

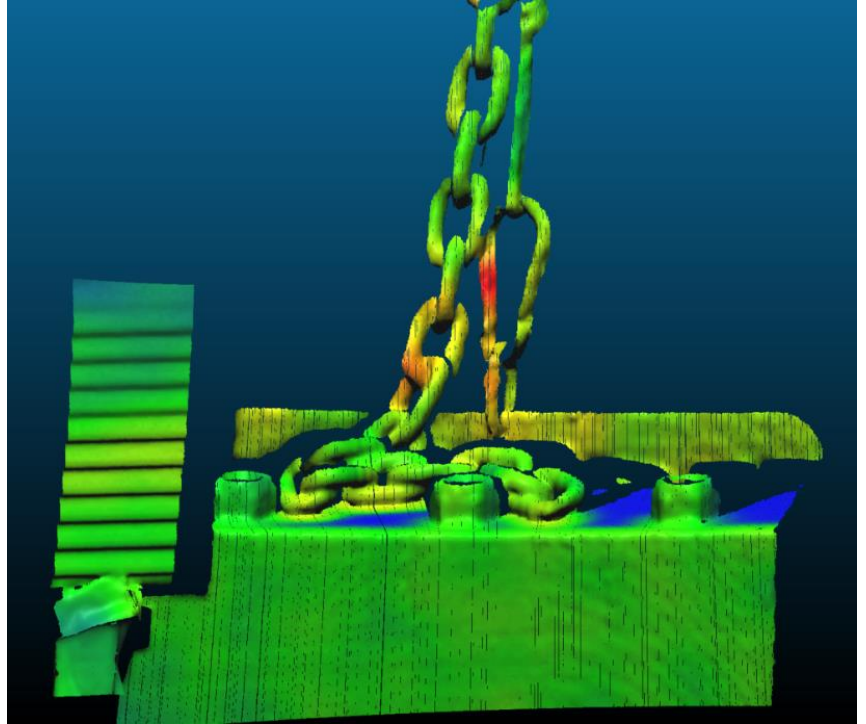
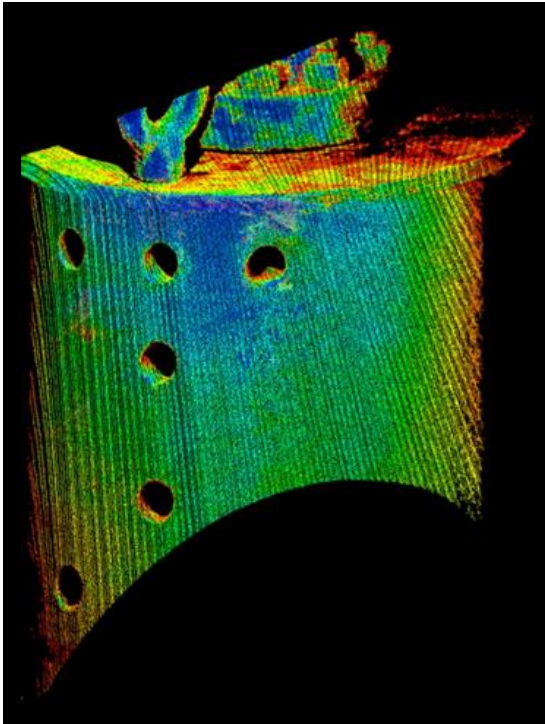


OceanTools

C-Scan

Subsea 3D Laser Imaging System

C-Scan is an *optical 3D scanning system* that may be used to generate accurate dimensional measurements from *internal* and *external* scans.



C-Scan is a laser triangulation system rotated by a high precision rotary encoder. The laser is a visible solid-state Class IIIb / 3B laser. The laser triangulation system creates a single laser line detected by a laser detector and a PC running the analysis software calculates the 3D data.

C-Scan takes measurements fifteen times a second, generates 700 discrete data points per scan and may be rotated through angles up to 360° to build up a complete 3D representation of the object being scanned. Resolution at 1.5m is typically 0.5mm.

The system output is a matrix of high precision X Y Z points. The software displays the 3D data points and enables the user to both visualise the object being scanned and to take accurate measurements within minutes of the scan.

A range of software tools in the supplied software enable the user to manipulate the data and take measurements. It is possible to export the data into a CAD package or other external software.

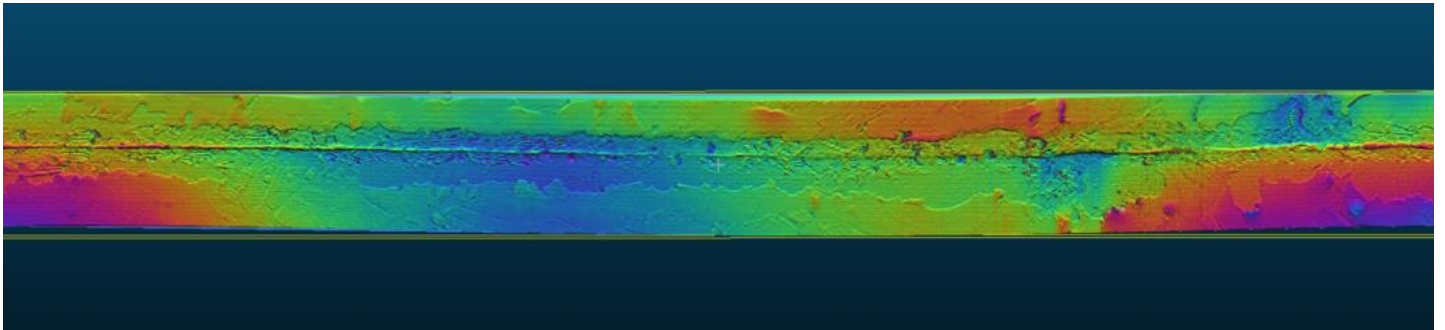
The system requires 24VDC, a video channel and either RS232 or RS485.



