Interpretation: 20-1

Subject: ANSI/ASME B30.20-1985

Date Issued: March 17, 1987

Question: With regard to Section 20-2.2.1(a) of B30.20-1985, does the responsibility of determining the maximum load width, maximum length, and minimum thickness rest with the manufacturer or with the end user?

Reply: The first sentence of Section 20-2.2.1(a) of B30.20-1985 reads as follows:

"(a) Rated Load. The rated load, maximum width, maximum length, and minimum thickness of the load shall be legibly marked on the main structure."

This requirement is consistent with safe handling of sheetlike materials such as metal or glass. When the minimum thickness of material to be handled has sufficient rigidity to prevent peel off, the weight would then be the controlling factor. This information relates to the safe operation of the equipment. The manufacturer must supply data so that this information will be available to the user of the equipment.
Interpretation: 20-2

Subject: ANSI/ASME B30.20-1985

Date Issued: March 21, 1988

Questions: Section 20-1.2.2, General Construction, reads as follows:
"A lifter shall be designed to withstand the forces imposed by its rated load, with a minimum design factor of 3, based on yield strength, for load bearing structural components."

(1) How should this paragraph be interpreted?

(2) Should all formulas used in design with existing factors of safety based on yield be reworked such that the factors of safety are 3?

(3) If the answer to (2) is yes, how is the compact section criteria handled when designing lifting beams from wide flange sections?

(4) If the answer to (2) is no, should the yield strength of the material be divided by 3 to get an allowable which is then compared to the allowables determined by the design method being used, with the more conservative value chosen?

(5) Would this be applicable for all cases, i.e., tension, compression, shear, etc.?

(6) Should impact factors for design be used with the design factor of 3?

Replies: (1) This paragraph determines the maximum allowable stress for materials used as load-bearing structural components. Analysis or actual maximum working stresses must be determined based upon working conditions including impact or any other factors pertinent to the application. Actual maximum working stresses must be equal to or less than the allowable stress.

(2) This Standard is designed to guard against and minimize injury to workers, and otherwise provide for protection of life, limb, and property by prescribing safety requirements. This Standard is not a design standard and does not preclude applicable standards whose guidelines result in lower allowable stresses.

(3) See Reply (2).

(4) See Reply (2).

(5) See Reply (2).

(6) See Reply (2).
Interpretation: 20-3

Subject: ANSI/ASME B30.20-1985, Below-the-Hook Lifting Devices

Date Issued: February 1, 1991

Question: With regard to Section 20-1.2.2, General Construction, does the factor of 3, based on yield, apply to tension, shear, and bearing, without regard to AISC allowables?

Reply: This paragraph determines the maximum allowable stress for materials used as load-bearing structural components. Analysis or actual maximum working stresses must be determined based upon working conditions including impact or any other factors pertinent to the application. Actual maximum working stresses must be equal to or less than the allowable stress.

The intent of Section 20-1.2.2 is that the load suspension parts of a lifter shall be designed so that the static stress calculation for the rated load shall not exceed 33% of the yield strength.

This Standard is designed to guard against and minimize injury to workers, and otherwise provide for protection of life, limb, and property by prescribing safety requirements. This Standard is not a design standard and does not preclude applicable standards whose guidelines result in lower allowable stresses.

Interpretation: 20-4

Subject: ANSI/ASME B20.20-1985, Below-the-Hook Lifting Devices

Date Issued: September 24, 1991

Question: The following constitutes a request for an interpretation of the sentence under subparagraph (a) of the subject paragraph (20-1.4.2) "Test loads shall not be more than 125% of the rated load unless otherwise recommended by the manufacturer."

Given the minimum design factor of 3 (to rated load) based on yield strength for load bearing structural components (para. 20-1.2.2), the test load of 125% of rated load stresses the structural member(s) to a maximum of 42% of yield. We understand this to constitute a prohibition of testing to a percent of yield greater than 42%, based on "...shall not be more than 125%..." of para. 20-1.4.2 (unless otherwise recommended by the manufacturer).

We request a finding as to the correctness of our understanding.

