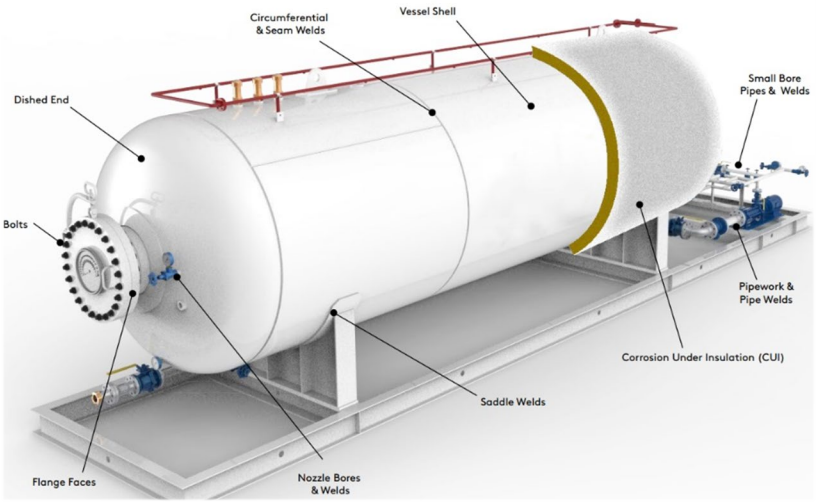
Non-Intrusive Inspection (NII)

Non-Intrusive Inspection (NII) is being considered increasingly as an alternative to Internal Visual Inspection (IVI) as part of the integrity management of pressure equipment. The benefits of NII are significant and include the following. It is widely recognised that NII is different in many respects to IVI hence a different approach to planning is needed. For example, while IVI has the capability to detect a range of different defect types without specific knowledge of what to expect, the capability of NII is very much technique driven. Hence an up-front knowledge of what degradation mechanisms may be present takes on added significance when planning an inspection by NII.

Successful NII is also very much dependent on knowledge of the capabilities and limitations of available inspection techniques so that the most appropriate are selected. Definition of the inspection requirements is also linked closely to the probable defects of concern driven by the credible integrity threats.



Areas of interest for NII Inspection, all these areas can be inspected using Mako Offshores services.

Advantages

- Reduced production losses associated with shutdown
- In-service inspections optimize productivity
- Reduced cost and downtime
- Reduced manpower requirements
- Removal of the need to clean vessels internally
- Safer inspection than traditional means by eliminating hazards from asset entry voidance of Confined Space access which is hazardous and can also require upgraded protective equipment and systems such as lighting and breathing apparatus
- Reducing shutdown/turnaround times, NII can be carried out prior to a shutdown event allowing the turnaround to be restricted to repair/maintenance work. This also allows for advanced planning
- Removal of the requirement to break containment/isolate/drain and purge the vessels under evaluation
- Minimize disturbance to the vessel, which may create new anomalies
- Allowance for the inspection to be performed as soon as an issue is identified
- Metallurgical defects which would not be identified during an IVI can be identified
- Periodic NII inspections allow engineers to calculate remaining plant life of operational