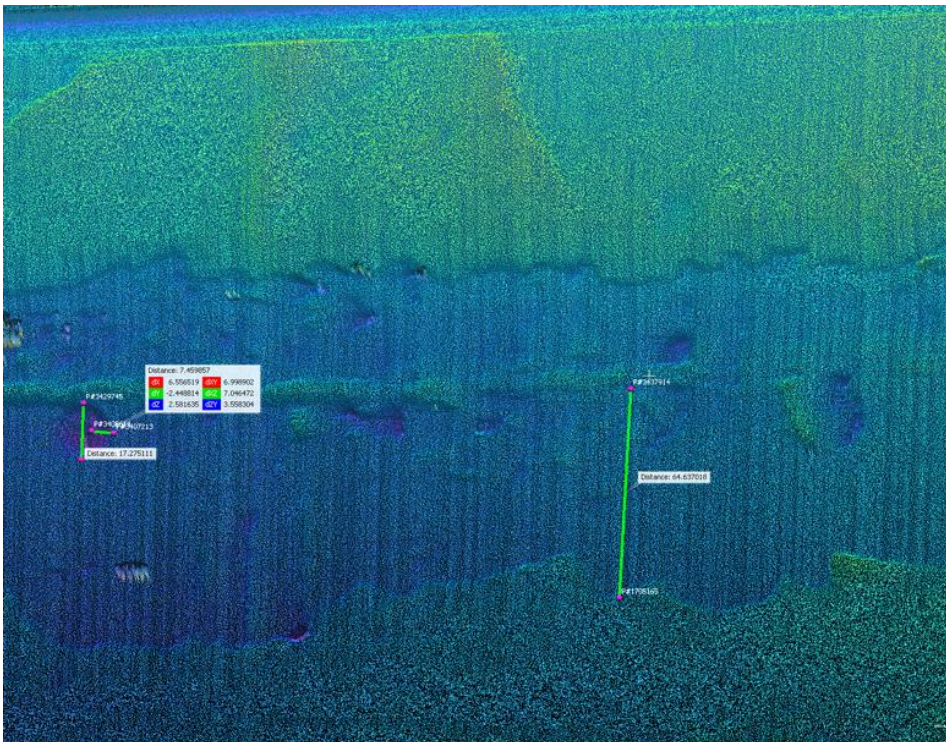


Internal and external scanning

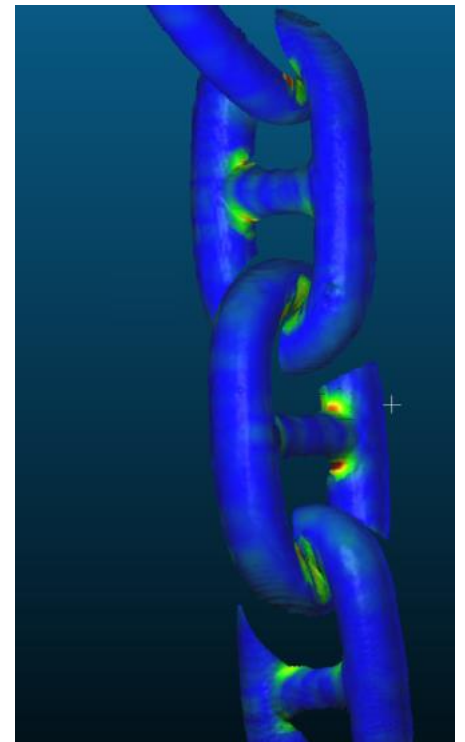
- Internal scans reveal surface details of caissons, pipes and piles
- External scans measure dimensions of flanges, anodes and other subsea structures
- 2D and 3D representations
- Precision distance measurement
- Colour contouring of height/distance
- Rapid identification of corrosion and weld defects



360° scan inside caisson shown two-dimensionally with corrosion colour contoured



Zoomed-in detailed measurements inside caisson



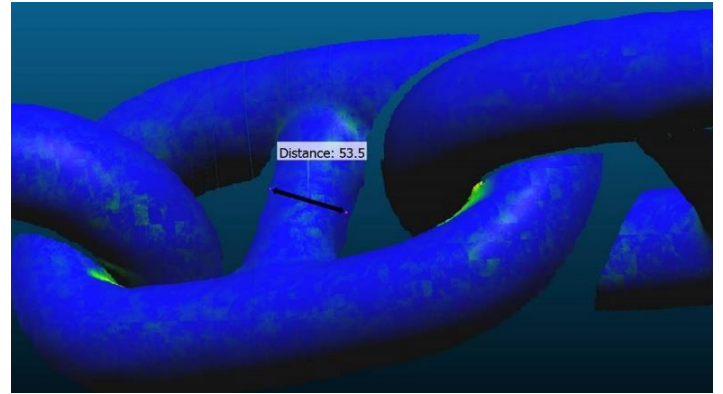
Studded anchor chain



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Anchor chain photographed with caliper and 3D scan representation

Specifications	
Vertical scan angle	50°
Vertical resolution	0.071°
Maximum range	1.5m
Range resolution	0.5mm
Sample rate	15 per second
Data points per scan line	700
Data points per second	10500
Rotational range	360°
Rotational resolution	0.02°
Ambient light filtering	User adjustable
Depth rating (standard)	3000m
Input voltage	24VDC
Maximum current	1A @ 24VDC
Data requirement	RS232/485 + Video

Product datasheets, GA drawings, case studies and other supporting documents are available to download from data.oceantools.co.uk

All specifications are subject to change without notice. E&OE.

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