

# APPENDIX A

## PROCUREMENT GUIDELINES

This appendix provides reference guidance in preparing purchase requisitions for hoisting and rigging materials and equipment. Nationally recognized standards and specifications are referenced for listed items. However, caution should be used prior to procurement of special items in order to verify appropriate specification or standard reference and requirements. Some specific requirements listed in this appendix are more restrictive than consensus standard requirements, but are recommended to ensure materials of adequate quality and workmanship are provided.

Quality receipt inspections should be provided for all received materials in order to verify compliance of all requirements stated on the purchase order.

This appendix primarily contains procurement criteria for off-the-shelf type items. If the information provided in this appendix is used in the development of specifications for purchase of cranes or other special handling equipment, the appropriate engineering group should be consulted.

Since this appendix contains only a partial listing of commonly used rigging hardware, the requisitioner shall review applicable standards or specifications and identify requirements to which the manufacturer shall adhere.

More specific information or requirements may be obtained by consulting the applicable section of this standard or an equipment manufacturer.

The manufacturer shall provide requested documentation as appropriate (e.g., rated load certification, proof-load test certification, material certification). The documentation shall be signed by the manufacturer's authorized representative.

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## 1.1 MANUAL, ELECTRIC AND AIR OPERATED HOISTS

- a. Suggested requirements include, but are not limited to the following:
1. Manual, electric and air operated hoists shall meet or exceed the requirements of ASME/ANSI B30.16.
  2. For hoists designated a "Safety Class" or "Safety Significant" per applicable DOE nuclear safety rules or Orders, application of ASME NUM-1 requirements should be considered during procurement.
  3. The rated load shall be marked on the hoist or load block.
  4. Shall be marked with identification as follows:
    - A) Hand Chain Operated
      - 1) Name of manufacturer
      - 2) Manufacturer's model or serial number
    - B) Electric-Powered Hoist
      - 1) Name of manufacturer
      - 2) Manufacturer's model or serial number
      - 3) Voltage of AC or DC power supply and phase and frequency of AC power supply
      - 4) Circuit ampacity
    - C) Air Powered Hoist
      - 1) Name of manufacturer
      - 2) Manufacturer's model and serial number
      - 3) Rated air pressure
- b. All manual, electric, or air operated hoists shall have affixed to the hoist or load block a label or labels displaying precautionary information concerning operating procedures.
- c. Load sprockets shall have teeth or pockets to allow engagement of the load chain, shall be guarded, and provisions shall be made to guard against jamming of the load chain within the hoist mechanism under normal operating conditions.
- d. Manufacturer shall supply instruction manual for each hoist, the manual shall include the following information and instructions:
1. Installation
  2. Operation
  3. Inspection and Testing
  4. Lubrication, maintenance, and repair
  5. Wiring diagram (electric powered only; maybe supplied separately)
- 1.1.1 LOAD CHAIN**
- a. Load chain may be either roller or welded link chain.
  - b. Load chain shall be pitched so as to pass over all load sprockets without binding.
  - c. Load chain shall be proof tested by the chain or hoist manufacturer with a load test of 150 percent of the rated load divided by the number of chain parts supporting the load.
- 1.1.2 HOIST HOOKS**
- If hooks are of the swiveling type, they should rotate freely. Hooks shall be equipped with latches unless the application makes the use of the latch impractical. 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, chains, etc. Refer to ASME/ANSI B 30.10.
- 1.1.3 LOAD BLOCKS**
- a. On hand chain operated hoists, a means shall be provided to guard against load chain jamming in the load block under normal operating conditions.
  - b. On electric- or air-powered hoists, load blocks shall be of the enclosed type, and means shall be provided to guard against rope or load chain jamming in the load block under normal operating conditions.
- 1.1.4 HOIST BRAKES**
- a. Hand chain operated hoist(s) shall be so designed that, when the actuating force is

removed, it will automatically stop and hold any test load up to 125 percent of the rated load.

