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SUPERSEDING
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MILITARY SPECIFICATION

SPREADERS, LIFTING, ISO AND INTERMODAL FREIGHT CONTAINERS

This specification is approved for use by the USA Belvoir Research and Development Center, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers modified commercial, lifting spreaders for handling of International Standards Organization (ISO) and American National Standards Institute (ANSI) Series 1, freight containers, weighing up to 67,200 pounds and 35 foot containers used in intermodal (land, rail, air, and marine) service.

1.2 Classification. The spreaders shall be of the following types and sizes as specified (see 6.2):

Type I - Top Lift, Automatic (TLA).
Type II - Top Lift, Semiautomatic (TLS).
Size 10 - 10 Foot, Designation 1D (ISO).
Size 20 - 20 Foot, Designation 1C (ISO).
Size 35 - 35 Foot, Designation "SEA-LAND".
Size 40 - 40 Foot, Designation 1A (ISO).

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified (see 6.2), the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation, form a part of this specification to the extent specified herein.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Belvoir Research and Development Center, ATTN: STRBE-DS, Fort Belvoir, VA 22060 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FSC 3990

SPECIFICATIONS

MILITARY

MIL-P-514	- Plates, Identification, Instruction and Marking, Blank.
MIL-T-704	- Treatment and Painting of Materiel.
MIL-L-2104	- Lubricating Oil, Internal Combustion Engine, Tactical Service.
MIL-G-3859	- Grease Gun, Hand Operated, Lever, Push and Screw Type.
MIL-A-8421	- Air Transportability Requirements, General Specification For.
MIL-L-46167	- Lubricating Oil, Internal Combustion Engine, Arctic.
MIL-C-46168	- Coating, Aliphatic Polyurethane, Chemical Agent Resistant.

STANDARDS

FEDERAL

FED-STD-H28	- Screw-Thread Standards for Federal Services.

MILITARY

MIL-STD-130	- Identification Marking of US Military Property.
MIL-STD-209	- Slinging and Tiedown Provisions for Lifting and Tying Down Military Equipment.

(Copies of specifications, standards, and drawings required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. The issues of the documents which are indicated as DoD adopted shall be the issue listed in the current DoDISS and the supplement thereto, if applicable.

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE Handbook.

(Application for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM-D 3951 - Standard Practice for Commercial Packaging.

(Application for copies should be addressed to American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

ASSOCIATION OF AMERICAN RAILROADS (AAR)

Rules Governing the Loading of Commodities on Open Top Cars: Section 6, Loading of Department of Defense Materiel on Open Top Cars.

(Application for copies should be addressed to the Association of American Railroads, 59 East Van Buren Street, Chicago, IL 60605.)

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification.

(Application for copies should be addressed to the American Trucking Associations, Inc., ATTN: Traffic Department, 1616 P Street, NW, Washington, DC 20036.)

INTERNATIONAL STANDARDS ORGANIZATION (ISO)

ISO 668 - Freight Containers - External Dimensions and Ratings.
ISO 1161 - Specifications of Corner Fittings for Series I Freight Containers.

(Application for copies should be addressed to the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th St., New York, NY 10017.)

AMERICAN NATIONAL STANDARDS INSTITUTE, INC. (ANSI)

Z35.1 - Industrial Accident Prevention Signs, Specifications For.

(lication for copies should be addressed to the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th St., New York, NY 10017.)

SEA-LAND SERVICE, INC.

Minimum Requirements for Sea-Land Spreaders Rev. Jan. 1980.

(Application for copies should be addressed to the Director, Container Handling, Sea-Land Service, Inc., Facilities Engineering, P.O. Box 1050, Elizabeth, NJ 07207.)

(Industry association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

3. REQUIREMENTS

3.1 Description. The spreaders shall consist of a hoist bridle assembly, a rigid framing assembly, and four or more freight container coupling devices.

The spreaders shall be complete and ready for operation. When used in conjunction with dockside hoists and cranes, crawler cranes, truck cranes, or container handling vehicles, the spreaders shall couple, lift, transport and discharge intermodal freight containers between highway semitrailers, railroad cars, ocean-going ships, and storage areas.

