

The Process Measurement and Control Group (PMAC) was formed in 2000 and have been providing sand / erosion monitoring services to the Well Testing sector since its inception. With offices in Aberdeen and Singapore, PMAC covers a worldwide market and has gained a reputation for innovative solutions in the fields of erosion, corrosion and flow assurance.

PMAC's unique Sand Monitoring packages offers true flexibility and an unrivalled range of data monitoring options. PMAC offers three sand / erosion monitoring solutions or any combination of those solutions to meet your well testing needs:

- High Resolution Erosion Probes** for rapid detection of erosion rates
- DSP Acoustic Detectors** for instantaneous indication of solids production
- SpotOn U UT Sensors** for wall thickness monitoring of well test pipework

Recognising the cost pressures operators and service companies are under, and the need to provide a service that delivers value, PMAC now offers a range of service options that can be combined with any of our monitoring technologies. This allows to offer a package truly tailored to your operational requirements:

Equipment & Training

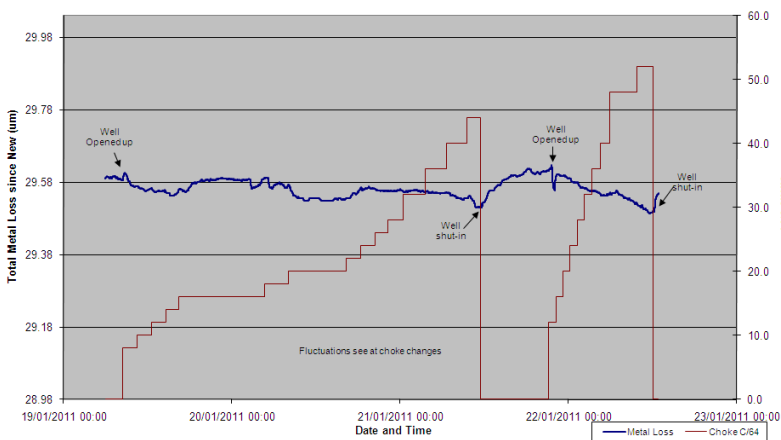
The equipment and expertise you need at minimal cost.

Equipment, Rig Up / Down & Onsite Training

Ensuring equipment is setup, tested & operational for handover to client

Equipment & Dedicated Onsite Support

The complete support package.



Process Measurement And Control Systems

**Integrity & Flow Assurance
Specialists**

**Products and Services for
Corrosion, Erosion &
Integrity Monitoring**

- Cathodic Protection
- Flooded Member Detection (FMD)
- Intrusive & Non-Intrusive Corrosion Monitoring
- Sand Monitoring
- Oilfield Chemistry

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Monitoring Solutions



High Resolution Erosion Probes:

Intrusive devices that measure the metal loss of a sample element with a very high level of resolution, enabling rapid detection of erosion rates caused by even the smallest sand events.

- Direct measurement of erosion
- Unaffected by changes to flow regime
- No calibration required



DSP Acoustic Particle Monitors:

Non-intrusive sensors that are clamped to a bend on the well test pipework. The sensors 'listen' to the sound of particles impacting on the pipe wall and provide an instantaneous indication of solids production.

- Non-intrusive & easy to install
- Highly sensitive to even small amount of solids production
- Instantaneous response.



SpotOn UT Sensors:

Non-intrusive sensors that are clamped to well test or production pipework. The sensor use conventional & proven UT technology to provide wall thickness monitoring of the well test or production pipework to which they are installed.

- Non-intrusive & easy to install
- Accurate, repeatable results
- Increased safety, with no requirement for manual UT readings from high risk areas
- Data can be sent via satellite from remote well sites if necessary

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Service Options

	<p>Equipment & Training: The equipment and expertise you need at minimal cost.</p> <ul style="list-style-type: none"> • Full equipment rental including dedicated support spares. • Full training on equipment installation, setup, operation and data analysis available either at PMAC office or client office / base.
	<p>Equipment, Rig Up / Down & Onsite Training: Ensuring equipment setup, tested & operational.</p> <ul style="list-style-type: none"> • Full equipment rental including dedicated support spares. • Complete installation setup by PMAC monitoring specialist. • Full onsite training on equipment setup, operation and data analysis. • Optional 24 hour remote support.
	<p>Equipment & Dedicated Onsite Support: The complete support package.</p> <ul style="list-style-type: none"> • Full equipment rental plus dedicated support spares • Complete installation setup and ongoing support through the Well Test by PMAC monitoring specialist. • Real-time on-site data monitoring and analysis ensuring rapid response to any sand event.

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