- b. Electric-powered hoist, under normal operating conditions with rated load and test conditions with test loads up to 125 percent of rated load, the braking system shall perform the following functions:
  - 1. Stop and hold the load hook when controls are released;
  - 2. Limit the speed of load during lowering, with or without power, to a maximum speed of 120 percent of rated lowering speed for the load being handled;
  - 3. Stop and hold the load hook in the event of a complete power failure.
- c. The braking system shall have thermal capacity for the frequency of operation required by the service.
- d. The braking system shall have provisions for adjustments where necessary to compensate for wear.
- e. Air-powered hoist, under normal operating conditions with rated load and test conditions with test loads up to 125 percent of rated load, the braking system shall perform the following functions:
  - 1. Stop and hold the load hook when controls are released;
  - 2. Prevent an uncontrolled lowering of the load in the event of a loss of air pressure;
  - 3. The braking system shall have thermal capacity for the frequency of operation required by the service;
  - 4. The braking system shall have provision for adjustments where necessary to compensate for wear.

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## 2.1 MANUALLY OPERATED LEVER HOIST

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- a. Suggested requirements include, but are not limited to the following:
1. Manually operated lever hoists shall meet or exceed the requirements of ASME/ANSI B30.21.
  2. Shall have the rated load marked on the hoist or load block.
  3. Shall be tested by the manufacturer with a test load of at least 125 percent of the rated load.
  4. Shall have identifications for controls to indicate function or direction of motion.
  5. Shall be marked with identification as follows:
    - A) Name of manufacturer
    - B) Manufacturer's model or serial number
  6. Shall have affixed to the hoist or load block in a readable position, a label or labels displaying precautionary information concerning operating procedures.
- b. Load chain shall be proof tested by the chain or hoist manufacturer with a load test of 150 percent of the hoist rated load divided by the number of chain parts supporting the load.
- c. If a load is supported by more than one part of load chain, the tension on the parts shall be equalized.

### 2.1.3 LOAD BLOCKS

Shall have means to guard against load chain jamming in the load block under normal operating conditions.

### 2.1.4 LOAD CONTROLLING MECHANISM

- a. Shall be equipped with a load controlling mechanism, which shall perform the following functions under normal operating conditions with test loads up to 125 percent of the rated load.
1. Stop and hold the load when the lever force is removed and the lever stroke completed.
  2. Provide for incidental movement of the load when lifting or lowering.
  3. Friction brake shall have provision for adjustment where necessary to compensate for wear.
- b. Manufacturer shall supply instruction manual for each hoist, the manual shall include the following information and instructions:
1. Operation
  2. Inspection and Testing
  3. Lubrication, maintenance, and repair

### 2.1.1 CONSTRUCTION

Load sprockets shall have pockets or teeth to allow engagement of the load chain, shall be guarded, and provisions shall be made to guard against jamming of the load chain with the host mechanism under normal operating conditions.

### 2.1.2 LOAD CHAIN

- a. Load chain may be either roller or welded link type and shall be pitched so as to pass over all sprockets without binding.

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## 3.1 SHOP/FLOOR CRANES

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- a. Suggested requirements include, but are not limited to the following:
  1. Shall meet or exceed the requirements of ASME PALD.
  2. Operating controls shall be designed in such a manner that they are readily visible and accessible to the operator and so that the operator will not be subjected to pinch points, sharp edges, or snagging hazards. The operation of controls should be clear to the operator either by position, function, labeling or combination thereof.
  3. The release system shall require intentional positive action by the operator for release to prevent accidental lowering.
  4. Shall have a positive means to prevent the load from being lowered or raised beyond the design limit of travel.
  5. Shop/floor cranes not equipped with internal load limit devices shall be capable of performing a proof test of 150 percent of the rated capacity.
  6. Shop cranes equipped with internal load limiting devices shall, when the load limiting device is deactivated, be capable of performing a proof load test of 125 percent of rated capacity.
  7. Because of the potential hazards associated with the misuse of equipment of this type, no alterations shall be made to the product.
  8. Shop/floor cranes shall be provided with a load hook and/or chain at the end of the boom extension that has a capacity capable of sustaining the proof load of the unit. The load hooks shall be provided with a latching mechanism.
  9. Shall have required product warnings and markings.

## 4.1 BELOW THE HOOK STRUCTURAL AND MECHANICAL LIFTING DEVICES

a. suggested requirements include, but are not limited to the following:

1. Shall conform to requirements of ASME/ANSI B30.20.

**NOTE: Special lifting devices for shipping containers weighing 10,000 lbs or more that are used for radioactive materials may be governed by ANSI N14.6 (Standard for Shipping Containers Weighing 10,000 Pounds or More for Nuclear Materials).**

2. Shall have the rated load capacity marked on the main structure where it is visible. If the lifter is made up of several lifters, each detachable from the group, these lifters shall also be marked with their individual rated loads.
3. A load test, not to exceed 125 percent of the rated load unless otherwise recommended by a manufacturer shall be provided.
4. A load test certificate indicating the date of load test, amount of load applied, and confirmation of lifter load rating shall be supplied.
5. Rated load should not be more than 80 percent of the maximum load sustained during the test.