3.1.1 Payloads and dimensions. The lifting spreaders shall be in accordance with table I.

TABLE I. Payloads and Dimensions.

	Size 10	Size 20	Size 35	Size 40
Spreader payload, minimum lb. (container and contents).	22,400	44,800	61,600	67,200
Designation	1D	1C	"SEA-LAND"	1A
Nominal overall container dimensions; feet.				
- Height	8'	8'	8'6"	8'
- Width	8'	8'	8'	8'
- Length	10'	20'	35'	40'

3.1.2 Compatibility. Sizes 10, 20, and 40 spreaders shall be compatible with corner fittings as specified in ISO 1161 and dimensional requirements of table I, and ISO 668. Size 35 spreaders shall be compatible with corner fittings of the "SEA-LAND" containers as defined in minimum requirements for Sea-Land spreaders, and dimensional requirements of table I. Spreaders shall be of the top lift type for crane operation, unless otherwise specified (see 6.2). Spreaders shall be capable of picking up or setting down containers without interference, when adjacent containers on all four sides are stacked two containers high and have a clearance of not more than 5 inches horizontal distance between containers.

3.2 First article. The contractor shall furnish one or more spreaders as specified (see 6.2), for examination and testing within the time frame specified (see 6.2), to prove that his production methods and choice of design detail will produce spreaders that comply with the requirements of this specification. Examination and tests shall be as specified in section 4 and shall be subject to surveillance and approval by the Government (see 6.3). When specified (see 6.2), the Government will conduct any or all of the first article examinations and tests.

3.3 Material. All material shall be new and unused. Material not specified shall be selected by the contractor as being compatible with the intended use in accordance with the engineering and production standards of the container lifting spreader industry. Threaded parts shall be in accordance with FED-STD-H28. Maximum practical use shall be made of interchangeable hardware and fastening devices using a minimum number of types and sizes of bolts, capscrews, nuts, washers, and similar common (standard) parts.

3.3.1 Spreader construction. The spreader construction shall be of comparable design to the manufacturer's commercial model for similar applications and capable of withstanding tests required in section 4.

3.3.2 Dissimilar metals. Unless suitably protected aginst electrolytic corrosion, dissimilar metals (see MIL-T-704, figure 1 - Galvanic Couples), shall not be used in intimate contact with each other.

3.3.3 Marine corrosion protection. All components and parts, not applicable to the cleaning, treatment, and painting requirements specified in 3.17 shall withstand the effects of salt water spray without functional deterioration. These components and parts shall be inherently corrosion resistant or treated to be corrosion resistant for marine applications.

3.4 Operating temperatures. The spreaders shall be capable of operation, transport and storage in any ambient air temperature between -25° F and +120° F.

3.5 Safety. Spreaders shall conform to all commercial and Federal regulations relative to the design and use of freight container handling spreaders. Guarding, enclosing and insulating features for exposed components and systems which are subject to high temperatures, high pressure, electrical current, or which are inherently hazardous shall be provided.

3.6 Maintainability. All major assemblies and installed attachments shall be accessible for maintenance, repair and replacement without the removal of other major assemblies and installed attachments. If hand access openings are used, the edge of the opening shall be smooth and shall be provided with a removable or hinged cover. Dimensions of access openings shall be in accordance with SAE J925 for bare or gloved hand. Covers or plates which must be removed for component adjustment, repair, replacement or maintenance shall be equipped with quick disconnect fasteners or not more than six common fasteners.

3.7 Transportability.

3.7.1 Highway transportability. The spreaders shall be highway transportable when loaded in accordance with the National Motor Freight Classification rules. Loading and unloading by common commercial materials handling methods shall not cause damage or permanent deformation of the spreader.

3.7.2 Rail transportability. The spreaders shall be rail transportable when loaded on a flatcar in accordance with the Association of American Railroad's "Rules Governing the Loading of Commodities on Open-Top Cars". Loading and unloading by common commercial materials handling methods shall not cause damage or permanent deformation of the spreader.

3.7.3 Marine transportability. The spreader shall be marine transportable. Loading and unloading by common commercial, container handling methods shall not cause damage or permanent deformation of the spreader.

