Pressure Vessel Inspection

Specification
Application: Hydrogen Storage
Material: CFRTP + PA lining
Goal: Quality check & Process Optimisation

Results
Optrion's solution is the only NDT method able to detect in-depth defect of different nature

Shearography Difference
- Contactless
- Large area inspected
- Various type of defects detectable
- Low pressure delta sufficient
- Feasible during high pressure testing

Sample
- Length: 2,5m diameter: 0,53m
- Maximum thickness: 46mm
- Working Pressure: 750 bar

Measurement Process
- Solicitation: internal pressure delta
- Test pressures: reference @ 2 bar & measurement @ 4 bar
- Area measured in each shot: ~50x75cm
- Measurement duration: <30 seconds (related to pressure build up/down)

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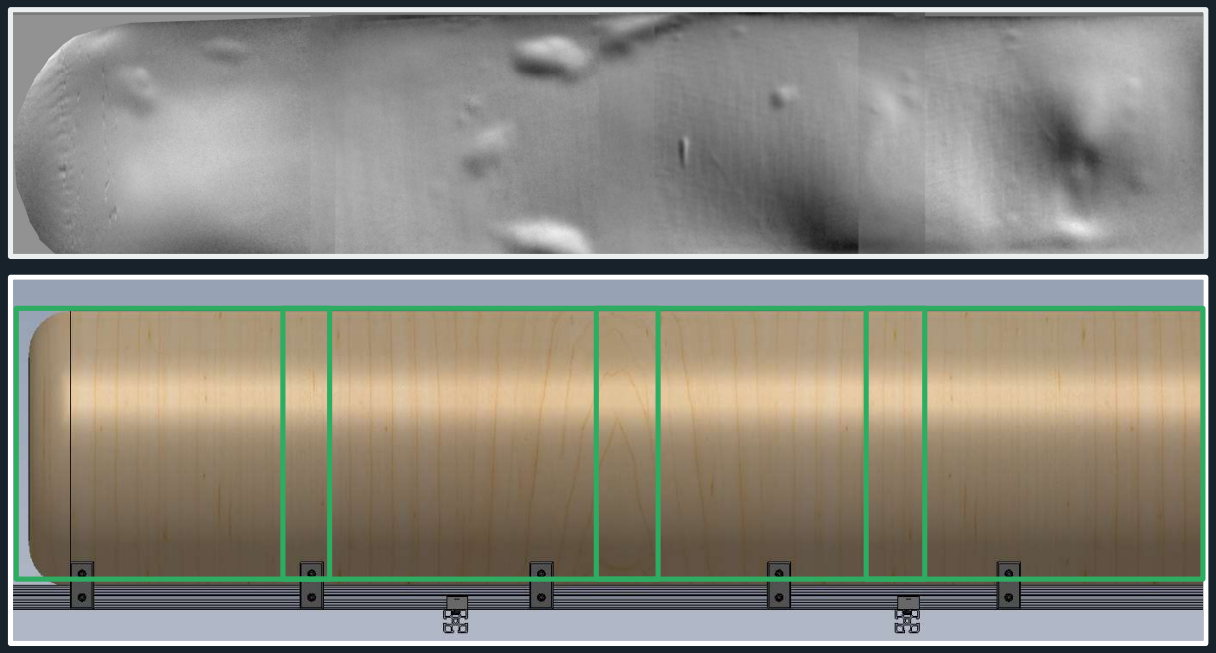
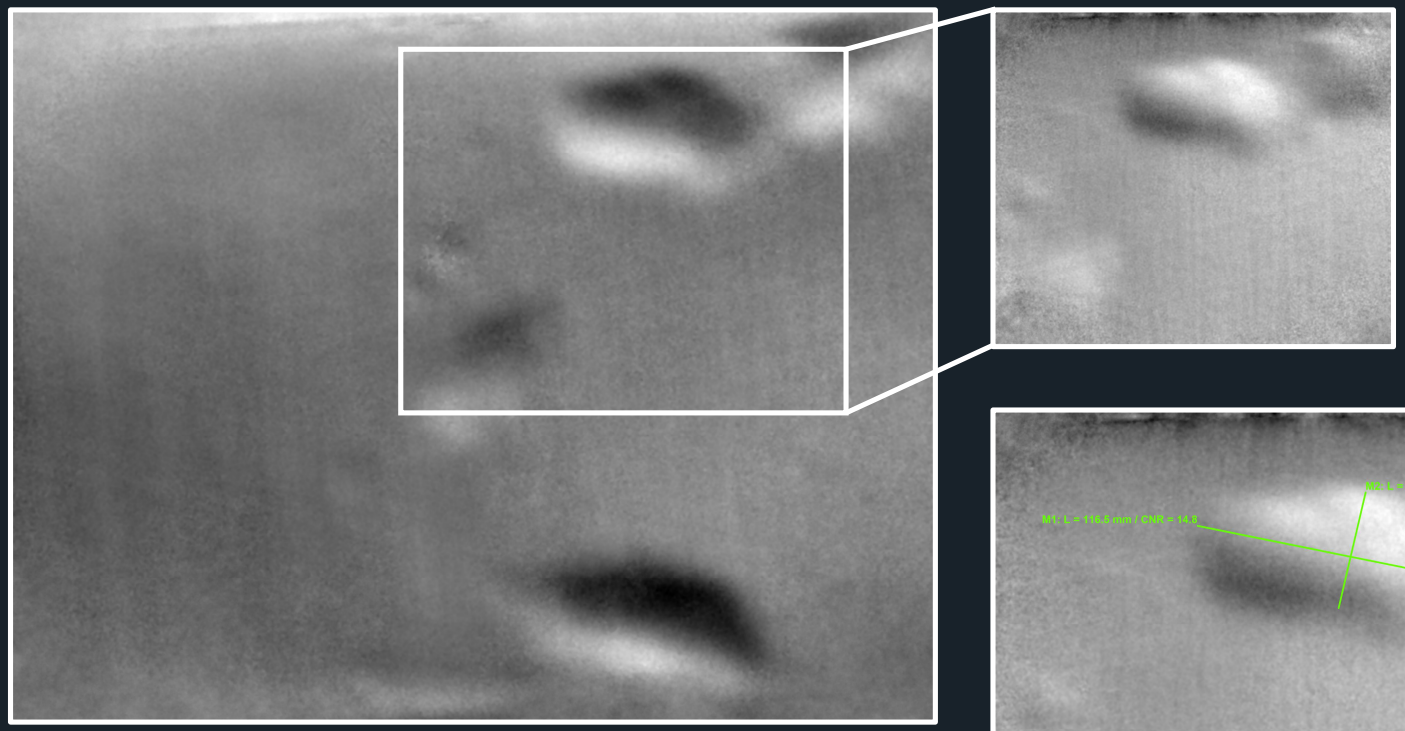
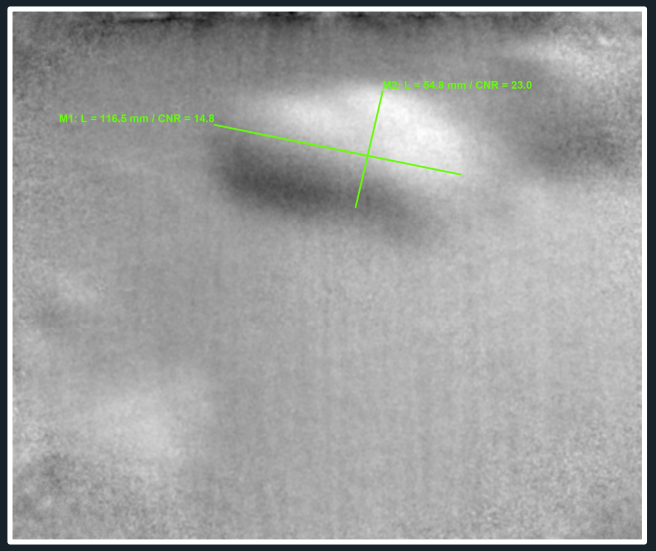
CASE STUDY #3: Pressure Vessel Inspection

