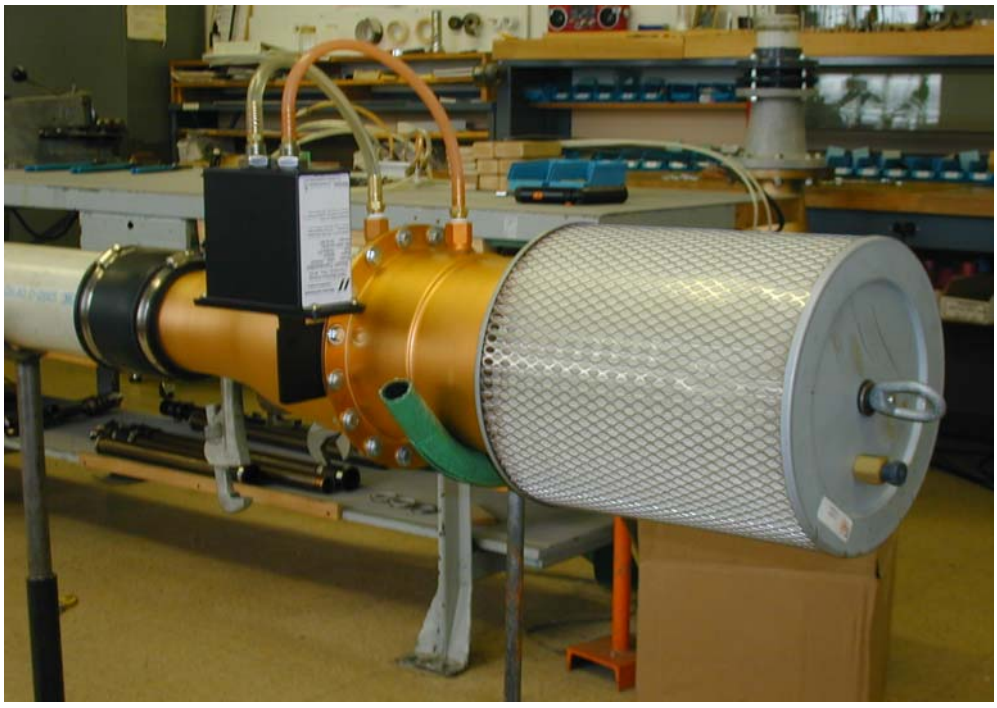
Meriam Instrument
a ScottFetzer company

# APPLICATION NEWSLETTER

A large automobile manufacturer wisely decided to use Laminar Flow Elements in their engine test cells. LFEs offer very good accuracy and great flow turndown for engine intake air flow measurement applications. When planning to upgrade seventy test cells, a decision was made to use differential pressure transmitters to moniter the DP. The Meriam Model 1500 Smart Transmitter was selected to be used with the model 50MC2 LFE.

The 1500 Smart Transmitter is available for low and high differential pressure measurement, gauge pressure measurement and absolute pressure measurement. Accuracy is ± 0.025% of full scale when using the RS-485 output and ± 0.05% of full scale when using analog output modes (4 - 20 mA, 1 - 5 vdc or 0 - 5 vdc). These were the specifications the customer needed but some custom work was also required to completely satisfy the customer.

Meriam designed a mounting fixture to allow the 1500 Smart Transmitter to be mounted directly to the flange ring of type 50MC2 (or 50MR2) LFEs. See the photo below for details. This simplified the mounting of the transmitter as well as the connections from the LFE to the transmitter (a DP transmitter is shown in the photo, but Meriam has also designed fixtures to accomodate both a DP and an inlet pressure Smart Transmitter). Meriam also implemented a calibration procedure to meet the customer's requirements. After the 1500 and the LFE were calibrated individually, the two instruments were assembled and the output of the 1500 Smart Transmitter was documented versus the NIST traceable flow rate from the laboratory standards. This document was used by the customer to program their PC for flow calculation based on the analog output received from the 1500.



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