



Canada - Nova Scotia Offshore Petroleum Board

6th Floor TD Centre, 1791 Barrington Street, Halifax Nova Scotia B3J 3K9

Tel (902) 422-5588 Fax (902) 422-1799

URL www.cnsopb.ns.ca

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Safety Notice - Offshore Lifting Operations – Self Locking Eye Hooks

This Safety Notice addresses safety concerns associated with offshore lifting and describes specific actions to be undertaken by Operators.

BACKGROUND - Item # 1 Unassisted Opening of Self Locking Eye Hooks

Recently, a Canadian East Coast offshore operator reported the unassisted opening of “self locking eye hooks”. Other jurisdictions in the Gulf of Mexico and overseas have reported similar incidents. Under normal load handling conditions with the load path remaining vertical under the hook, the self locking mechanism is designed to keep the hook closed under load. A problem may arise, however, if the exposed trigger release mechanism is accidentally struck during lifting operations while at the same time the impact causes the load to be momentarily reduced to zero. Although unlikely, this could cause the hook to open sufficiently and shed the attached load. Continuous use and resulting wear of the locking mechanism may be a factor in the occurrence of unassisted openings.

Industry has taken steps to improve the safety of the “self locking eye hook”. Manufacturers have developed an alternate design incorporating a **weld-on trigger guard (WTG)** surrounding the trigger lock release mechanism. The new WTG design is available from specific manufacturers as a special order item.

ACTION REQUIRED

- a) Operators shall comply with API RP 2D, 5th edition, June 2003, Section 3.4.1 which specifies that a “...hook that can be closed and locked with a pinned or other positive locking device...” shall be used in the load path for personnel hoisting. The Board’s interpretation of section 3.4.1, 5th edition excludes the use of “self locking eye hooks” for hoisting personnel. A load hook equipped with a positive locking latch and a holding pin is an example of a hook that would be in compliance with the latest edition of API RP 2D for hoisting personnel.
- b) If not already documented, operators are to complete a due diligence/risk evaluation of the types of cargo crane hooks in use at their installation(s), considering in part; utilization criteria; factors affecting safety; types of safety latches; lifting apparatus available to reduce the likelihood of hoisting incidents; and measures to eliminate or reduce the risk to acceptable levels.
- c) Operators due diligence evaluation of “self locking eye hooks” for cargo handling operations shall consider, but not necessarily be limited to, the following:
 - i) Use of self locking eye hooks complete with weld on trigger guards,
 - ii) Locking mechanism on self locking eye hooks to receive close visual inspection on a semi annual basis by a competent lifting gear inspector,
 - iii) Self locking eye hooks to be disassembled by a competent person annually to inspect the locking latch mechanism for wear. The locking mechanism should be changed out if wear exceeds manufacturer’s measurement criteria. Alternatively, the hook should be taken out of service and replaced.

BACKGROUND - Item # 2 Termination of Wire Rope Pendants with Self Locking Eye Hooks

During offloading operations from a vessel to an offshore installation on the Canadian East Coast, a “self locking eye hook” that was terminated directly to the wire rope thimble at the lower end of the crane pendant became misaligned in the thimble just as the crane was hoisting a container off the vessel deck. The crane operator noticed the load path misalignment and placed the container back on the deck. However, the damage was already done in that the hook had received a dynamic load of the full weight of the container in a “side loading” mode. It was reported that this had happened on other occasions. **Self locking eye hooks are not designed to take side loading.**

Upon inspection of the hook assembly to the wire rope pendant, it was observed that the eye of the hook was too small for the wire rope thimble to properly fit through and allow enough space for the hook to align itself in the vertical position whilst the crane took the weight of the load. The hook was taken out of service.

ACTION REQUIRED

- a) If using a pendant sling with a self locking eye hook for cargo handling, ensure that the lower termination assembly provides for free movement of the “eye” of the hook relative to the thimble. Otherwise, consideration should be given to an alternative method for securing a self locking eye hook to the lower wire rope thimble termination.
- b) Self locking eye hooks that have been side loaded shall be removed from service.

Compliance with the actions required shall be completed as soon as possible but no later than 60 days after the date of this notice.

CODE REFERENCES

- API RP2D 5th edition, June 2003, Section 3.4.1
- API SPECIFICATION 2C, Section 6.5.3.

REGULATORY REFERENCES

- Declaration of Operator
- Nova Scotia Offshore Petroleum Installations Regulations, Section 16
- Nova Scotia Offshore Petroleum Drilling Regulations, Section 107
- Offshore Petroleum Occupational Safety and Health Requirements, Element 1 – Part 3, Element 2-Part 14

You are advised that the Board may audit for compliance with this Safety Notice. Questions regarding this Safety Notice should be directed to CNSOPB, attention the Chief Safety Officer.



Stuart Pinks,
CNSOPB - Chief Safety Officer

