BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G80.412.1
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TOWER BODY BELT AND SAFETY STRAPS

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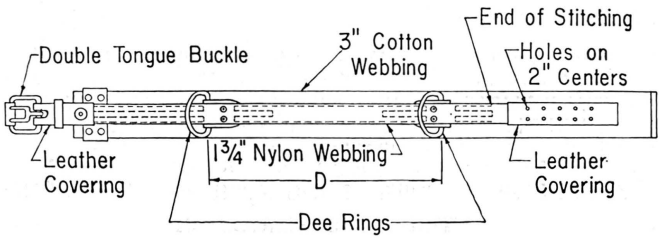
1. GENERAL

1.01 This section describes the Tower Body Belt which is used with the Tower Ladder Safety Device or with safety straps for protection of personnel climbing or working aloft on radio towers. It also describes the Tower Safety Strap.

2. DESCRIPTION—TOWER BODY BELT

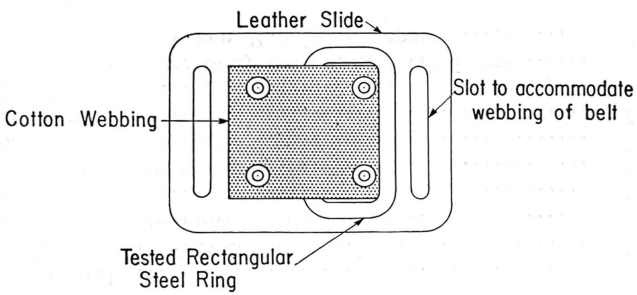
2.01 The Tower Body Belt is fabricated of 3-inch 2-ply cotton webbing and 1-3/4-inch nylon webbing sewn together with nylon thread. The double tongue buckle engages only the nylon webbing which is covered with leather at the buckle holes. The belt is equipped with two standard Dee rings and a slider which can be removed. It is available in four sizes: 20, 22, 24, and 26 inches. (Sizes refer to distance between Dee

rings.) The following illustrates the Tower Body Belt without the slider.



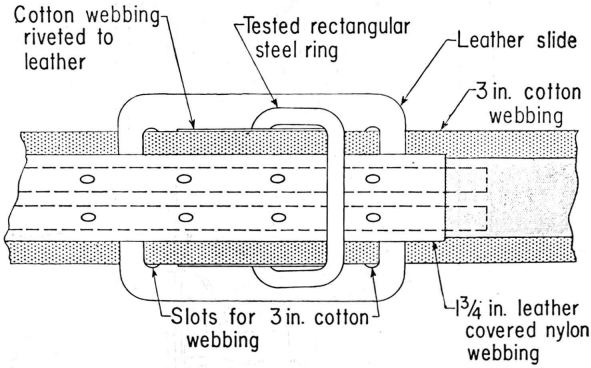
TOWER BODY BELT

The slider is illustrated below.



2.02 The slider which is furnished with the Tower Body Belt is fabricated of leather and carries a rectangular steel ring attached by a strip of 3-inch cotton webbing riveted to the leather slide. The rectangular ring is provided to engage the snap hooks of the safety sleeve of the Tower Ladder Safety Device. When the slider is placed on the Tower Body Belt care must be taken to place it so that **both the 3-inch**

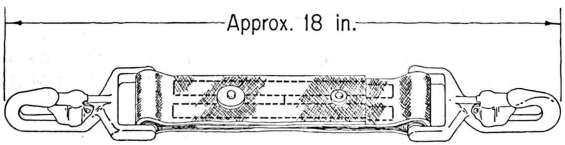
cotton webbing and the 1-3/4-inch nylon webbing passes through the ring as shown in the following illustration.



NOTE: Place Slider on Tower Body Belt so that 3 inch cotton webbing and 1¾ inch nylon webbing passes THROUGH the tested rectangular steel ring.

3. DESCRIPTION—TOWER SAFETY STRAP

3.01 The Tower Safety Strap consists of a length of 1-3/4-inch nylon webbing and two snap hooks. The webbing is looped over the stirrup of each snap hook and brought back on itself to provide three thicknesses of material in the middle of the strap. Two short inner strips of leather are provided to protect the webbing from abrasion where it passes over the stirrup. The strap is sewn together with four rows of nylon stitching and further reinforced with two copper rivets. The over-all length of the strap is about 18 inches and is nonadjustable.

