

Auxitrol Weston

Pursuing investments on its piezoresistive silicon on insulator (SOI) pressure sensor technology.

Auxitrol Weston has developed and patented (FR2859281) a mechanical design of SOI sensing element able to support overpressure as high as 20 times the full scale pressure range.

The applications are for example, but not limited to, pneumatic anti-icing systems, bleed air systems, lubrication systems, hydraulic systems,... This new type of sensing element is already in service for absolute pressure measurement and is in qualification progress for on a major program to be introduced in 2015 for true delta measurement.

Auxitrol Weston has also patented (US 7661318) a new design for high accuracy and stability SOI sensing element. The basic principle is a stress isolator fitted between the glass base and the metallic support to reduce the constraints caused by the thermal expansion due to dissimilar materials. With a digital compensation the accuracy is better than 0.02% full scale over a temperature range -55°C + 125°C. Auxitrol Weston is expecting to get even better accuracy.

Auxitrol Weston is progressing in the qualification of several new sensors for new aeronautic programs including:

- pressure sensors using high temperature active electronics to ensure signal amplification, compensation, voltage regulation .. of the pressure cell at a surrounding temperature range of 180°C to 200°C
- pressure sensor where the SOI sensing element is in direct contact with air in order to improve the measurement accuracy in case of low pressure range.

In order to enlarge its proposal towards applications, Auxitrol Weston has launched several R&D projects. Among these projects, Auxitrol Weston is targeting:

- by modifying the sensing element architecture and pressure cell design,
- to extend the temperature capability up to 250°C in a first step and to higher temperature in a middle term
- to address harsh environment conditions for vibration and acceleration
- to reduce the pressure cell size
- to further improve the accuracy of its pressure cell

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