

Application

Market: Oil & Gas

Product Line: Load Cell

Pipeline Pig

Application: Pipeline pigs use sensors to measure deflections caused by radial probes in contact with the inside diameter of the pipe. The “pig” is used in an oil pipeline for inspection, it is carried down the pipeline by the product being transported.

Customer Challenge: These sensors can be exposed to high temperatures, vibration, and shock. Given the high cost and long down-time required to replace damaged sensors, the customer was looking for a durable design to survive harsh conditions.

SMD Sensor Solution: Strain Measurement Devices designed custom elected standard **S220** and **S230** load cells to provide both the accuracy and long life required for this application.

Longer Life: The Wheatstone Bridge circuit included in these load cells are created using a vacuum sputtering process. Where other manufacturers offer adhesive bonded circuits which can delaminate with exposure to humidity, vibration, or shock, Strain Measurement Device’s sputtered circuits are atomically bonded directly to the surface of the metal load cell structure with no adhesives. This results in a more robust sensor design capable of high accuracy and extended long life.

Overload Protection: Strain Measurement Devices designed an overload feature that prevented the load cell from deflection beyond its 250% maximum limit. This design allowed the customer to write operation procedures with confidence so that their instrument would survive well beyond its warranty specification.



Related Products:

S220 Low Profile Load Cell
S230 Low Profile Load Cell
S401 Load Cell
E110 Signal Conditioning Board
E120 Signal Conditioning Board
4000 Panel Meter