

## AMS News

This month AMS will have a new sales engineer commencing his employment in our NSW Office. Fahim Arif has a great instrumentation knowledge and will be a great asset to our company. We wish him a long and rewarding career at AMS.

### WHY USE AMS FOR YOUR BEAMEX CALIBRATOR NATA CERTIFICATION?

AMS are the Australian authorised distributors and service agents of the Beamex range of calibrators and are the only company that can competently check and repair your equipment prior to the NATA certification.

Upon receipt of the calibrators, the units are checked for the latest software updates, cleaned and fully checked out prior to the NATA calibrations. Faults can be rectified speedily, thus expediting the return of your equipment. Software updates are generally only available to the users and AMS and thus might be missed by other laboratories. AMS will provide both as found and as left calibration results (As left if adjustments are done) and provide a statement that the unit(s) meet the manufacturers specifications. AMS has made arrangements with NATA certified laboratories for the calibration of pressure, temperature and electrical calibration equipment. Further, these laboratories have proved their capability to calibrate and adjust Beamex calibrators using factory procedures. AMS have negotiated very competitive pricing and these savings are passed on to the client.

We feel you can be confident with the procedures and cost savings that AMS are offering you.



The Trimec Flow Products TF Series Oval Gear PD flowmeters offer a high level of accuracy, turndown & repeatability. These precision meters are used for flow rate measurement in flow monitoring & control application and for totalizing in dispensing and batching. Micropulse gear meters are suitable for use with a wide range of clean liquids including viscous lubricants, chemicals, food bases & non-conductive low viscosity solvents either pumped or gravity fed.



The Oval Gear Flow meter uses two fine-toothed meshed gears that are oval in shape and engage each other in a precision machined body. This fluid is transferred sequentially from the inlet to the outlet and one or two pulses are transmitted for each revolution of the gear. Embedded within the gear, a pair of chemically resistant magnets provide the external signals. Detection of the rotation uses either a reed switch or a Hall effect sensor on the outside of the fluid housing. A choice of materials allows the meters to be used in a variety of corrosive applications.

The equipment is suitable for use in hazardous areas, and the basic meter is classed as simple apparatus, enabling use in monitoring flows of low viscosity hydrocarbons, fuels and solvents.



Process engineers at large food/beverage industry operations, which are harvesting their bio-waste in fermenters or digesters to generate heat or power and reduce pollution will find the ST98 Biogas Flow Meter from FCI provides precise measurement of these wet, dirty, mixed methane composition gases.

On dairy farms, for example, large amounts of cow manure accumulate that are a rich source of biogas gas that can be harnessed for the eco-friendly production of green electric power. The output from the manure biomass digestion process results in a complex gas mixture that includes methane (CH<sub>4</sub>), carbon dioxide (CO<sub>2</sub>), water and trace amounts of hydrogen sulfide (H<sub>2</sub>S).

The biomass production process requires optimising gas creation, cleansing, drying, storage (tank or bag-type accumulator) to ultimately use the biogas as a fuel source for heating or powering a co-gen engine to produce electricity. Biogas flow must be measured at several points in the system to provide operators with critical information for optimal gas production, control and reporting. A ground flare is an integral part of the safety system for the process. Mass flow measurement of biogas is challenging. This gas is typically 65 percent CH<sub>4</sub> and 35 percent CO<sub>2</sub>. Biogas is dirty and corrosive with particulates that will quickly clog any flow meter designed with orifices and it will foul meters with moving parts. Low flow measurement sensitivity and a wide turndown are essential due to biogas flow variability based on biomass supply and environmental fluctuations.

With its highly reliable thermal mass sensing element, the advanced ST98 Mass Flow Meter delivers precision flow rate, totalised flow and temperature measurement. It is ideal for biogas measurement and features high accuracy to +/-1% of reading, 0.5% of full scale.

Exceptionally consistent the ST98 offers repeatability to +/-0.5% of reading and is temperature compensated for accurate measurement under variable environments.

The insertion style ST98 Flow Meter operates over a wide flow range from 0.21 to 172 NMPS. It features a turndown ratio that is factory preset from 10:1 up to 100:1 within the calibrated flow range and operates at pressures up to 17 bar (g).

The ST98's thermal mass sensing element is comprised of two all-welded 316L stainless steel thermowells that protect two matched platinum precision resistance temperature detectors (RTDs). With a highly reliable no-moving parts design, one RTD is heated relative to the reference RTD, and the temperature difference between the two is proportional to the processes biogas mass flow rate.

The ST98's transmitter features robust, microprocessor-based electronics. The transmitter can be located integral with the sensor or remote mounted up to 350m. A NEMA/CSA Type 4X (IP66) rated enclosure and explosion-proof, Division 1 [Zone1] rated enclosures are available for the toughest environments.

