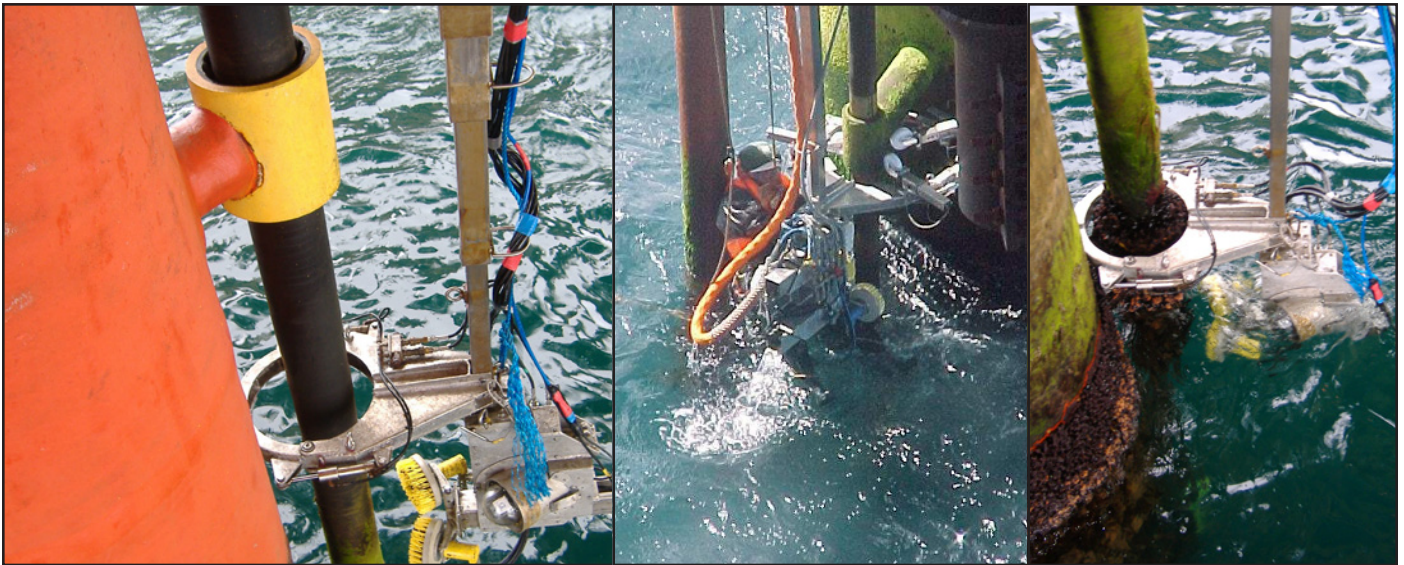


# SPLASHZONE RISER INSPECTION TOOL



Oceaneering Asset Integrity offers an innovative Splashzone Riser Inspection Tool deployed using Rope Access Techniques. The tool consists of a telescopic arm, a tool head comprising of both cleaning and camera inspection facility, a power pack and a DVD recording / editing suite. All components are fully certified for offshore use in hazardous areas.

## Telescopic Arm

The telescopic arm is fabricated from stainless steel box section and attaches to the riser by means of a 'V' block and cargo straps. It extends to a length of 10 meters, giving a potential subsea inspection capability of up to 8 meters depending on the initial rigging position. A hydraulically operated winch mounted at the top of the tool controls the extension and retraction of the arm. This movement is monitored by the operator via a remote observation screen and digital gauge.

## Tool Head

The tool head is fabricated from stainless steel and aluminum and is mounted to the bottom of the telescopic arm by means of a quick release pin assembly. The tool head comprises of two

hydraulic motors to drive the cleaning brushes and the housing for the subsea lights and camera assembly.

Different grades of brushes are available to give the best compromise between marine growth removal and avoidance of damage to the riser's protective coating. The camera incorporates a full pan and tilt capability; this combined with its 'low light' capability means that a General Visual Inspection (GVI) of ancillary items on the jacket (anodes, clamps, etc.) can be carried out while the tool is deployed.

There are also facilities to fit ultrasonic thickness checking probes or Pulsed Eddy Current (PEC) probes to the tool head, these facilities being remotely controlled topside.

## Lower Clamp Assembly

The tool head is held in position by means of the lower clamp assembly. This clamp is interchangeable to accommodate riser diameters of 4 inch to 36 inch. The clamp is hinged and opens by means of hydraulic rams. This allows the tool to negotiate obstructions on the riser such as clamps or nozzles and therefore prevents it being "hung-up" subsea.



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## Power Pack

The power pack consists of an “EX” motor driving a hydraulic pump. A series of positive pressure valves control movement on components of the tool. An 8 inch monitor allows the power pack operator to view progress of the tool while it is in the water. This gives advance warning of any obstacles which might be encountered subsea. The hydraulic fluid is biodegradable so should any leaks occur environmental pollution is not a factor. The fluid is conveyed by means of flexible hoses fitted with quick release couplings.

## Tool Operators

The tool is deployed by a fully trained and experienced four man team. The team members are multi-skilled and incorporate a cross-section of fully qualified NDT Inspectors.

## Additional Information

The tool is shipped with a fully equipped containerized workshop that houses a full range of spares, accessories and rigging loft, including all necessary NDT and Rope Access equipment. The compact design of the component parts renders it ideally suited for areas of poor access such as underdeck locations.

## Camera and Editing Suite

The camera is a specially designed, high resolution, low light, and color dome camera. It can produce high quality pictures from depths of 0-10 m. It is fitted with a 19:1 optical zoom lens. The editing suite has the capability to edit and record on DVD format and also make multiple disk copies (if required). The operator can overwrite text to the video and also record commentary or edit both during and after the inspection.

## Helmet Cameras

A new addition to the camera suite is the capability to record footage of the workscope taking place with the use of helmet cameras issued to the operating technician. These are also used for the airzone inspection of the risers and have an additional camera which has a very high resolution, low light with waterproof Vari-Focal Lens (26mm OD x 100mm L) for closer inspection should any defects be found. Electronic transfer of data is possible to onshore locations via email or FTP.