3.7.4 Air transportability. The spreaders shall be transportable in the C-5, C130E and C141 aircraft, and also transportable externally by helicopter. Transportability requirements shall be in accordance with MIL-A-8421 and MIL-STD-209.

3.8 Performance. The spreaders shall be capable of withstanding all loads imposed by lifting, swinging, lowering, and arresting the descent of the specified loaded containers. The spreader(s) shall be capable of withstanding all tests specified herein without failure, damage or permanent deformation.

3.9 Hoist assembly. Spreaders for crane operation shall be equipped with single and two point suspension assembly modes. Single point suspension assembly mode shall mate with 80 ton hook block and two point suspension mode shall mate with two 45 hook blocks. For type TLA spreaders, control lines shall be sufficient to operate the spreader when at least 140 feet of crane hoist line is paid out. Means shall be provided to prevent entanglement of control lines. Spreader controls shall be provided for operation from the crane cab. Type TLS spreaders shall be furnished with container corner fitting unlock and lock control and shall be accessible to handling personnel standing on the ground, and shall be operable from either side of the spreader. The control shall mate the spreader with the container and lock and unlock the coupling devices into all four corners simultaniously under all enviornmental conditions specified herein, without requiring more than 100 pounds of manual effort from the handling personnel. When specified (see 6.2), spreaders shall be provided with means for mating with and capability of operation of the spreaders with container handling fork-lift trucks of the make and model specified by the procuring activity.

3.9.1 Stabilizer/spacer bar. When specified (see 6.2), a stabilizer/spacer bar shall be furnished for mating the container spreader bar to cranes equipped with two hook blocks. The stabilizer/spacer bar shall be for the purpose of separating the crane blocks, leveling the container and preventing container rotation. The stabilizer/spacer bar shall be provided with two screw pin schackles for attaching the stabilizer/spacer bar to 45 ton hook blocks and shall separate the hook blocks 81-1/2 inches on center. The Safe Working Load (SWL) of the stabilizer/spacer bar assembly shall not be less than 72,000 lbs and its weight shall not exceed 400 lbs. Provisions and the necessary hardware shall be provided with the stabilizer/spacer bar for attaching it to the spreader bar hoist assembly configured in its two point suspension mode. These provisions shall be located on the ends of the stabilizer/spacer bar and shall separate the two points of the spreader bar hoist assembly 81-1/2 inches on center. Dimensional tolerances shall be plus or minus 1/16 inch. The quantity of stabilizer/spacer bars required shall be as specified (see 6.2).

3.10 Coupling components.

3.10.1 Coupling devices. Coupling devices shall be furnished to mate the spreader to the specified freight container. The top lifting coupling device engagement shall be of the twist-lock type. The twist-lock coupling device shall be positively held in both the locked and unlocked position to prevent rotation during operation. Each power-operated, remote control, coupling device shall provide the hoist operator with visual indication that the coupling devices are safely engaged and seated into the corner fittings. Each manually-operated coupling device, in the locked position, shall be either indentified by marking or readily apparent in its engaged and seated position, when viewed by personnel

standing on the ground. The locations of the coupling devices shall coincide with the longitudinal, lateral, and diagonal dimensions and tolerances for the container corner fittings in accordance with ISO 1161, or "SEA-LAND" requirements as specified.

3.10.2 Aligning arms. The spreaders shall be equipped with a minimum of six aligning arms, one on each end and two on each side. A horizontal gathering of at least five inches shall be provided. The aligning arm shall extend a minimum of twenty inches below the twist-lock-housing. Each aligning arm shall be capable of being rotated 180 degrees and positively held in a down or up position. A person standing at ground level shall be capable of positioning each aligning arm in the down or up position when the spreader bar is connected to a container. The aligning arms in the up position shall not extend beyond the plan outline of the spreader bar. Type TLA spreaders shall retract the aligning arms under the remote control of the hoist operator.

3.10.3 Corner roller guides. The spreaders shall be equipped with corner roller guides so placed as to engage the cell guides of a ship's container cell.