6. Shall have a complete or other permanent marking affixed to the lifter displaying the following:

- A) Manufacturer's Name
- B) Serial Number/Identification Number
- C) Lifter Weight if over 100 lbs. (45 kg)
- D) Rated Load Capacity

### 4.1.1 GENERAL CONSTRUCTION

- a. Shall be designed to withstand the forces imposed by the rated load.
- b. Shall have a minimum design factor of 3, based on yield strength for all load bearing structural components.
- c. Welding shall be in accordance with ANSI/AWS D14.1.
- d. Guards for exposed moving parts such as, but not limited to gearing, projecting shafts, and chain drives that constitute a hazard under normal operating conditions should be guarded.
- e. Electrical equipment and wiring shall comply with Article 610 of ANSI/NFPA 70.

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## 5.1 WIRE ROPE

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- a. Suggested requirements include, but are not limited to the following:
1. Wire rope shall meet or exceed the requirements of Federal Specification, RR-W-410 for wire rope, Mil Specification MILDTL-83420 for aircraft cable and MIL-W-83140 for non-rotating stainless steel wire rope.
  2. Wire rope shall be made in the United States by a member of the Wire Rope Technical Board<sup>1</sup> (except stainless steel, and unless recommended otherwise by a crane or hoist manufacturer). Stainless steel wire rope shall be made in the United States and shall be 302 or 304 grade stainless steel unless otherwise recommended by a crane or hoist manufacturer.
  3. Wire rope shall have documentation from the manufacturer traceable to the material furnished and signed by the manufacturer's authorized representative. Documentation should reference as a minimum the purchase order number, the diameter, number of strands, core, lay, grade, manufacturer's lot/run number, material number and the nominal breaking strength of a sample.
  4. Shall be shipped lubricated and with a protective covering (i.e., plastic or cardboard)

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<sup>1</sup> Union Wire Rope, the Rochester Company, Williamsport Wire Rope, Macwhyte Company, Paulsen Wire Rope Corporation, Wire Rope Corp. Of America, Broderick & Bascom Rope Co., Bridon American Corporation.

**Note:** This list is not all inclusive and may not include subsidiary companies.



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## 6.1 CHAIN SLINGS

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- a. Suggested requirements include, but are not limited to the following:
1. Shall meet or exceed requirements of ASME/ANSI B30.9 and 29 CFR 1910.184.
  2. Alloy steel chain slings shall have permanently affixed durable identification stating size, manufacturer's grade, rated load and angle upon which the rating is based, reach, number of legs, and sling manufacturer.
  3. Hooks, rings, oblong links, pear-shaped links, welded or mechanical coupling links or other attachments shall have a rated load of at least equal to that of alloy steel chain with which they are used.
  4. All welded components in the sling assembly shall be proof load tested as components or as part of the sling assembly.
  5. Hooks attached to chain slings shall meet the requirements of ASME/ANSI B30.10.
  6. The welded components of all new slings shall be proof tested by the component or sling manufacturer to 200 percent of the rated load.
  7. The proof load for multiple leg slings shall be applied to the individual legs and shall be 200 percent of the rated load of a single leg sling.
  8. A certificate of proof test shall be provided by the manufacturer or supplier referencing the specific sling identification number, date of test, and amount of load applied. (Employer shall retain a certificate of the proof test and shall make it available for examination.)

