

DTB's environmental chamber with a readout attached to the control panel.



Group in the DTB Engineering and Test Division.

Mr. Zimoulis explains the demanding test conditions: "We require a rugged and accurate humidity transmitter that is resistant to condensation during rapid temperature transitions at high relative humidities. A typical test temperature range is from -40 to 90 °C (-40 to 203 °F) with relative humidity levels as high as 95% at 71 °C (160 °F)."

The first Vaisala HMP243 dew point transmitters were tested in late 1996, and the first purchases were made in early 1997.

"The HMP243 transmitters are used to monitor and control the relative humidity in various test chambers. The unique design of the transmitter with its heated sensor head makes it ideal for these applications," Mr. Zimoulis comments. "The ability of the HMP243 to accurately measure relative humidity at temperatures of -40 °C (-40 °F) has also been extremely useful. Previously used sensors were only rated to -5 °C (23 °F), and while in most cases we do not control RH below 10 °C (50 °F), we are often asked by customers to record the RH at low temperatures."

Another plus is the HMP243's ability to operate at reduced pressures – as low as 2.7 kPa – and to withstand, without damage, extremely low temperatures, down to -65 °C (-84 °F).

"All in all, Vaisala's HMP243 transmitter has been exactly the

right product for our application."

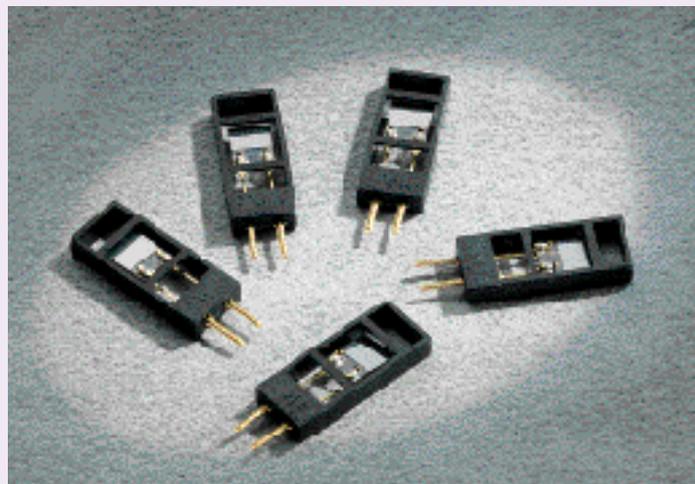
#### Unique cross-utilization of talent

The DTB Engineering and Test Division operates under the direction of C. Kenneth Morrelly, Senior Vice President. In his view, the division's biggest asset in the market is its wide range of experts from all fields of engineering.

"The unique capability and availability of DTB's organizational structure is the cross-utilization of talent. The Engineering and Test Division offers the versatility of an engineering and technician group that is experienced in structural, hydraulic, electronic, instrumentation, dynamic, environmental and other key disciplines. From this talent pool, the project engineers and program managers cross-utilize all the expertise that is required to accomplish an assigned task with the highest level of capability available within the division."

This cross-utilization of personnel also makes the organization more effective, since all experts can be involved in any working project. There is no idle time associated with many specialized areas not having enough work to keep their employees busy. ■

*HUMICAP® sensors are the flagship product of Vaisala's line of humidity instruments.*



## The HUMICAP® Celebrates Its 25th Anniversary

With the launch of the HUMICAP®, 25 years ago, Vaisala introduced the world's first thin-film capacitive humidity sensor. Since then, this breakthrough technology has been constantly improved, and Vaisala has continued its pioneering development in the field of humidity measurement.

**V**aisala's major R&D investments are reflected in the continuous advances in its humidity products. This work has resulted in many improvements to the HUMICAP® sensor, keeping it at the forefront of humidity measurement and opening up totally new application areas. The repeatability, stability and performance of this sensor have been demonstrated in many studies. Several examples of the wide-ranging application areas of the HUMICAP are described in this issue of Vaisala News. ■