Certain military regulations mandate a test load of 200% of rated load on selected below-the-hook critical lift devices designed to the same minimum factor of 3 (to rated load) based on yield strength for load bearing structural members, resulting in their being stressed to a maximum of 67% of yield. We are concerned as to whether this 67% value might be injurious to the equipment in light of the B30.20 42% limitation, thereby being counter to the "super safe" intent behind the military's 200% load test requirement. By and large, the below-the-hook lifting devices are custom designed and built steel fabrications by independent contractors to military specifications dedicated for specific lifting applications.

We request a finding as to the basis for the B30.20 limitations, the validity of our expressed concern, and the potential consequences of the continuation of the aforesaid military practice.

Reply: The maximum 125% proof test limit is the accepted industry practice for hoists, cranes, and below-the-hook lifting devices.

The maximum 125% proof test should only be exceeded when approved by the manufacturer or a qualified person.

Proof testing and periodic load testing using loads that approach or exceed 42% of the yield strength of the materials may cycle the material well above the endurance limit and eventually contribute to a fatigue failure.
**Interpretation: 20-5**


Date Issued: August 21, 1992

Question: (1) Does Section 20-1.4.2, “Rated Load Test,” recommend a rated load test before placing equipment into service?

Reply (1): Yes. However, this does not preclude reasonable periodic retesting.

Question: (2) How do you assure the structural integrity against cracked critical welds or structural members without load testing the lifting device?

Reply (2): Inspection by a qualified person for visual signs of cracking or damage. Some form of NDT (non destructive testing) may also be necessary where there are indications of a problem.

Question: (3) What is the rationale in Section 20-1.4.2(2), for the recommended limit of 125% of the rated load for load testing?

Reply (3): See Interpretation 20-4 issued on September 24, 1991

**Interpretation: 20-6**

Subject: ANSI/ASME B30.20-1985, Below-The-Hook Lifting Devices

Date Issued: August 21, 1992

Question: (1) What is a “vacuum reserve system” and a “vacuum reservoir”?

Reply (1): A “vacuum reservoir” is a storage vessel or place to reserve excess vacuum. A “vacuum reserve system” consists of those parts that ensure that all available vacuum is routed to the vacuum pad(s) to maintain control of the load.

Question: (2) Does incorporation of check valve between the powered vacuum generator and the balance of the system, create a vacuum reservoir and thus satisfy the requirement of B30.20?

Reply (2): A check valve is one acceptable method of improving the holding time of the vacuum reserve in the system.

Question: (3) Does para. 20-2.2.2(e), “Vacuum Reserve System” apply only to nonporous loads?

Reply (3): Yes, the referenced paragraph, 20-2.2.2(e), applies only to nonporous loads as stated in that paragraph, “...a clean, dry, and nonporous load.”

Question: (4) What is the applicability of a vacuum reserve system when handling porous loads?

Reply (4): B30.20 applies only to nonporous loads. The committee is reviewing the definition of porous material and the use of vacuum lifters handling porous materials. Any changes to the present volume would occur on an addenda to the new volume.
**Interpretation: 20-7**

**Subject:** ASME B30.20-1985, Below-The-Hook Lifting Devices

**Date Issued:** March 11, 1993

**Question:** (1) Does Section 20-1.2.2(a) mean that if a below-the-hook lifting device has welds, it can only be constructed of steel?

**Question:** (2) If so, why can't aluminum be welded per a comparable standard such as ANSI/AWS D1.2, the structural welding code for aluminum, as long as the design factor is at least 3?

**Reply:** In response to both questions, para. 20-1.2.2(a) welding does not cover devices constructed from materials other than steel. The B30.20 Subcommittee on Below-the-Hook Lifting Devices will review for possible future inclusion lifters that are made from materials other than steel.
B30.20 Interpretations

Interpretation: 20-8

Subject: B30.20-1985, Below-the-Hook Lifting Devices

Date Issued: June 21, 1993

Question (1): Are scrap charging buckets and vessels suspended from a running overhead crane for use in charging aluminum melting furnaces considered below-the-hook lifting devices?

Reply (1): The intention of the B30.20 volume is to address lifters that are attached below the hook and, by supporting or gripping, lift, transport, and release a load. Buckets, hoppers, crucibles, vessels, and similar containers that are loaded prior to transporting are themselves not considered a B30.20 lifting device. If these containers are supported by other than the crane hook, the intermediate supporting member may fall under B30.20 or other B30 volumes such as B30.9 Slings.

Question (2): If the answer to Question (1) is yes, would molten metal crucibles which are crane suspended also fall into this category?