3.11 Hydraulic system. The type TLA spreader shall incorporate a hydraulic system or an electro-hydraulic system that performs all spreader functions under the control of the vehicle operator. The system shall include all cylinders, lines, fittings, valves, filters and components required for spreader operation. All components shall be located to provide for ease of maintenance and replacement. Test point fittings shall be provided in the hydraulic system for attachment of a hydraulic system tester. One test point fitting shall be in the return line upstream from and adjacent to the filter and one fitting shall be connected to the outlet of the pump(s). Oil for the system shall conform to MIL-L-2104, grade 10, or MIL-L-46167. All hydraulic component material shall be compatible with these oils.

3.11.1 Hoses, tubing, fittings, and clamps. All hoses, tubing, fittings and clamps shall conform to SAE Standards J514, J517, J518, J524, J525, and J536 as applicable.

3.12 Lubrication. All surfaces requiring lubrication shall be provided with accessible lubrication fittings. Lubrication fittings shall conform to SAE J534. Fittings shall be located in a protected position and shall be accessible to a grease gun conforming to MIL-G-3859 with a 10-inch flexible extension. Accessibility to fittings shall be provided without the removal or adjustment of accessories or parts. Panels and plates equipped with hand-operable, quick-disconnect fasteners may be removed to provide accessibility to lubrication fittings.

3.13 Slinging and tiedown provisions.

3.13.1 Slinging provisions. The spreader shall be provided with slinging attachments for loading and unloading the spreader into transport vehicles. The spreader shall be provided with slinging attachments conforming to MIL-STD-209, class 1 or class 3, type IV. Spreaders configured for use with a crane may use the crane bridle ring for slinging.

3.13.2 Tiedown provisions. The spreader shall be provided with tiedown attachments to permit tiedown to the floor or deck of the transportation medium. Tiedown attachments shall conform to MIL-STD-209, class 2 or class 3, type IV.

3.14 Identification marking. Each spreader shall be identified in accordance with MIL-STD-130. All plates shall be furnished by the contractor and shall conform to MIL-P-514, type I, style 3, composition C, of type I, grade A, class 1 material.

3.15 Instruction plates. Instruction plates shall be furnished and permanently affixed by the contractor in a conspicuous and protected location on each spreader. Plates shall conform to MIL-P-514, type III, composition C, of type I, grade A, class 1 material, size as applicable. The plates shall include instructions, warnings and cautions describing the operation of the controls, any special or important procedure(s) to be followed. Plates shall be in accordance with ANSI Z35.1. Plates for transportation data shall show the silhouette of the spreader in transport position indicating locations and capacity of lifting and tiedown attachments, location of center of gravity, length and size of slings required and the recommended tiedown arrangement for the spreader. The lettering shall be not less than .24 inch in height.

3.16 Spreader marking. Each spreader shall be marked with the information, location and character size shown below. Characters shall be block-type capitals and Arabic numerals. The color shall be white.

Information	Example	Location	Minimum Character Size (Height)
Agency	US Army	Two Opposite Frame Members	1-1/2 inches
Registration No.	USA 123456	Two Opposite Frame Members	1-1/2 inches
Capacity	44,800 Lbs.	Two Opposite Frame Members	2-inches
Slinging/ Tiedown Points	Lift/Tiedown Here	Near Slinging/ Tiedown Points	1-inch

3.17 Cleaning, treatment, and painting. Cleaning, treatment, and painting shall be in accordance with MIL-T-704. Ferrous metal surfaces shall conform to type "F", all non-ferrous surfaces shall conform to type "G". After cleaning, treatment, and primer, all exposed surfaces shall be painted with polyurethane conforming to MIL-C-46168, color forest green. All machined surfaces, rotating parts, and lube fittings shall be free of paint.

3.18 Workmanship. All workmanship shall be in accordance with engineering, manufacturing, and production standards of the freight container spreader industry. The spreaders shall be free from workmanship deficiencies that could impair the operation or serviceability of the spreaders. All parts, components

and assemblies of the spreaders including bearings, seals, machinery, stampings, welded parts, castings, forgings, and machined work, shall be clean and free from sand, dirt, fins, pits, sprues, scales, flux, and other harmful, extraneous material. External surfaces shall be free of burrs and sharp edges and corners, except when sharp edges and corners are functional.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.1.1 Component and material inspection. The contractor is responsible for insuring that components and materials used are manufactured, examined, and tested in accordance with referenced specifications and standards.

