**. This unmatched course is only available for a maximum of 8 delegates.

#### **Who would benefit from attending the course?**

This course is suitable for a broad range of staff from those new to Temperature, Humidity and Dew Point, to knowledgeable engineers and scientists who need personalised training.

#### **What does the course cover?**

- Knowledge that is not available from other sources.
- Terminology and units.
- Fundamentals of each parameter.
- Best practice measurement.
- Calibration methodologies.
- How to interpret results and spot common errors.
- Measurement uncertainty.
- How to use uncertainty budgets and benefit from them.
- Common instrument types and their advantages/disadvantages.

#### **What will I benefit from attending the course?**

A practical and theoretical understanding of all the key aspects of Temperature, Humidity and Dew Point measurement and calibration.

The ability to produce basic uncertainty budgets.

Hands on experience of using a range of equipment in our UKAS accredited calibration laboratory from wide range of specialist manufacturers including;

Thunder, ESPEC, Vaisala, E+E, Rotronic, MBW, Fluke, ASL, Agilent, Ametek, Isotech, Beamex, Chamois and Benrhos.

#### **How can I ensure that my training needs will be met?**

The course will be presented by Richard Gee, Dave Ayres and Jeremy Wingate who each have many years of unique experience in both industrial and laboratory measurements.

Course attendees will be limited to only 8 people ensuring individual attention and tailored course content. The course is built around good metrology with an understanding of the working reality in commercially run labs and industrial environments.

Course material and training will be un-biased; course presenters are all formally scientists.

Dates Available: 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> March 2016, (3 days)  
12<sup>th</sup>, 13<sup>th</sup> and 14<sup>th</sup> July 2016, (3 days)  
15<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup> November 2016 (3 days)

Venue: The course is based in the **Offices and UKAS Accredited laboratory of Rotronic Instruments Ltd**; Optional accommodation is available at a local hotel.  
Gatwick Airport and Three Bridges main line railway stations are close by.  
Rotronic Instruments (UK) Ltd., Crompton Fields, Crompton Way, Crawley, West Sussex.  
RH10 9EE. 01293 843701

Included: Course notes and a copy of the slides.  
Certificate of attendance and other relevant information on a USB memory stick.  
Refreshments through the day, lunch.  
Group dinner on day one.

Costs: Option 1: Course as described above. £1250+vat.  
Option 2: Course with 2 night's hotel accommodation (B&B basis). £1460+vat.

#### Lecturer Information

The temperature content is led by Dave Ayres of Benrhos Ltd, a highly respected temperature expert, and an external temperature assessor for UKAS and INAB. Dave also conducts lectures in the subject of industrial temperature at Universities as well as conducting onsite training for many customers.

The humidity content is led by Dr Jeremy Wingate. Jeremy has moved into the field of humidity following a PhD at the University of Surrey. Jeremy is currently working for Rotronic Instruments (UK) as the head of UK sales. He has provided training courses and consultancy for a wide number of industrial humidity and temperature projects giving him a broad appreciation of the breadth of humidity applications and practical issues.

The measurement uncertainty content is led by Richard Gee the Managing Director of Rotronic Instruments (UK). Richard joined Rotronic in August 2006 as the Technical Services and Quality Manager. This was after spending 5 years from 2001 to 2006 working in the Humidity Group at the National Physical Laboratory. Richard has a varied experience of practical humidity measurement and has been delivering training courses in the subject for the last 13 years.

#### Applications and more information.

Registration will be carried out by Jeremy Wingate and Dave Ayres.  
Jeremy and Dave will be happy to answer any questions that you may have.

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