Reply (2): See Reply (1).
Interpretation 20-9

Subject: ASME B30.20-1993

Date Issued: October 18, 1996

Question (1): Regarding Rated Load Test, para. 20-1.4.2(a) states in part:

Prior to initial use, all new, altered, modified, or repaired lifting devices should be tested and inspected by or under the direction of a qualified person and a written report be furnished by such a person, confirming the load rating of the lifter.

If multiple units of a lifting device are to be produced from a single assembly drawing, is it adequate to test the first unit and then to validate the structural integrity of all subsequent units by similarity of construction (common drawings)?

Reply (1): No. A manufacturer producing multiple units of a lifting device, according to a single design assembly drawing, does not assure that all units will be identical and able to meet the criteria of the rated load test. Therefore, one should not conclude that a rated load test done on the first unit can validate the structural integrity of all subsequent units by similarity of construction.

Question (2): Does a qualified person necessarily have to be a licensed Professional Engineer?

Reply (2): A person does not have to be a licensed Professional Engineer to be a qualified person. The B30.20 definition of “qualified person” is “a person who, by possession of a recognized degree or certificate of professional standing, or who, by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter and work.”

Question (3): Is a degreed engineer with a background in structures sufficient for directing the test?

Reply (3): See Reply (2).
Interpretation: 20-10

Subject: ASME B30.20-1993

Date Issued: October 3, 1997

Question (1): Does para. 20-1.2.1, Markings, limit the manufacturer’s ability to attach only one load capacity rating on a device that may have been intended and designed to support several different load capacities under different structural loading scenarios (i.e., a load beam that while being suspended from one overhead crane may only have a 20 ton capacity, while the same beam suspended from two cranes may have a capacity of 40 ton)?

Reply (1): No.

Question (2): If the answer to Question (1) is “no,” is the above description of a load beam with dual capacities permissible provided it is clearly labeled as such and it meets all sections of the B30.20 volume?

Reply (2): Yes.
Interpretation: 20-11

Subject: ASME B30.20-1993, Below-The-Hook Lifting Devices

Date Issued: January 13, 1999

Question (1): Paragraph 20-1.2.2 states: "A lifter shall be designed to withstand the forces imposed by its rated load, with a minimum design factor of 3, based on yield strength for load bearing structural components." How should this paragraph be interpreted relative to yield strength?


Question (2): Is the design factor mentioned in para. 20-1.2.2 related to a design based on either of the following:
(a) first micro-yield (localized yielding) based on an analysis using curved beam calculations for the device?
(b) yielding based on the onset of permanent, plastic deformation (macroscopic yield) of the entire device geometry?
(c) is there a different way the yield strength is to be understood?


Question (3): Parameters for the design factor could be separated into two main categories: design parameters and material parameters.

Design parameters might include the use of curved beam theory for the calculations, analysis using a linear elastic response, the size factor of the device, the reliability of the device, and the temperature of the device.

Material parameters might include the endurance limit of the material, the endurance limit of the mechanical element, the surface effects of the device itself, the modifying factor for any stress concentrations of the device, and the microstructure of the device material.

Having made the above classifications, can it be interpreted that the design factor established in para. 20-1.2.2 is to be applied to the load calculations after the design parameters have been established, and that the material parameters are accounted for in the design factor?


Question (4): If the assumption made in Question (3) is not correct, which modifying parameters for design factors are to be included before the application of the design factor of 3?

Reply (4): Paragraph 20-1.2.2 determines the maximum allowable stress for materials used as load-bearing structural components. Analysis or actual maximum working stresses must be determined based upon working conditions including impact or any other factors pertinent to the application. Actual maximum working stresses must be equal to or less than the allowable stress.

The intent of para. 20-1.2.2 is that the load suspension parts of a lifter shall be designed so that the static stress calculations for the rated load shall not exceed 33% of the yield strength.

The Standard is designed to guard against and minimize injury to workers and otherwise provide protection of life, limb, and property by prescribing safety requirements. This Standard is not a design standard and does not preclude applicable standards whose guidelines result in lower allowable stresses.
Interpretation: 20-12

Subject: ASME B30.20-1993, Below-The-Hook Lifting Devices
Date Issued: June 11, 1999

Question: Paragraph 20-1.2.2 states: "A lifter shall be designed to withstand the forces imposed by its rated load, with a minimum design factor of 3, based on yield strength for load-bearing structural components."