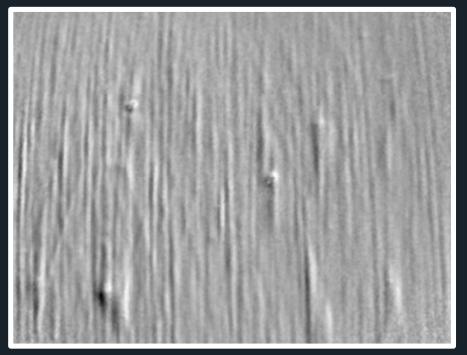


CASE STUDY #3: Pressure Vessel Inspection





Thermal sollicitation
→ no defect visible
→ Located deep



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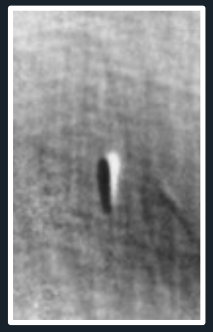
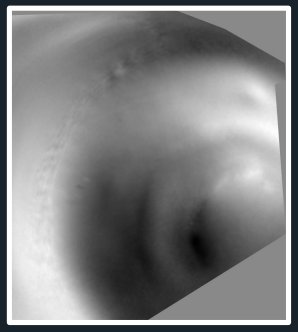
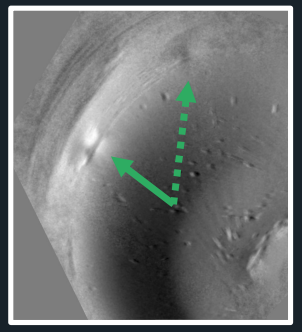
CASE STUDY #3: Pressure Vessel Inspection

Broken fibers	Delaminated areas	Fiber bridging around poor quality weld	Fiber bridging
			

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