4.1.2 Spreader accessories and parts. The spreader accessories and parts required to rig the spreader for the tests specified herein but not included as part of the contract or order shall be furnished by the contractor at no cost to the Government.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. First article spreader inspection (see 4.3).
b. Quality conformance inspection (see 4.4).
c. Inspection comparison (see 4.6).
d. Inspection of packaging (see 4.7).

4.3 First article spreader inspection. Spreaders furnished in accordance with 3.2 shall be examined and tested in accordance with 4.3.1 through 4.3.2.

4.3.1 Examination. Prior to testing, the first article spreader(s) shall be examined for the characteristics marked "X" in column 1 of table II. Presence of one or more defects shall be cause for rejection.

4.3.2 Tests. Upon successful completion of the examinations specified in 4.3.1, the spreader shall be subjected to the tests marked "X" in column 1 of table III. Acceptance of a first article spreader shall not exclude the remaining spreaders from the quality conformance inspection and acceptance provisions specified in 4.4. Failure of any test shall be cause for rejection.

4.3.3 Inspection failure. Failure of a first article spreader to meet any requirement specified herein during and as a result of the examination and tests specified in 4.3.1 and 4.3.2 shall be cause for rejection of the first article

spreader and shall be cause for refusal by the Government to continue acceptance of production spreaders until evidence has been provided by the contractor that corrective action has been taken to eliminate deficiencies. Correction of such deficiencies shall be accomplished by the contractor at no cost to the Government on spreaders previously accepted and produced under the contract. Any deficiencies found as a result of the first article inspection will be considered prima facie evidence that all spreaders accepted prior to the completion of the first article inspection are similarly deficient unless evidence to the contrary is furnished by the contractor and such evidence is acceptable to the contracting officer.

4.4 Quality conformance inspection.

4.4.1 Examination. Each spreader shall be examined for the characteristics marked "X" in column 2 of table II. Presence of one or more defects shall be cause for rejection.

4.4.2 Tests. Each spreader shall be subjected to the tests marked "X" in column 2 of table III. Failure of any test shall be cause for rejection.

4.5 Inspection schedule.

4.5.1 Examination. Examination shall be in accordance with table II.

TABLE II. Examination schedule.

First Produced	Quality Conformance	Characteristics	Requirement Paragraph
1	2	3	4
X	-	101. Payload not as specified.	3.1.1
X	X	102. Compatibility not as specified.	3.1.2
X	-	103. Multiple container clearance not as specified.	3.1.2
X	X	104. Material not as specified.	3.3
X	-	105. Environmental capabilities not as specified.	3.4
X	X	106. Safety characteristics not as specified.	3.5
X	-	107. Maintainability not as specified.	3.6
X	-	108. Transportability not as specified.	3.7 thru 3.7.4
X	-	109. Hoist assembly not as specified.	3.9
X	X	110. Coupling devices and alining arms not as specified.	3.10.1 and 3.10.2

TABLE II. Examination schedule. (Continued)

First Produced	Quality Conformance	Characteristics	Requirement Paragraph
1	2	3	4
X	-	111. Hydraulic system not as specified.	3.11 and 3.11.1
X	X	112. Lubrication fittings, lubrication not as specified.	3.12
X	X	113. Slinging and tiedown provisions missing or not as specified.	3.13
X	X	114. Identification marking missing or not as specified.	3.14
X	X	115. Instruction plates missing or not as specified.	3.15
X	X	116. Marking not as specified.	3.16
X	X	117. Treatment and painting not as specified.	3.17
X	X	118. Workmanship not as specified.	3.18
X	X	119. Stabilizer/spacer bar not as specified.	3.9.1

4.5.2 Tests. Tests shall be in accordance with table III.

TABLE III. Test schedule.