Paragraph 20-1.4.2(a) states: "Prior to initial use, all new, altered, modified, or repaired lifting devices should be tested and inspected by or under the direction of a qualified person and a written report be furnished by such a person, confirming the load rating of the lifter. The load rating should not be more than 80% of the maximum load sustained during the test. Test loads shall not be more than 125% of the rated load unless otherwise recommended by the manufacturer. Test reports should be available."

Was the minimum design factor of 3 (based on yield) strength selected so that the dynamic loading (which could double the static stresses) would leave at least 50% margin before the device components would be exposed to their yield strength?

Reply: No. A minimum design factor of 3, based on yield strength, was chosen to minimize the probability of lifter failure due to normal variability and uncertainty arising from design manufacturing and use of below-the-hook lifters.

Interpretation: 20-13

Subject: ASME B30.20c-1998, Below-The-Hook Lifting Devices, Para. 20-1.2.2
Date Issued: May 23, 2000

Question (1): In interpretation 20-3, the last line states: "This standard is not a design standard..." Paragraph 20-1.2.2 states: "A lifter shall be designed to..." This seems to be a direct contradiction. What is the intention of para. 20-1.2.2 if it is not a design standard?

Reply (1): As stated in interpretation 20-3, "The intent of Section 20-1.2.2 is that the load suspension parts of a lifter shall be designed so that the static stress calculation of the rated load shall not exceed 33% of the yield strength."

Question (2): Is the intent of para. 20-1.2.2 to apply the 3 to 1 minimum design factor based on yield strength after considering stress concentration factors, laboratory testing and/or FEA (finite element analysis) software to determine the actual maximum stress?

Reply (2): Please see Reply (1).

Question (3): In para. 20-1.2.2 does it seem reasonable to apply a minimum design factor of 3, based on yield strength of the steel, to any part with no regard to the ultimate strength of the steel?

Reply (3): Subjects not covered within the B30.20 Volume cannot be interpreted. The ASME B30 Standards Committee is presently developing the standardization of design criteria for below-the-hook lifting devices, which will address this subject.
**Interpretation: 20-14**

Subject: ASME B30.20-1999, Below-The-Hook Lifting Devices, paras. 20-1.6.2(a) and (b), 20-1.6.3, and 20-1.6.4(e)

Date Issued: September 26, 2000

Question (1): If a *pressure gripping* type lifting device is to be attached by another designated person and is not attached, or mechanically operated, by the person who operates the crane that hoists the lifting device, are paras. 20-1.6.2(a) and (b) intended to apply to the crane operator?

Reply (1): No.

Question (2): Do any of the recommendations or requirements defined in para. 20-1.6.3 apply to a crane operator: who does not attach or mechanically operate the *pressure gripping* lifting device; who is not the designated operator of the below-the-hook lifting device; whose sole function is to operate the crane that hoists the lifting device and its attached load?

Reply (2): No.

Question (3): If there are recommendations or requirements that are defined in para. 20-1.6.3 that are intended to apply to the crane operator as defined in Question (2) above, in which subparagraphs of 20-1.6.3 are they found?

Reply (3): ASME B30.20 does not address crane operators as defined in Question (2).

Question (4): What does the phrase “the load is correctly distributed for the lifter being used” mean as used in para. 20-1.6.4(e)?

Reply (4): The phrase means as described in the lifting device manufacturer’s operating instructions.
Interpretation: 20-15

Subject: ASME B30.20-1993, Below-The-Hook Lifting Devices, Sections 20-1.2 and 20-1.4

Date Issued: May 30, 2002

Question (1): Paragraph 20-1.2.1 states: "The rated load of the lifting device shall be marked on the main structure where it is visible. If the lifting device is made up of several lifters, each detachable from the group, these lifters shall also be marked with their individual rated loads."

If a lifting device is composed of four components, one main lifting components and three subcomponents that attach to the main component independently or in combinations with each other, is the standard requiring each combination and each individual component/subcomponent be labeled with the rated load?

Reply (1): Each combination shall be marked on the one main lifting component with its rated load. If three individual subcomponents are not lifting devices in and of themselves they need not be marked with the rated load.

