MONPAC™ is an Acoustic Emission (AE) technology package for evaluating the structural integrity of metallic pressure equipment. The method utilises proprietary multichannel AE systems and sensors that detect the high-frequency signals resulting from active defects. The systems have sufficient speed and resolution to ensure real-time, on-screen display of all activity and indications.

MONPAC™ provides a severity grading for defects along with recommendations for further action. Sources of interest can be located on the equipment.

MONPAC™ can be applied during:

- First hydrotest of new pressure equipment
- Requalification hydrotest of used pressure equipment
- In-service pressurisation (with working fluid or inert gas)

Detectable damage modes / mechanisms:

- Overstress
- Manufacturing defects (e.g. weld defects)
- In-service defects (e.g. cracks)
- Corrosion, including CUI
- Environmentally assisted cracking (e.g. chloride-induced SCC)

Benefits of using MONPAC™:

- Rapid inspection (e.g. a 15m sphere is tested in approximately 3 days)
- Global monitoring (100% inspection, including welds, repairs etc.)
- Single shell, insulated and double wall equipment are routinely tested
- Supports Non-intrusive Inspection (NII) strategies, as per DNV-RP-G103
- Aids pre-turnaround inspection and maintenance planning
- Reduction in inspection costs - Guiding local NDT where it is needed
- Reduction in downtime resulting from improved information about plant condition
- Meets the requirements of ASME-V article 12, EN 15495, EN 14584 and AFIAP
- In-service continuous monitoring can be applied to critical assets, as per API 579

Insulated vessel MONPAC™ in-service test led to identifying significant weld HAZ corrosion with minimal disruption to operations.
MONPAC™
EVALUATING
STRUCTURAL
INTEGRITY

MISTRAS ABERDEEN
📍 Kirkhill Industrial Estate, Aberdeen AB21 0GN
📞 +44 (0) 1224 725277
✉️ info.aberdeen@mistrasgroup.co.uk

MISTRAS BRIDGEND
📍 17 Village Farm Industrial Estate, Bridgend CF33 6BL
📞 +44 (0) 1656 740232
✉️ info.bridgend@mistrasgroup.co.uk

MISTRAS CAMBRIDGE
📍 Norman Way, Over, Cambridge CB24 5QE
📞 +44 (0) 1954 231612
✉️ info@mistrasgroup.co.uk

MISTRAS HARTLEPOOL
📍 108 Graythorp Industrial Estate, Hartlepool TS25 2DF
📞 +44 (0) 1429 233323
✉️ info.hartlepool@mistrasgroup.co.uk

mistrasgroup.co.uk