First Produced	Qualified Conformance	Test	Test Paragraph	Requirement Paragraph
1	2	3	4	5
X	-	Coupling device test.	4.5.2.2	3.1.2, 3.10 thru 3.10.2
X	X	Hydraulic system.	4.5.2.3	3.11
X	-	Performance tests.	4.5.2.4, 4.5.2.6	3.8
X	X	Overload tests.	4.5.2.5, 4.5.2.6	3.8
X	X	Slinging and tiedown provisions.	4.5.2.7	3.13
X	-	Transportability test.	4.5.2.8, thru 4.5.2.8.2	3.7 thru 3.7.4

4.5.2.1 Test conditions. Prior to test, the spreader shall be lubricated with oils and grease specified by the contractor. Lubricants and oils shall be those designated for use in the ambient temperature at the place of test. Unless otherwise specified in a test, tests shall be performed without shelter and at the climatic conditions existing at the place of test. The spreader shall operate as specified herein without maintenance other than the contractor's recommended normal scheduled maintenance as established by a maintenance schedule prepared and submitted by the contractor prior to test.

4.5.2.2 Coupling device test. Bench mount one of each type of coupling device furnished for each type of spreader and insert the bayonet into a standard, rigidly mounted, container corner fitting that conforms to ISO 1161, or "SEA-LAND" requirements. Lock and unlock the coupling device into the corner fitting for not less than 1,000 cycles. Evidence of malfunction, damage, permanent deformation, abnormal wear, or nonconformance to 3.12, 3.10.1 and 3.10.2 shall constitute failure of this test.

4.5.2.3 Hydraulic system test. Operate all hydraulic control functions, independently, a minimum of 50 on/off cycles. Operate any one hydraulic function until relief valve opens. Hold for 30 seconds. Examine hydraulic components for failure, deformation or leakage. Any inability to operate, any failure, deformation or leakage shall be cause for rejection of the spreader.

4.5.2.4 Performance. Utilizing the designated container for the spreader to be tested, loaded in accordance with 3.1.1, and utilizing a crane, lower the spreader over the container and engage the twist locks into the corner fittings of the container. Using the spreader controls, lock the twist locks. Lift the container to a height of at least 1 foot, measured from the bottom of the container. Hold for 1 minute. Lower the container to the ground, unlock the twist locks and separate the spreader from the container. Repeat 10 times. In lieu of a container or crane, a mock-up or simulation may be used.

4.5.2.5 Overload. With the spreader, pick up a load equal to 2 times the rated payload, uniformly distributed over the pick-up points, to a height of 2 feet. Hold for 5 minutes. Lower load and disengage the spreader. Examine the spreader for failures, deformation, or inoperability. A test stand may be used to perform this test.

4.5.2.6 Failure criteria. Any evidence of malfunction, damage, permanent, deformation, incompatibility with corner fittings, inability to engage, lift, hold or disengage the spreader after completion of any or all tests.

4.5.2.7 Slinging and tiedown provisions. Evaluate the slinging and tiedown attachments in accordance with MIL-STD-209. Noncomformance to 3.13 and MIL-STD-209 shall be cause for rejection.

4.5.2.8 Transportability.

4.5.2.8.1 Highway, rail and marine transportability. The contractor shall demonstrate or provide data to assure that the spreader(s) is acceptable for highway, rail or marine transportability in accordance with carrier regulations. Nonconformance to carrier regulations, 3.7.1, 3.7.2, and 3.7.3 shall constitute failure of this test.

4.5.2.8.2 Air transportability. The contractor shall demonstrate or provide data to assure that the spreader(s) is air transportable in accordance with MIL-A-8421. Nonconformance to MIL-A-8421 and 3.7.4 shall constitute failure of this test.

4.6 Inspection comparison. The Government may select spreaders at any time during the contract production period and subject these spreaders to the examination specified in 4.3.1 and the tests specified in 4.3.2 to determine conformance to the requirements of this specification. The inspection will be performed by the Government at a site selected by the Government, on spreaders selected at random from those which have been accepted by the Government and will not include the previously inspected first article spreader. In addition to any test specified as part of the inspection comparison, the Government reserves the right to conduct any and all other tests contained in this specification as part of the inspection comparison, and failure of such additional tests shall have the same effect as failure of those tests specified as inspection comparsion.