Question (2): Paragraph 20-1.2.2 states: "Structural and mechanical lifters may be modified or rerated provided such modifications are analyzed and approved by the equipment manufacturer or a qualified person. A rerated lifter or one whose components have been modified shall conform to para. 20-1.2.2 and be tested according to Section 20-1.4. New rated load shall be displayed in accordance with para. 20-1.2.1."

In Question (1), if each of the four components is modified, is each component to be tested or is each combination to be tested, or both?

Reply (2): Each combination shall be tested, and if the three individual subcomponents are lifting devices in and of themselves they shall be individually tested.

Question (3): Paragraph 20-1.2.2 states: "The load bearing structural components of a lifter shall be designed to withstand the stresses imposed by its rated load plus the weight of the lifter, with a minimum design factor of three, based on yield strength of the material, and with stress ranges that do not exceed the values given in ANSI/AWS D14.1 for the applicable conditions."

Are we to interpret the standard as implying that a qualified person be the individual(s) to design the structural components?

Reply (3): Yes, the equipment manufacturer or a qualified person.

Question (4): Paragraph 20-1.4.2 states: "Prior to initial use, all new, altered, modified, or repaired lifting devices should be tested and inspected by or under the direction of a qualified person and a written report be furnished by such a person, confirming the load rating of the lifter. The load rating should not be more than 80% of the maximum load sustained during the test. Test loads shall not be more than 125% of the rated load unless otherwise recommended by the manufacturer. Test reports should be available."

Paragraph 20-1.4.2 states that a modified structural component should be tested and inspected, while para. 20-1.2.2 states the modified component shall be tested. Is it required to test a modified lifting device?

Reply (4): Paragraph 20-1.2.2(d) states: "A rerated lifter or one whose components have been modified shall be tested according to Section 20-1.4..." Section 20-1.4, Testing, is made up of two parts, 20-1.4.1 Operational Tests, and 20-1.4.2 Rated Load Test. The Operational Tests are mandatory and use the wording "shall be tested" while the para. 20-1.4.2 Rated Load Test is advisory and use the wording "should be tested and inspected."

Question (5): What if you have several lifting devices, new or modified, but are of the same design, is it required to test each lifting device?

Reply (5): Yes, see Reply (4) for the type of tests to be performed.
Question (6): Are specialized lifting devices used for only one purpose exempt from ASME B30.20?

Reply (6): No.

**Interpretation: 20-16**

Subject: ASME B30.20-1999, Below-The-Hook Lifting Devices, Sections 20-0.2 and 20-1.2.2

Date Issued: September 20, 2002

Question (1): Is there a more detailed interpretation to qualified person (Section 20-0.2)?

Reply (1): No.

Question (2): I have a bachelor’s degree in mechanical engineering; does this mean I am a qualified person?

Reply (2): No. An engineering degree alone does not fulfill the requirements for a qualified person, unless the degree is in the applicable field and the person has successfully demonstrated the ability to solve or resolve problems related to the subject matter and work.

Question (3): Do I need to be a licensed P.E. to be considered a qualified person?

Reply (3): No.

Question (4): What documentation is required to ensure that the guidelines specified in para. 20-1.2.2 are met?

Reply (4): The form documentation is beyond the scope of this volume. ASME B30.20-1999 does not mandate that the designer or manufacturer of the lifter shall provide documentation supporting compliance with these requirements.

Question (5): Does a lifting device have to be made from a certified drawing that has been approved by a Licensed Engineer?

Reply (5): No.

Question (6): Is the manufacturer’s load test and inspection report all that is required to meet the requirements of Section 20-1.2.2?


Question (7): If the device passes the load test, how do we know it meets the minimum design factor of three based on the material’s yield strength?

Reply (7): It is not the purpose of para. 20-1.4.2 to verify the design factor requirements of para. 20-1.2.2. Passing this test does not verify that the lifter meets the minimum design factor requirements of para. 20-1.2.2. Calculations can be performed to verify the design factor.
Interpretation: 20-17

Subject: ASME B30.20a-2001, Para. 20-1.2.1(b)(1)
Date Issued: May 19, 2003

Question: Does traceability to the original manufacturer through documentation and/or serialization coding within the identification markings of the nameplate allow private branded below-the-hook lifters to conform to the ASME B30.20 requirements?
Reply: Yes.