## 7.1 SYNTHETIC SLINGS

- a. Suggested requirements include, but are not limited to the following:
1. Shall meet or exceed the requirements of 29 CFR 1910.184 and ASME/ANSI B30.9.
  2. Should be manufactured from webbing specifically constructed for overhead lifting, featuring red core yarns.
  3. Webbing shall have the following characteristics:
    - A) Sufficient certified tensile strength to meet the sling manufacturer's requirements;
    - B) Uniform thickness and width;
    - C) Full woven width, including selvage edges;
    - D) Webbing ends shall be sealed by heat, or other suitable means, to prevent raveling.
  4. Thread used in the manufacture of synthetic web slings shall be the same generic type yarn as the sling webbing.
  5. Stitches shall be lock-stitched and preferably continuous. When not continuous, it shall be back stitched at the ends to prevent raveling.
  6. The load carrying splice shall be sewn with a pattern of sufficient strength to justify the manufacturer's rated capacities.
  7. Shall have a minimum design factor of 5.
  8. End fittings shall have sufficient strength to sustain twice the rated load of the sling without permanent deformation.
  9. EACH SLING SHALL BE PERMANENTLY MARKED WITH THE FOLLOWING:
    - A) Manufacturer's name or trademark.
    - B) Manufacturer's code or stock number.
    - C) Type of synthetic web material.
    - D) Rated loads for the type of hitches used.
- NOTE: Hand written, or ink embossed markings are not acceptable. Sling tags shall be indelibly marked and the lettering shall not wear off with use. The markings shall remain legible for the life of the sling.
10. The manufacturer shall have on file a written system of sling traceability as well as a quality control procedure. Traceability should be specific mill lots.
  11. Fabric wear pads should be sewn into the bearing points of the sling eyes. Leather wear pads are not recommended.
  12. Product warnings relative to the proper use, care, and maintenance shall accompany the shipment.
  13. Single leg and endless synthetic web slings shall be proof tested to 200 percent of the rated load.
  14. Multiple leg bridle slings shall have the proof load applied to the individual legs. The proof load shall be two times the vertical rated load of a single leg sling.
  15. A load test certificate (LTC) shall be provided for each lot of slings supplied. The LTC shall reference as a minimum, the PO number, date of proof test, amount of load applied, sling capacity, and lot/run number. The LTC shall be signed by the manufacturers authorized representative.

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NOTE: Sling lengths shall be within a specified tolerance. Synthetic sling manufacturers normal length is  $\pm 1$  percent of the sling length. If closer

tolerance is required, the purchaser should specifically request required tolerance on the purchase order.

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## 8.1 SYNTHETIC POLYESTER ROUND SLINGS

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- a. Suggested requirements include, but are not limited to the following:
  1. Slings should meet or exceed requirements of the Web Sling and Tiedown Association, Inc., recommended specification for roundslings made of polyester fibers used for general lifting purposes.
  2. Polyester roundslings including those incorporating welded fittings shall be proof tested to 200 percent of the vertical rated capacity.
  3. A load test certificate (LTC) shall be provided for each lot of slings supplied. The LTC shall reference at a minimum, the PO number, date of proof test, amount of load applied, sling capacity and lot/run number. The LTC shall be signed by the manufacturer's authorized representative.
  4. The core(s) shall be formed from one or more ends of yarn, wound together on a plurality of turns. The core(s) should be uniformly wound to ensure even distribution of the load.
  5. The cover(s) should be of the same fiber type as the load bearing core(s). When the cover is a different fiber type than the load bearing core, follow the manufacturer's recommendations for use.
  6. The cover should be made from one length of material.
  7. When the core and cover are of the same fiber, the thread shall also be of that fiber type. When the core and cover are of different fiber types, the thread should be of the same fiber type as the cover.
  8. All stitching shall be lock-stitched type and should be continuous. When not continuous, they shall be back stitched or overstitched to prevent raveling.
  9. The design factor for new polyester roundslings and polyester roundslings incorporating fittings shall be a minimum of five (5).
  10. Each polyester roundsling shall be permanently marked or labeled showing:
    - A) Name or trademark of manufacturer.
    - B) Manufacturer's code or stock number.
    - C) Rated capacities for the three basic hitches. (vertical, choker, vertical basket)
    - D) Core fiber type – if cover(s) is of a different fiber type, both fiber types shall be identified.
    - E) Length (reach) – bearing point to bearing point.
  11. Each manufacturer shall internally identify their product with name or trademark for traceability.