4.6.1 Inspection failure. Failure of an inspection comparison spreader to meet any requirement specified herein during and as a result of the examination and tests specified in 4.3 shall be cause for rejection of the inspection comparison spreader(s) and shall be cause for refusal by the Government to continue acceptance of production spreaders until evidence has been provided by the contractor that corrective action has been taken to eliminate the deficiencies. Correction of such deficiencies shall be accomplished by the contractor at no cost to the Government on spreaders previously accepted and produced under the contract. Any deficiencies found as a result of the inspection comparison will be considered prima facie evidence that all spreaders accepted prior to the completion of inspection comparison are similarly deficient unless evidence to the contrary is furnished by the contractor and such evidence is acceptable to the contracting officer.

4.7 Inspection of packaging. Each spreader when completely prepared for shipment, shall be inspected for compliance with 5.1. Nonconformance to 5.1 shall be cause for rejection.

5. PACKAGING

5.1 Preservation, packing, and marking (see 6.8). Each complete spreader shall be preserved, packed, and marked in accordance with ASTM D 3951, and the following specific requirements. Items with critical surfaces required for fit or function shall be provided protection by the use of preservative coatings, volatile corrosion inhibitor, or desiccated packs. Items requiring protection from physical damage to surfaces or which are fragile by nature shall be protected by wrapping, pack compartmentization, or cartonizing of the individual item. A guide shall be furnished indicating the preservation and packing materials to be removed, in detail, and any other servicing required prior to placing the spreader in operation.

6. NOTES

6.1 Intended use. The spreaders are intended for use in handling containers in intermodal service. These spreaders are tailored for use with cranes or optional use with lift trucks. The type TLA spreader is intended for use in high volume repetitive operations, which emphasizes speed of handling. Use of

the type TLS spreader is intended for low volume intermittent container handling operation. The TLS spreader requires an equipment operator supported by additional ground personnel.

6.2 Ordering data. Procurement documents should specify the following:

a. Title, number, and date of this specification.
b. Type and size of spreader required (see 1.2).
c. Date of issue of DoDISS applicable and exceptions thereto (see 2.1.1).
d. When other than operation with a crane is specified, exact equipment specifications shall be identified (3.1.2).
e. Time frame required for submission of the first-article spreader(s) and number or spreaders required (see 3.2).
f. When the Government will conduct any or all of the first-article spreader examinations and test. When the Government will conduct some but not all of the first-article examinations and tests, the contracting officer should specify which examinations and tests will be conducted by the Government and which examinations and tests shall be conducted by the contractor (see 3.2).
g. When spreaders are required to operate with container handling forklift trucks in lieu of the cranes, the make, model or specification requirements of the forklift truck with which the spreader shall perform shall be provided (see 3.9).
h. When stabilizer/spacer bar is required and quantity required (see 3.9.1).

6.3 First-article spreader. Any changes or deviations of production spreaders from the approved first-article model during production will be subject to the approval of the contracting officer. Approval of the first-article model will not relieve the contractor of his obligation to furnish spreaders conforming to this specification.

6.3.1 Incident report. When the contractor conducts the tests specified herein, a written report shall be furnished the contracting officer within 24 hours of any incident of equipment malfunction or failure during the conduct of the test. As a minimum, the report shall describe components and parts affected, test and operating conditions, date of incident, how detected, and description of incident.

6.4 Lubricants. The contracting officer should furnish a list of military lubricants applicable to the spreaders covered by this specification as contained in the Federal Supply Catalog, DOD Section Identification List C9100-LL for FSC Group 91.

6.5 Data requirements. The contracting officer should include requirements for such data as technical publications, instructional materials, illustrated parts list, and contractor's maintenance and operation maunal to be furnished with each spreader.

6.6 Provisioning. The contracting officer should include provisioning requirements for repair parts and maintenance tools as necessary (including any special tools), and instructions regarding shipment of spreaders.

6.7 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of the specification.

Custodian:
Army - ME

Review activities:
Army - SM
DLA - GS

Preparing activity:
Army - ME

Project 3990-A180

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER	2. DOCUMENT TITLE
MIL-S-52713B(ME)	Spreaders, Lifting, ISO and Intermodal Freight Containers

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION *(Mark one)*
	☐ VENDOR
b. ADDRESS *(Street, City, State, ZIP Code)*	☐ USER
	☐ MANUFACTURER
	☐ OTHER *(Specify)*: _____

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional	b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional
c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional	8. DATE OF SUBMISSION *(YYMMDD)*

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