



# Acoustic Emission Pressure Vessel Testing (MONPAC™)

MONPAC™ is an Acoustic Emission based expert system for evaluating the structural integrity of metallic pressure vessels, spheres, columns and tanks. MONPAC™ consists of AE test procedures and evaluation criteria and enables 100% inspection of the vessel during one pressure test.

## MONPAC™ can be applied during:

- First Hydrotest of a new Pressure Vessel according to ASME-V Part 12
- Requalification Hydrotest of a used Pressure Vessel
- On-line Pressurization (in-service with working fluid)

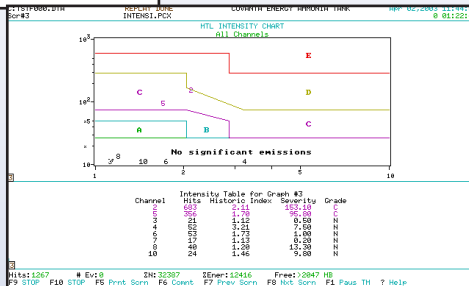
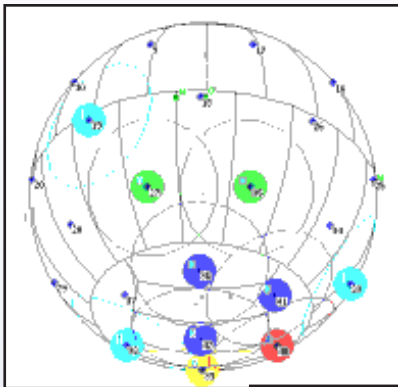
The method utilizes PAC's multichannel Acoustic Emission systems and sensors that detect the high-frequency signals resulting from deterioration in the structure when subject to stress. The systems have sufficient speed and resolution to ensure real-time, on-screen indications of the development of any defects.

The signals may result from local over-stressed areas, crack growth, corrosion products de-cohesion. According to evaluation criteria, which were developed after thousands of tests, MONPAC™ gives 'color coding' for severity of emission and complete associated recommendations.



## Advantages

- Rapid inspection (e.g. a 15m sphere is tested in approximately 3 days)
- Global monitoring (100% inspection, including welds, repairs, base metal etc.)
- On-line testing (can be tested with service product)
- Minor disturbance of insulation (insulation not removed, only few holes are cut locally)
- Reduction in inspection costs
- Reduction in downtime resulting from improved information about plant condition
- The Acoustic Emission test is performed in accordance with ASME - Section V, Article 12



Physical Acoustics Corp. is a member of MISTRAS Software & Systems division, a team of skilled researchers, engineers, technicians and manufacturing personnel dedicated to the development on practical and cost saving solutions to your challenging inspection needs.



For assistance or additional information, please contact our Princeton Junction headquarters.

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