

## A Measurement Device of Condensing Flow Rate, an Order of MilliGrams per Second

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**Abstract :** There are many difficulties in measuring a small flow rate of an order of milli grams per minute (LPM) or less using a conventional flowmeter. Therefore, a flow meter with minimal loss and based on a new concept was designed as part of this paper. A chamber was manufactured with a level transmitter and an on-off control valve. When the level of the collected condensed water reaches the top of the chamber, the valve opens to allow the collected water to drain back into the tank. To allow the water to continue to drain when the signal is lost, the valve is held open for a few seconds by a time delay switch and then closed. After an examination, the condensing flow rate was successfully measured with the uncertainty of  $\pm 5.7\%$  of the full scale for the chamber.

**Keywords :** chamber, condensation, flow meter, milli-grams

**Conference Title :** ICSR2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020