ASME B30.9 INTERPRETATIONS

Replies to Technical Inquiries
July 1994 – March 1997

FOREWORD

This publication includes all of the written replies issued between the indicated dates by the Secretary, speaking for the ASME B30 Committee, Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings, to inquiries concerning interpretations of technical aspects of ASME B30.9, Slings.

These replies are taken verbatim from the original letters, except for a few typographical corrections and some minor editorial corrections made for the purpose of improved clarity. In some few instances, a review of the interpretations revealed a need for corrections of a technical nature: in these cases a corrected interpretation immediately follows the original reply.

These interpretations were prepared in accordance with the accredited ASME procedures. ASME procedures provide for reconsideration of these interpretations when or if additional information is available which the inquirer believes might affect the interpretation. Further, persons aggrieved by this interpretation may appeal to the cognizant ASME Committee or Subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

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Interpretation: 9-19

Subject: ASME B30.9-1996, Slings

Date Issued: March 7, 1997

Question (1): Please clarify whether chain slings should be removed from service if they are found to contain carbon steel sling hooks. B30.9-1996 defers us to B30.10-1993 in regards to hook issues. Based on this volume, any material, i.e., even plastic, could be used, as long as it conforms to criteria set forth in Section 10-1.1.2. The title, as well as the scope, for Chapter 9-1 of B30.9-1996 itself, "Alloy Steel Chain Slings," implies that the volume applies to slings made entirely of alloy steel. Does the alloy adjective pertain only to the chain itself, or does it apply to the sling as a whole?

Reply (1): Paragraph 9-1.1.3 states components of alloy chain slings shall meet the requirements of Section 9-1.7, Attachments. Paragraph 9-1.7.1 states that attachments, hooks included, shall have a rated load at least equal to that of the alloy steel chain with which they are used. It does not require additional material specifications. Therefore, in this context, the alloy adjective applies only to the chain as a mandated requirement.

Question (2): Does the answer differ if the sling is a mechanically assembled sling, as compared to a welded type sling?

Reply (2): No, there is no distinction, made or intended, between welded or mechanically assembled slings.

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Interpretation: 9-17

Subject: ASME B30.9-1990, Slings, including B30.9a-1991, B30.9b-1993, and B30.9c-1994

Date Issued: December 12, 1995

Question (1): Does the term "mechanical splice" mean, "a return loop, flemish eye, or farmers splice that is completed by pressing (swaging) one or more metal sleeves over the rope juncture"? [Reference: Wire Rope Slings Users Manual (1990), page 11.]

Reply (1): The term is already defined under the entry "splice, mechanical."

Question (2): If this is not the correct definition of "mechanical splice," what is the meaning of this term?

Reply (2): See Reply (1).

Question (3): Will the definition of "mechanical splice" be included in a future issue of B30.9?

Reply (3): See Reply (1).

Question (4): While slings with "swaged sockets" require proof testing, am I correct to understand this Standard leaves proof testing of slings with "swaged sleeves" to the purchaser's discretion?

Reply (4): Yes.

Interpretation: 9-18

Subject: ASME B30.9a-1991, Section 9-2.5 — Sling Identification

Date Issued: June 14, 1996

Question (1): Section 9-2.5 states "Wire rope slings should be identified by the rated load and manufacturer. This identification should be maintained for life of the sling." Does Section 9-2.5 require the sling fabricator to stamp any information on the press steel sleeve of a flemish eye mechanical spliced sling?

Reply (1): ASME B30.9 is a safety standard written in performance language; simply stated, the Standard describes what end result should be achieved. Therefore, the section will not specify any methods for accomplishing the identification process.

Question (2): Does Section 9-2.5 require the sling fabricator to tag all slings?

Reply (2): The word "should" in Section 9-2.5 indicates the provision is of an advisory nature and is a recommendation to be considered. Therefore, any type of tagging is a recommendation and not a requirement.

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Interpretation: 9-13

Subject: ASME B30.9-1990, Slings

Date Issued: December 20, 1994

Question (1): Are Kevlar slings included in design factors for natural and synthetic fiber rope slings in Section 9-4.2?

Reply (1): Section 9-4.2, Design Factor, states: "The following design factors shall be used for the four basic fiber types detailed in this Standard:

Fiber Type	Design Factor
Natural (Manila and Sisal)	5
Nylon	9
Polyester	9
Polypropylene	6

Kevlar slings are not addressed.

Question (2): Should Kevlar slings be included in Chapters 9-4 or 9-5?

Reply (2): The B30 Committee has not addressed the inclusion of Kevlar slings in Chapters 9-4 or 9-5, and therefore, cannot express an opinion to your question.

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Interpretation: 9-14

Subject: ASME B30.9-1990, Slings

Date Issued: December 20, 1994

Question (1): High stranding is taken to be distortion of the wire rope structure, and it may occur, in frequent cases, during the fabrication of an eye splice, where the cause is one of workmanship and not damage. Can some form of high stranding occur within the eye splice that is acceptable as not violating para. 9-2.8.3(b)(3), "...other damage resulting in distortion of the rope structure...," even if the cause is unknown?