Interpretation: 20-18

Subject: ASME B30.20a-2001, Para. 20-1.3.8.2
Date Issued: May 19, 2003

Question: Paragraph 20-1.3.8.2(a) says "all new, altered, modified, or repaired lifting devices should be tested and inspected" and para. 20-1.3.8.2(c) says "Altered, repaired, or modified lifters shall be tested by a qualified person." Does B30.20 require load testing for altered, repaired, and modified lifters?
Reply: No. However, testing is recommended.

Interpretation: 20-19

Subject: ASME B30.20a-2001
Date Issued: May 26, 2004

Question (1): In order to comply with para. 20-1.3.4, Periodic Inspection, is it a requirement to remove the paint and primer from load-bearing welds?
Reply (1): No, unless there is some indication that the paint and primer are masking an unsafe condition.

Question (2): What is the definition of modifications as it applies to para. 20-1.2.2(d)?
Reply (2): A modification is a change of some aspect of the original design of the lifting device.

Question (3): What is the definition of a below-the-hook lifting device as it applies to ASME B30.20?
Reply (3): A below-the-hook lifting device is a device as described under Section 20-0.1: Scope of ASME B30.20.

Question (4): In order for a below-the-hook lifting device to be considered a below-the-hook lifting device as it applies to ASME B30.20, is it a requirement that the below-the-hook lifting device hang directly on the crane hook?
Reply (4): No.

Question (5): If a below-the-hook lifting device is connected to the crane hook by a wire rope sling that is not permanently connected to the below-the-hook lifting device, is the below-the-hook lifting device considered a below-the-hook lifting device as it applies to ASME B30.20?
Reply (5): Yes.
Question (6): Is the only function of a below-the-hook lifting device as it applies to ASME B30.20 to attach loads to a hoist?

Reply (6): No, attaching loads to a hoist is not the only function; it is the primary function. A below-the-hook lifting device may also manipulate the load in addition to attaching.

Question (7): If a device is used as a storage rack or a container when it is not used to lift a load, is this device considered to be a below-the-hook lifting device as it applies to ASME B30.20?

Reply (7): Yes; if it complies with the requirements of the appropriate chapter of ASME B30.20, then the device would be considered a below-the-hook lifting device when used for lifting loads.

**Interpretation: 20-20**

Subject: ASME B30.20-2003, Para. 20-1.3.8.2

Date Issued: January 21, 2005

Question: Would or should the load test weight be greater than the rated load?

Reply: Paragraph 20-1.3.8.2, Load Test, sets forth the minimum requirements for lifting devices. It is not recommended to rate a lifting device in excess of 80% of the test load, nor shall test loads be more than 125% of the rated capacity unless otherwise recommended by the manufacturer.
Interpretation: 20-21

Subject: ASME B30.20-2006, Section 20-0.2
Date Issued: February 21, 2008

Question: If a suspended weigh scale is inserted between the hook of an overhead crane and the actual lifting device, is that scale considered a “below-the-hook lifting device” as defined by ASME B30.20?

Reply: No.

Interpretation: 20-22

Subject: ASME B30.20-2003, Para. 20-1.3.8
Date Issued: February 21, 2008

Question: Does the manufacturer of new mass produced lifting devices have to load test every individual lifting device in order to comply with para. 20-1.3.8?

Reply: No, para. 20-1.3.8.2, Load Test, does not require that every individual lifting device be load tested. It is an advisory statement as it uses the wording, “should be tested.” However, para. 20-1.3.8.1, Operational Tests, is mandatory as it uses the wording, “shall be tested.”

Interpretation: 20-23

Subject: ASME B30.20-2003, Para. 20-1.2.1
Date Issued: July 7, 2008

Question: If a lifting device is engineered and is only used for one particular lifting activity repeatedly, do the required markings as stated in paras. 20-1.2.1(a) and (b) apply?

Reply: Yes.

Interpretation: 20-24

Subject: ASME B30.20-2003, Para. 20-2.2.2(e)
Date Issued: October 17, 2008

Question (1): Do you have to use a vacuum reservoir?
Reply (1): Yes.

Question (2): Can you use a vacuum system where vacuum is created by a vacuum pump or with compressed air use the Venturi effect as well?
Reply (2): Yes, but the system cannot be used in lieu of a reservoir.

Question (3): Is there a difference between when the lifting device is used as a part of equipment within an enclosure and when it is a lifting device operated with humans present in close range to operate the device?
Reply (3): No.

