

Welaptega Chain Measurement System (CMS)[®]



CMS[®] is part of the Welaptega **Subsea Intelligence Suite**[™] also comprising Rope Measurement (RMS)[®], 3Dimensional Video (3DV)[®] and 3Dimensional Modelling (3DM)[®]. This unique toolset gives you the information you need to protect the integrity of your subsea infrastructure.

The Business Problem

Underwater mooring failure can compromise production, cost money, impact the environment and hurt your reputation.

Mooring failures can have serious consequences for an offshore operation. An increasing number of high-profile mooring failures have focused the attention of operators, regulators and certifying agencies on this problem. Operators also recognize that moorings are critical systems and that maintaining mooring integrity is crucial.

The Business Solution

Introduce an in-service mooring inspection system.

The Welaptega Chain Measuring System (CMS)[®] is an ROV-deployed inspection tool that provides the information to assess the condition of chains. CMS[®] is an in-service solution, meaning chain moorings can be inspected without the need to remove chains from water.

“The most established ROV-deployable chain measurement system is effectively an ‘optical caliper’ developed by Welaptega Marine Ltd.”

UK Health and Safety Executive

www.welaptega.com

Gathering subsea intelligence that matters.

The Technical Solution

Photogrammetric technology for chain measurement.

Welaptega CMS[®] is an optical caliper system that measures mooring chain dimensions for elongation, corrosion and wear. Results are compared to industry standards to assess operational viability.

Welaptega CMS[®] also allows for an up-close visual inspection of individual links so operators can assess the material condition of links.

The system utilizes synchronous digital images of chains from several cameras. It then calibrates these images, corrects spatial geometry and generates statistically reliable measurements of chain dimensions.

Welaptega CMS[®] specifications

CMS[®] deployment requirements

- Work-class ROV with 7-function manipulator

System components

- High-resolution video camera array with integrated LED lighting
- Acetal tool frame
- Digital recording system
- Computer control system

Chain surface preparation

- Removal of marine growth using high pressure water

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“The business interruption potential due to mooring problems should not be underestimated.”

UK Health and Safety Executive

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