Reply (1): Paragraph 9-2.8.3(b) states:

"Conditions such as the following should be sufficient reason for questioning sling safety and for consideration of replacement...

(3) kinking, crushing, birdcaging, or any other damage resulting in distortion of the rope structure;"

High stranding caused by fabrication found during receiving inspection is not considered to be damaged and does not fall within the intended coverage of Chapter 9-2 of B30.9.

Question (2): If the answer to Question (1) is yes, then how many strands can be elevated and how far from their original position?

Reply (2): The Committee has not addressed this subject but will forward this question to our technical support organizations, Associated Wire Rope Fabricators (AWRF) and the Wire Rope Technical Board (WRTB). We will ask them to respond to the Committee. At that time the Committee will consider an inclusion of a removal criteria in a future addenda of this volume.

Question (3): A recessed dead end of a wire rope in a foldback eye is generally unacceptable to swage hardware manufacturers and they typically provide procedures to guard against that condition, but we can find no ruling to specifically prohibit that occurrence. Is there reason to believe that any recess is acceptable, or would the Committee prohibit that occurrence by rule if so requested?

Reply (3): The question is beyond the purview of the Committee. It is a design question which should be addressed by the individual fitting manufacturer.

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Interpretation: 9-15

Subject: ASME B30.9-1990, Slings

Date Issued: March 16, 1995

Question (1): Is it the intent of B30.9 to limit synthetic sling material to those in the document (i.e., rope: nylon, polyester, and polypropylene; web slings: nylon and polyester type yarns)?

Reply (1): No. Section 9-0.1, Scope of B30.9, states: "Slings made from materials or constructions other than those detailed in this Standard shall be used only in accordance with recommendations of the sling manufacturer." We recognize that materials other than those covered exist now or may be available in the future.

Question (2): Are improvements in materials allowed?

Reply (2): Yes, when used in accordance with Section 9-0.1.

Question (3): Are improvements in materials for synthetic rope and web slings regularly monitored and evaluated for acceptability?

Reply (3): B30.9 is a safety standard, not a materials acceptance standard; however, when factual data is received it is considered and may be included in future addenda.

Question (4): Does B30.9 explicitly prohibit the use of synthetic rope/web slings in environments or under conditions outside of the ranges listed in Chapters 9-4 and 9-5?

Reply (4): Paragraphs 9-4.6.1, 9-4.6.2, and 9-5.6.1 specifically allow the manufacturer to make recommendation for temperatures outside the range of −20°F to 150°F and for use in chemically active environments. Nylon and polyester web slings per para. 9-5.6.2 are prohibited from being used at temperatures in excess of 194°F.

Question (5): Is it the intent of B30.9 to have a difference in the level or type of inspection for frequent and periodic inspections of synthetic fiber rope and web slings?

Reply (5): Yes. A frequent inspection is a "should" requirement and is to be performed by the person handling the sling each day it is used. A periodic inspection also is a "should" requirement but is to be conducted by a designated person and it is recommended that the periodic inspection be conducted at least annually.

Question (6): Is B30.9 considered a National Consensus Standard as defined by OSHA?

Reply (6): Yes. But it is not "incorporated by reference" as defined by OSHA.

Question (7): Do the requirements of B30.9 take precedence over the requirements of standards established and promulgated by Agencies of the U.S. Military?

Reply (7): B30.9 is a voluntary standard and we cannot make a recommendation as to precedence. This Standard presents a coordinated set of rules that may serve as a guide to government and other regulatory bodies and municipal authorities responsible for guarding and inspection of the equipment falling within its scope. The suggestions leading to accident prevention are given both as mandatory and advisory provisions; compliance with both types may be required by employers of their employees.

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Interpretation: 9-16

Subject: ASME B30.9b-1993, Slings

Date Issued: June 20, 1995

Question (1): For chain slings, does the statement in para. 9-1.8.1(b)(2), Periodic Inspection, "...Visual inspection by a designated person *making* a record of inspection..." indicate a "shall"? Please note that for wire rope slings, para. 9-2.8.2, Periodic Inspection, states: "...Inspection shall include a record of the inspection..."

Reply (1): Yes. While the word "shall" does not appear in para. 9-1.8.1(b), this paragraph is a definition of the general classification of periodic inspection. Paragraph 9-1.8.3, Periodic Inspection, however, states clearly that periodic inspection "shall be performed at intervals as defined in para. 9-1.8.1(b)(2)."

Question (2): If the answer to Question (1) is to the affirmative, are there any reasons why the Committee has not required the same for Metal Mesh Slings, para. 9-3.8.1, or Synthetic Webbing Slings, para. 9-5.8.4, which both show "should" in reference to Periodic Inspection and Records?

Reply (2): Metal mesh slings, para. 9-3.8.1 of B30.9b-1993, does not address inspection records. The Committee has directed the B30.9 Subcommittee to consider the issue for the next addenda. Synthetic web slings, para. 9-5.8.5, Inspection Records, requires that written inspection records "should" be kept and is not mandatory. The rationale is that the serialization of synthetic slings is difficult. Synthetic slings are also easy to inspect on a daily basis.

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