Question (4): Is there a difference in safety factor if the equipment is in an enclosure where there is no possibility of contact with personnel?
Reply (4): No.
Interpretation: 20-25

Subject: ASME B30.20-2006, Para. 20-1.2.1

Date Issued: October 17, 2008

Question (1): If a mechanical or structural lifter arrives for repair with no capacity information or any markings, and the only repair is to replace a worn pin (i.e., make no substantive changes to configuration of the unit or its capacity), would the repairer be required by ASME B30.20 to calculate the load capacity, design category, and service class of the unit and mark appropriately?

Reply (1): It is not within the scope of ASME B30.20-2006 to determine who performs the rated load calculations or determines the design category and service class and mark appropriately.

Question (2): If the mechanical or structural lifter described in Question (1) arrives for repair, except markings do exist as to capacity, manufacturer, address, but due to the age of the unit, no reference to Design Category or Service Class. Again, with no substantive changes to the design or major repair to the unit, would the repairer be required per ASME B30.20 to calculate and add the marks for Design Category and Service Class?

Reply (2): See reply to Question (1).

Mechanical and structural lifters manufactured prior to January 16, 2008 (effective date of ASME B30.20-2006 revision) that are repaired do not require the markings for Design Category and Service Class. In accordance with the B30 Standard Introduction, Section V Effective date, “It is not the intent of this Volume of the B30 Standard to require retrofitting of existing equipment. However, when an item is being modified, its performance requirements shall be reviewed relative to the requirements within the current volume.”

Interpretation: 20-26

Subject: ASME B30.20-2006, Section 20-0.1

Date Issued: October 17, 2008

Question: Are the slings that come attached to these devices to be considered a part of the device or are they to be considered under ASME B30.9?

Reply: ASME B30.20-2006 does not cover chain assemblies. These assemblies should be inspected according to ASME B30.9-2006.

Interpretation: 20-27

Subject: ASME B30.20-2006, Section 20-0.3

Date Issued: February 18, 2009

Question (1): Is a motorized rotating hoist or crane hook supplied with sheaves for reeving into a hoist or crane considered a below-the-hook lifting device as it applies to ASME B30.20?

Reply (1): No.

Question (2): Should it be designed to satisfy HMI and/or CMAA standards?

Reply (2): It is not within the scope of ASME B30.20-2006 to state that the device should be designed to satisfy HMI and/or CMAA standards.
Interpretation: 20-28

Subject: ASME B30.20-2006, Para. 20-2.2.1(b)(3)
Date Issued: February 18, 2009

Question: What specifically is the ASME definition for Serial Number?
Reply: The ASME B30 Standard does not have a formal definition for “Serial Number.”

Interpretation: 20-29

Subject: ASME B30.20-2003, Para. 20-1.3.8.2
Date Issued: June 10, 2009

Question: Would or should the load test weight be greater than the rated load?
Reply: Paragraph 20-1.3.8.2, Load Test, sets forth the minimum requirements for lifting devices. It is not recommended to rate a lifting device in excess of 80% of the test load, nor shall test loads be more than 125% of the rated capacity unless otherwise recommended by the manufacturer.

Interpretation: 20-30

Subject: ASME B30.20-2006
Date Issued: June 29, 2009

Question (1): Does ASME B30.20-2006 address padeye design?
Reply (1): No, ASME B30.20-2006 does not address design of padeyes.

Question (2): Does ASME B30.20-2006 address the difference between a pin connection and padeye?
Reply (2): No.

Question (3): The Scope of ASME B30.20-2006 as defined by Section 20-0.1 indicates that the Volume is meant to be applied to only the lifting arrangement used for attaching loads to the hoist and implies the load itself would not be covered by the Volume. If padeyes are welded or otherwise integrated into the load being lifted; are they part of the load and thus not covered by the Volume?
Reply (3): Yes.

