EM&I

Delivering Integrity



ODIN™

Diverless Sea Chest and Sea Valve Inspection



Sea valves and sea chests are critical safety components on offshore installations. They must open, close, and isolate reliably, and classification societies require their integrity. Floating production and drilling assets need to inspect them while remaining on-station and operational.

External inspections by divers or ROVs depend on metocean conditions and provide limited views through sea chest gratings. Internal inspections using borescopes can produce unstable footage, narrow fields of view, and limited camera control, making it difficult to assess valve condition.

ODIN is a fully class-approved diverless inspection system that uses a purpose-designed port installed inside the asset, adjacent to the valve. A high-performance camera is positioned and adjusted to inspect valve condition, observe operation, and check seals for leakage while the system remains operational.

ODIN sea chest variant provides direct high-resolution inspection access with no blind spots. Each ODIN Access Port incorporates a sacrificial anode to protect adjacent steelwork, with a larger anode available to protect the whole sea chest.

Each inspection creates a traceable digital record indexed to the valve. Repeat inspection data can be linked to digital twins and analysed using AI-assisted defect recognition to monitor and trend changes in valve condition and optimise maintenance planning.

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