

# Factors effecting the long-term operation of quick release mooring hooks

Sandy Thomas, Marine Director, Straininstall UK Ltd, Isle of Wight, UK

In Oil and Gas terminals the use of quick release hooks is recommended by the Oil Companies International Marine Forum (OCIMF), as they form the basis of a safe mooring system. Designed for installation in hazardous cargo handling jetties, the main purpose of this safety equipment is to release the mooring lines as quickly as possible in the event of an emergency.

## Regular maintenance

The hook release mechanism consists of several movable levers that provide the necessary load reduction to allow manual release at full working load limit conditions, which are typically around 1,000 kN. As with any mechanical equipment, these movable levers need regular maintenance to ensure that they continue to function properly. However, jetty operators often overlook this requirement and consequently over a period of time the hooks either do not function as they should, or worse, fail completely.

Straininstall AMTS has supplied quick release hooks for almost 30 years and have optimised their design in order to cope with the harsh conditions they operate in and to require as little maintenance as possible. However, even the best designed and highest

specification equipment cannot function indefinitely without some level of servicing, and we have seen equipment that is no longer fit for purpose because of the lack of routine checks. This of course has a significant implication on the operational safety of the terminal.

## Site meeting, Turkey

We recently attended a site meeting at an installation in Turkey where our equipment had been supplied many years ago. We were pleased to learn that our quick release hooks and ancillary items including the hydraulic remote control, electric operated capstans, foot switches and manual release systems, were all in perfect working order. The jetty operators were committed to the maintenance programme we had suggested at the time of installation, as they wanted to ensure that every piece of equipment used at the terminal remained in good operation condition. It was a straightforward scheme that included simple procedures like regular greasing, periodical functional testing and consistent repair of defective items. This visit proved that our equipment continues to work and is reliable for many years, provided it is properly maintained.



If properly maintained quick release mooring hooks will continue to work and be reliable for many years.

## Inspection specialists

Straininstall AMTS has a team of specialists who can inspect your installation and provide recommendations as to its status and operating condition. Our many years of experience allows us to offer this service for both our own products and those supplied by other companies. We have prepared a simple preliminary inspection checklist, which can be obtained by sending an e-mail to [enquiries@straininstallamts.com](mailto:enquiries@straininstallamts.com). Once completed and

returned to us, we will be able to gain a clear understanding of the readiness of your equipment to cope with emergency situations, and from this will issue a report giving you our initial recommendations. Should you wish to take it further, one of our specialist engineers can visit for a full site evaluation. This person will be able to advise you on the status of your equipment and, if required, propose solutions which are customised to your specific needs.

### ABOUT THE AUTHOR

**Sandy Thomas** is Marine Director at Straininstall UK Ltd. An Engineer by profession, with a qualification in Mechanical and Production Engineering, Sandy has been involved in the design and implementation of advanced Berth Manager systems for over 20 years.

### ABOUT THE COMPANY

**Straininstall UK Ltd** is a specialist designer and manufacturer of load monitoring systems and quick release mooring hooks, and in addition to those described here also supply systems for tendon and riser tension monitoring for offshore oil and gas structures, crane and winch load monitoring and silo content monitoring for both on and offshore use, and the StressAlert II hull stress monitoring system.

The company's experience, expertise and application skills have made them world leaders, and they are constantly striving to improve, enhance and develop their systems. Straininstall are registered to ISO 9000:2000.

### ENQUIRIES

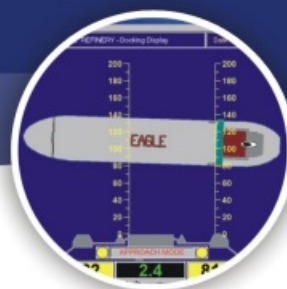
Straininstall UK Limited  
9-10 Mariners Way  
Cowes  
Isle of Wight  
PO31 8PD  
UK  
Tel: +44(0)1983 203600  
Fax: +44(0)1983 291335  
E-mail: [marine@straininstall.com](mailto:marine@straininstall.com)  
Web site: [www.straininstall.com](http://www.straininstall.com)

# The Integrated Approach to Total Jetty Monitoring & Management

- Mooring Load Monitoring
- Speed of Approach Systems
- Environmental Monitoring
- Load Arm Position Monitoring
- Berth Management Systems
- Quick Release Mooring Hooks
- Quick Release Towing Hooks

Straininstall monitoring and management technology is amongst the most advanced available in terms of flexibility and functionality in use.

Installed in many oil & gas terminals worldwide, we provide real-time interactive data during the critical phases of vessel approach and mooring management. Our systems not only improve terminal efficiency, but also ensure that safety requirements are met and any potential risks reduced.



Tel: +44 (0)1983 203600  
[www.straininstall.com](http://www.straininstall.com)

Email: [enquiries@straininstall.com](mailto:enquiries@straininstall.com)

**Straininstall**  
The world of load measurement and stress analysis