Interpretation: 20-31

Subject: ASME B30.20-2006, Section 20-0.3
Date Issued: June 29, 2009

Question: Is there any minimum value of grip ratio, gripping force, or gripping force design factor for friction-type pressure-gripping lifters or for indentation-type pressure-gripping lifters?
Reply: No. However, ASME BTH-1-2008, Section 4-9 does set forth requirements for the grip ratio for friction-type pressure-gripping lifters.
Interpretation: 20-32

Subject: ASME B30.20-2006, Section V and Para. 20-1.2.2(d)
Date Issued: June 29, 2009

Question (1): Section V talks about existing devices and how it is not the intent of ASME B30.20 to require retrofitting of existing equipment. However, in the same section, if a lifting device is modified then its performance requirements shall be reviewed to the requirements within the current volume. Does this mean that an existing lifting device that is modified shall meet ASME B30.20?

Reply (1): When an item is being modified, its performance requirements shall be reviewed relative to the requirements within the current volume. The need to meet the current requirements shall be evaluated by a qualified person selected by the owner (user). See para. 20-1.2.2(d), Modifications, for example.

Question (2): Section 20-1.2.2(d) states that an existing lifting device may be modified or rerated, provided that it is analyzed and approved by a qualified person. It also states that the rerated or modified lifting device shall conform to the other sections in ASME B30.20. What is the definition of rerated?

Reply (2): To change the original rating of the device.

Interpretation: 20-33

Subject: ASME B30.20-2006, Paras. 20-1.2.1(b)(7) and (8)
Date Issued: June 29, 2009

Question: Since all our specific lifting device configurations fall into the same category of Service Class and Design Category, is it mandatory to mark all of our lifting devices with Service Class and Design Category?

Reply: All new structural and mechanical lifting devices built after January 16, 2008 shall be marked with Service Class and Design Category in order to be in compliance with ASME B30.20-2006 [para. 20-1.2(b)].
Interpretation:  20-34

Subject: ASME B30.20-2006, Para. 20-1.3.8.2
Date Issued: October 12, 2010

Question: What is the minimum load (applied on a lifting device in whatever manner) from which we have to apply the load test procedure?

Reply: Load testing of a Structural or Mechanical Lifting device is not a mandatory requirement. There is no minimum rated load for which a load test is recommended to be performed.

Interpretation:  20-35

Subject: ASME B30.20-2010, Para. 20-1.3.1, Inspection Classification Subparagraph (b)(3) Periodic Inspection
Date Issued: February 1, 2011

Question (1): Would it be correct to say that an external code mark may be substituted for dated inspection reports that appear to be mandatory by this Standard in Table 1 Note (2) and in paras. 20-1.3.6 and 20-2.3.6?

Reply (1): Yes.

Question (2): Would it be correct to say the external code mark is in addition to the dated inspection reports and is applied to the lifter for field verification to show that the dated inspection reports have been completed?

Reply (2): No.

Question (3): Should “An external code mark on the lifter is an acceptable identification in lieu of records” be added or addressed in paras. 20-1.3.6 and 20-2.3.6 as being an acceptable method of Inspection Records?

Reply (3): This will be taken as a request for revision.

Question (4): Paragraph 20-2.3.1(b)(3) Periodic Inspection uses the words coded mark. Should that be code mark as stated in para. 20-1.3.1 Inspection Classification under (b)(3) Periodic Inspection?

Reply (4): This will be taken as a request for revision.

Question (5): What is the definition of an external code mark?

Reply (5): This will be taken as a request for revision.

Interpretation:  20-36

Subject: ASME B30.20-2010, Section 20-0.2, Definitions — General — Repair and Para. 20-1.2.1, Subparagraph (c), Marking
Date Issued: February 1, 2011

Question: Routine maintenance on structural and mechanical lifters involves the replacement of worn parts. Is the normal replacement of worn parts considered a repair?

Reply: Yes.
Interpretation: 20-37

Subject: ASME B30.20-2010, Sections 20-0.1 and 20-0.2 Date

Issued: May 25, 2012

   Question (1): Once a BHLD (B30.20) incorporating a hook, wire rope sling, or other component covered by another B30 series standard has been assembled, are there any load test requirements for this BHLD other than those specified by B30.20, which would include a one-time load test of 125%?

   Reply (1): No, once components covered by another B30 volume have been incorporated into a Below-the-Hook Lifting Device, the completed assembly is only required to meet the load test requirements of B30.20.

   NOTE: B30.20, Chapter 1 for structural and mechanical lifting devices recommends a load test; it is not mandatory.

   Question (2): Does B30.20, Para. 20-1.3.7, Repairs require that repaired hooks comply with the requirements of B30.10?

   Reply (2): Yes.