## 9.1 WIRE ROPE SLINGS

- a. Suggested requirements include, but are not limited to the following:
1. Shall meet or exceed the requirements of 29 CFR 1910.184 and ASME/ANSI B30.9.
  2. Wire rope purchased to fabricate slings shall be made in the United States by a member of Wire Rope Technical Board (Except stainless steel). Stainless steel wire rope shall be made in the United States and shall be 302 or 304 grade stainless steel.
  3. Wire rope shall meet the requirements of Federal Specification RR-W-410D or Military Specification MIL-W-83420.
  4. Wire rope shall have documentation from the manufacturer traceable to the material furnished and signed by the manufacturer's authorized representative. Documentation shall reference as a minimum, the PO number, the diameter, number of strands, core, lay, grade, manufacturing lot/run number, master reel number and nominal breaking strength of sample.
  5. Shall be shipped lubricated and with a protective covering (i.e., plastic or cardboard).
  6. Slings should be either 6 x 19 or 6 x 37 classification.
  7. Slings should be made of wire rope produced from EXIPS (Extra Improved Plow Steel) with an IWRC (Independent Wire Rope Center). Consideration may be given to other grades or types of wire rope, dependent upon the type of expected service due to the type of load, hitch, or environment.
  8. Shall have a minimum of 5 to 1 safety factor.
  9. Mechanical spliced single leg and endless wire rope slings, and swaged socket or poured socket assemblies shall be load tested to 200 percent of the rated vertical load.
  10. Shall be individually tagged with a durable tag, including the following information:
    - A) WLL (Working Load Limit)
    - B) Purchase Order number or serial number
    - C) Manufacturer's name or ID
  11. Shall have a load test certificate (LTC) for each lot of slings supplied. The LTC shall reference as a minimum, the PO number, date of proof test, amount of load applied, sling capacity, lot/run number. The LTC shall be signed by the manufacturer's authorized representative.
  12. Single leg hand tucked slings shall have a proof load equal to the rated load, but shall not exceed 125 percent of the rated load.
  13. The proof load for multiple leg bridle slings shall be applied to the individual legs and shall be either 125 percent for hand tucked splice or 200 percent for mechanical splice, times the vertical rated load of a single leg sling of the same size, grade, and construction of rope. Any master link to which multiple leg slings are connected shall be proof loaded to 200 percent of the force applied by the combined legs.
  14. Multiple leg bridle slings shall be tagged with a durable tag on the master link indicating the working load limit for the total combined legs for each individual sling in a vertical configuration. The purchase order number or serial number and the manufacturer's ID should be supplied.

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## 10.1 WIRE ROPE CLIPS (Clamps)

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- a. Suggested requirements include, but are not limited to the following:
  - 1. Shall meet or exceed requirements of Federal Specification FF-C450D.
  - 2. Shall be permanently and legibly marked with the size and manufacturer's identifying mark.
  - 3. Wire rope clips should be shipped with application instructions and product warnings for each type or size clip.

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## 11.1 EYE BOLTS

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- a. Suggested requirements include, but are not limited to the following:
  1. Shall be fabricated from forged carbon or alloy steel and shall meet or exceed the requirements of ASTM specification A489 for "Carbon Steel Eye Bolts" or ASTM F541 "Standard Specification for Alloy Steel Eyebolts," and ANSI/ASME B18.15 "Forged Eye Bolts."
  2. Eye bolts used for lifting service shall have the manufacturer's name or identification mark forged in raised characters on the surface of the eyebolt. Alloy steel eye bolts shall have the symbol "A" (denoting alloy) and the manufacturer's name or identification forged in raised letters on the surface of the eyebolt.
  3. The safe working load shall have a safety factor of 5.

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## 12.1 HOOKS

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- a. Suggested requirements include, but are not limited to the following:
1. Hooks used for lifting service shall meet or exceed the requirements of ANSI/ASME B30.10.
  2. Manufacturer's identification shall be forged cast, or die stamped on a low stress non-wearing area of the hook.
  3. When proof tests are used to verify manufacturing process, material, or configuration, hooks shall be able to withstand proof load application, without permanent deformation when a load is applied for a minimum of 15 seconds. Proof loads for hooks up to 50 tone capacity shall be 200 percent of the rated capacity.
  5. Performance testing of hooks shall not be required, except where necessary to conform to requirements for the equipment of which they are a part of.



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## 13.1 SWIVEL HOIST RINGS

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- a. Suggested requirements include, but are not limited to the following:
  - 1. All hoist rings shall be individually proof load tested to a minimum of 200 percent of the rated capacity, but no more than 250 percent of the rated capacity.
  - 2. Shall have a proof load certificate supplied from the manufacturer with each swivel hoist ring.
  - 3. Shall have the manufacturer's name or trademark permanently marked on the swivel hoist ring.
  - 4. Shall have a minimum safety factor of 4 based on ultimate breaking strength.
  - 6. Shall be permanently marked by the manufacturer with the WLL and recommended torque value.
  - 7. Shall be packaged with proper application instructions and warning information.

