

Requirement For Use Of Hook Latches - ANSI/ASME API and OSHA

The Crosby Group, Inc. does not establish recommendations for when a hook latch is required. The requirements for hook latches are outlined by ANSI/ASME OSHA and API. The user is responsible to meet these requirements. To assist the product user, the documents and their specific requirements are listed below:

1. ANSI/ASME B30.10-2005 *Hooks* states, "When a latch is provided, it shall be designed to retain such items as, but not limited to, slings and chains under slack conditions. The latch is not intended to support the load." Hooks are to be frequently inspected for "latch engagement (if provided)" and "damaged or malfunctioning latch (if provided)". "When using a device to close the throat opening of the hook, care shall be taken that the load is not carried by the closing device." "The use of a hook with a latch does not preclude the inadvertent detachment of a slack sling or a load from the hook. Visual verification of proper hook engagement is required in all cases." "When a lock is equipped with a latch, the latch should not be restrained from closing during use."

Note that the above requirements are applicable to only the hooks that support a load in a direct-pull configuration where the load is carried in the base (bowl/saddle or pin hole) of the hook. These requirements are not in the chapter that is applicable to hooks that do not support load in a direct-pull configuration, such as a grab or choker hook.

2. ANSI/ASME B30.9- 2006 *Slings* does not specifically address the requirement of latches on hooks used on slings. It consistently refers to B30.10 for hook component characteristics, removal criteria, and repair, of chain slings, wire rope slings, synthetic rope slings, synthetic webbing slings, synthetic round slings.
3. ANSI/ASME B30.5-2004 *Mobile and Locomotive Cranes* states "Hooks shall be equipped with latches unless the application makes the use of a latch impractical. When provided, the latch shall bridge the throat opening of the hook for the purpose of retaining slings or other lifting devices under slack conditions (refer to ASME B30.10)."
4. ANSI/ASME B30.23-2005 *Personnel Lifting Systems* states "Hooks used for attachment of a personnel lifting platform shall be of a type that can be positively locked closed and that will prevent the platform lifting bridle from being dislodged."
5. ANSI/ASME B30.2-2005 *Overhead and Gantry Cranes* states "Latch-equipped hooks shall be used unless the application makes the use of the latch impractical or unnecessary." "When required, a latch or mousing shall be provided to bridge the throat opening of the hook for the purpose of retaining slings, chains, or other similar parts, under slack conditions (see ASME B30.10)."
6. ANSI/ASME B30.16-2007 *Overhead Hoists* states "Hooks shall be equipped with latches unless use of the latch creates a hazardous condition. When required, a latch shall be provided to bridge the throat opening of the hook and retain, under slack conditions, such items as, but not limited to, slings and chains. Refer to ASME B30.10."
7. ANSI/ASME B30.21-1999 *Manually Lever Operated Hoists* states "Hooks shall be equipped with latches unless the use of the latch creates a hazardous condition where it interferes with the use of the hook. When required, a latch shall be provided to bridge the throat opening of the hook for the purpose of retaining slings, chains, etc., under slack conditions. (See ASME B30.10)." Under Frequent Inspection, "hook latches, if used, for proper operation." Under Operation, "The sling or other device shall be properly seated in the base (bowl) of the hook. Hook latch shall not be allowed to support any part of the load."

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8. ANSI/ASME B30.8-2004 *Floating Cranes and Floating Derricks* and B30.22-2005 *Articulating Boom Cranes* states that, "Hooks shall be equipped with latches unless the application makes the use of a latch impractical. When provided, the latch shall bridge the throat opening of the hook for the purpose of retaining slings, or other lifting devices, under slack conditions (refer to ASME B30.10)."
9. OSHA 1910.181 *Derricks* gives requirements for safety latches in 1910.181(j)(2)(ii), which states that "Safety latch type hooks shall be used wherever possible."
10. OSHA interpretation of 1910.181(j)(2)(ii) dated 3/8/1976 states: "OSHA compliance officers may use the OSHA general duty clause 5(a)(1) whenever a hazard is created by a hoisting operation where the hoist hook is not provided with a throat latch. The compliance officer may then support the 5(a)(1) citation by calling attention to 1910.181(j)(2)(ii)." REF:
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=18487
11. OSHA 1926.550(g)(4)(iv)(B) *Cranes and Derricks*, states: "Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be of a type that can be closed and locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used." REF.: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10760
12. An interpretation of OSHA 1926.550 *Cranes and Derricks*, 1926.550(g)(4)(iv)(B) reiterates this position by stating "Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be of a type that can be closed and locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used." REF.:
http://www.osha-slc.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=19629
13. API Specification 2C *Specification for Offshore Cranes* Sixth Edition, Sept. 2004 states, "Hooks shall be equipped with a latch to retain loose lifting gear under non-lifting conditions. The latch shall be lockable if the hook is to be used for transporting personnel. The latch is not intended to support the lifted load."
14. API Recommended Practice RP 2D Fifth Edition, June 2003 *Operation and Maintenance of Offshore Cranes* states: "The load should be attached to the hook by means of slings or other suitable devices. The latch should be closed to secure loose slings." "All hooks used for support of personnel shall have an operable latch. A crane hook that can be closed and locked, with a pinned or positive locking device, eliminating the hook throat opening, shall be used for any personnel lifts."

REV. 2: Updated ASME B30 Standards and API Spec. 2C
REV. 1: GENERAL REVISION, ADDED REFERENCE SOURCES.

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