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## 14.1 HOIST RINGS, PEAR SHAPED LINKS

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- a. Suggested requirements include, but are not limited to the following:
  - 1. Welded rings or links shall be subjected to a nondestructive weld test (NDT) and have documentation provided. NOTE: NDT is not required for forged rings or links.
  - 2. Shall have a minimum safety factor of 5 based on ultimate breaking strength.
  - 3. Rings shall be forged or welded from low alloy steel.
  - 4. Rings or links should be marked by the manufacturer with the manufacturer's name or trademark and ring or link size.

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## 15.1 SHACKLES

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- a. Suggested requirements include, but are not limited to the following:
1. Each shackle body shall be permanently and legibly marked in raised or stamped letters on the side of the shackle bow with the identifying manufacturer's name or trademark, shackle size, and the recommended safe working load.
    - A) Grade A regular strength shackle pins and bolts shall be unmarked;
    - B) Grade B high strength shackle pins and bolts shall be marked by the raised or stamped letters "HS" on the head.
    - C) Shackle markings shall be raised or stamped letters of the maximum height permitted by the size of the shackle component being marked.
  2. Grade A shackles (Regular Strength), together with their pins and bolts shall be forged from carbon steel. Grade B shackles (High Strength) together with their pins and bolts shall be forged from alloy steel.
  3. Shackles shall have minimum 5 to 1 safety factor.
  4. Shackle samples shall be subjected to proof loads of 200 percent of the rated capacity.
  5. Shackle pins shall fit freely without binding and seat properly.
  6. Shackles shall be sufficiently ductile so that, when fractured, the fractured member shall show a permanent distortion before breaking.

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## 16.1 TURNBUCKLES – Type III Rigging

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- a. Suggested requirements include, but are not limited to the following:
1. Turnbuckles used for rigging applications shall meet or exceed the requirements of Federal Specification FF-T-791B, Section 3.9.3.
  2. Shall be fabricated from forged alloy steel.
  3. Shall be provided with a jam nut of a type which does not depend upon deformation of the threads for security.
  4. Certificate of proof test shall be provided by the manufacturer for selected samples from each lot. Certificate shall indicate as a minimum, the size, WLL, test weight, and date of test.
  5. Proof test loads shall be one-half the specified breaking strength for the end pull.
  6. Turnbuckles shall have a minimum safety factor of 5 based on ultimate breaking strength.
  7. Manufacturer's name or trademark and turnbuckle size shall be permanently marked on the body of the turnbuckle.

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**PURCHASE REQUISITION**

**EXAMPLE ONLY**

Part I – Delivery, Receipt, and Handling (Complete for all Procurements)

P.O. No.	AB81111	P.O. Date		Requisition Date	12/18/96
Required Delivery	3/97	Deliver to (Name/Phone No., Bldg. Rm)	Myra T. Fall / 1-1111 / Bldg 501		
Inspection (Check One)					
<input type="checkbox"/> N/A <input checked="" type="checkbox"/> RI <input type="checkbox"/> PDT/RI <input type="checkbox"/> RO					
End Use/Project No.	Tank Removal		End User (Name/Phone)	Myra T. Fall / 1-1111	
Packing, Shipping Level (Check One)					
<input type="checkbox"/> N/A <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> c <input type="checkbox"/> D <input checked="" type="checkbox"/> SS					
Storage Level					
<input type="checkbox"/> N/A <input type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> c <input type="checkbox"/> D					

PART II – Engineering/QA Control Data (Complete for all Procurements)

Type Item	Documents Deliverable	Onsite Visit Required
<input type="checkbox"/> N/A <input type="checkbox"/> Engineered <input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> None <input type="checkbox"/> Comm. <input type="checkbox"/> Eng <input checked="" type="checkbox"/> Quality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

PART III – Health and Safety Data (Complete for all Procurements)

Functional Classification
<input type="checkbox"/> GS

PART IV – Description (Complete for all Procurements)

Procurement Type					
<input type="checkbox"/> ASSI Item <input checked="" type="checkbox"/> Approved Equal <input type="checkbox"/> ADP <input type="checkbox"/> Service <input type="checkbox"/> ASSI Item <input type="checkbox"/> Sole Source I <input type="checkbox"/> Sole Source II					
Item No.	Quantity	Unit	Description (Salient Features)	Unit Price	Total Price
1	100	FT	Wire Rope, ½" Carbon Steel, 6 x 19 classification EIPS (Extra Improved Rlow Steel), IWRC (Independent Wire Rope Core), RRL (Right Regular Lay)	1.00	100.00
2	10	EA	Wire Rope Slings, ½ x 6 ft., made with carbon steel wire Rope, minimum working load limit (4,000 lbs.)	10.00	100.00
3	10	EA	Synthetic Slings, 6 ft. length Flat Eye and Eye with a Minimum rated vertical capacity of 6,000 lbs.	20.00	200.00
4	10	EA	Shackles, screw pin anchor, 25 Ton capacity	40.00	400.00
SEE CONTINUATION SHEET FOR FUNCTIONAL REQUIREMENTS					
				TOTAL	
Suggested Supplier (Name/Phone No.)				Total Est Cost/Price	
Marvin's Rigging Supply Anytown, USA 800-999-0000				\$ 800.00	
				Budget Ceiling	
				\$1,000.00	

**APPROVALS:**

APPROVER	PRINTED NAME	SIGNATURE	Social Security No.	Phone No.	Date
<input checked="" type="checkbox"/> Requestor	Freddie Hartzop		222-22-2222	1-1112	12/18/96
<input type="checkbox"/> Safety					
<input checked="" type="checkbox"/> Manager	Joe Boss		220-02-0000	1-1114	12/19/96
<input type="checkbox"/> Engineering					
<input type="checkbox"/> Other					

GA99 0027

**Exhibit 1 – Purchase Requisition Example.**

CONTINUATION – PURCHASE REQUISITION

EXAMPLE ONLY

ITEM NO.	QUANTITY	UNIT	DESCRIPTION (Salient Features)	UNIT PRICE	TOTAL PRICE
			<b>FUNCTIONAL REQUIREMENTS FOR WIRE ROPE:</b>		
			Carbon steel wire rope shall be made in the United States by a member of the Wire Rope Technical Board.		
			Shall meet the requirements of RR-W-410D Federal Specification for Wire Rope and Strand or MIL-W-83420 for aircraft cable.		
			Shall be shipped lubricated and with a protective covering, i.e., plastic or cardboard.		
			Wire Rope shall have Documentation from the manufacturer traceable to the material furnished and signed by the manufacturer's authorized representative. Documentation Shall reference as a minimum, the PURCHASE ORDER number, state the diameter, number of strands, core, lay, grade, manufacturing lot/run number or master reel number and nominal breaking strength of sample.		
			<b>ACCEPTANCE CRITERIA:</b>		
			Quality receipt inspection shall verify that the manufacturer is a member of the Wire Rope Technical Board (for carbon steel), verify the diameter, lay, grade, core and documentation as complete and meets or exceeds the requirements of this rope.		
			<b>FUNCTIONAL REQUIREMENTS FOR WIRE ROPE SLINGS:</b>		
			Wire rope purchased to fabricate slings shall be made in the United States by a member of the Wire Rope Technical Board.		
			Shall meet the requirements of RR-W-410D Federal Specification for Wire Rope and Strand or MIL-W-83420 for aircraft cable.		
			Wire Rope Shall have Documentation from the manufacturer traceable to the material furnished and signed by the manufacturer's authorized representative. Documentation Shall reference as a minimum, the P.O. number, state the diameter, number of strands, core, lay, grade, manufacturing lot/run number, master reel number, and nominal breaking strength of sample.		
			Shall be shipped lubricated and with a protective covering, i.e., Plastic or cardboard.		
			Shall be mechanical flemish eye spliced.		
			Single leg slings Shall be either 6 x 19 or 6 x 37 classification.		

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Exhibit 1 – Purchase Requisition Example (continued)

CONCLUDING MATERIAL

Review Activity:

<u>DOE</u>	<u>Field Offices</u>
DP	CH
EH	ID
EM	NV
RW	OR
ER	RL
EE	SR
FE	AL
	OAK

Preparing Activity:

DOE-EH-53

Project Number:

SAFT-0077

National Laboratories

- BNL
- INEEL
- LANL
- ORNL
- SNL

Area Offices

- Amarillo Area Office
- Princeton Area Office
- Rocky Flats Area Office
- Western Area Power Association

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