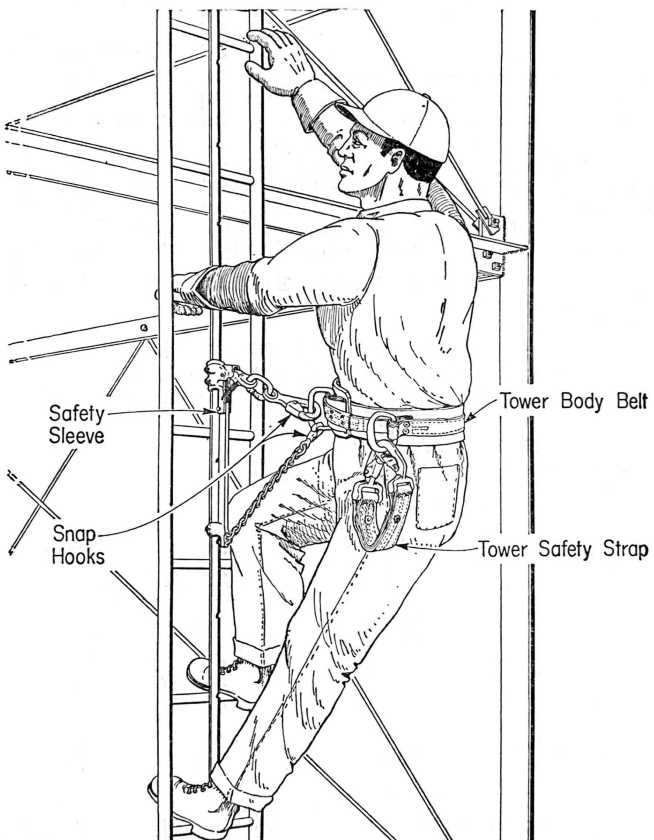


TOWER SAFETY STRAP

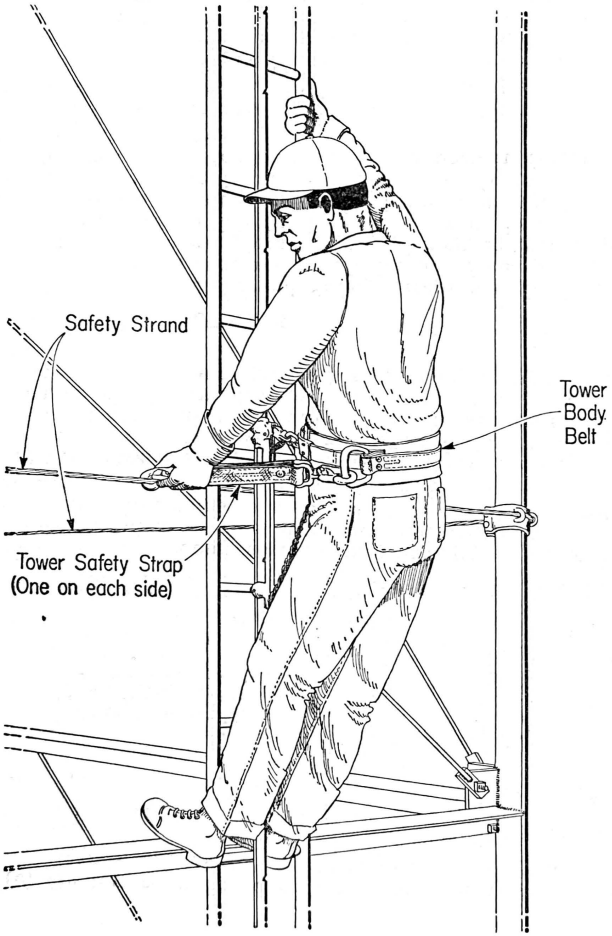
4. USE

4.01 A Tower Body Belt and Safety Straps shall be worn when climbing or working aloft on radio towers as follows:

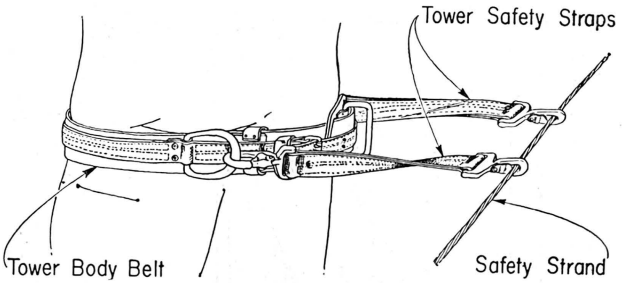
(a) Attach both snap hooks of safety sleeve to rectangular steel ring before climbing as shown.



(b) When transferring from the safety sleeve to the tower or safety strand, engage a safety strap before releasing from the safety sleeve. When transferring back, disengage the safety strap nearest the safety sleeve, engage both snap hooks of the safety sleeve, then disengage the other safety strap.



(c) On towers equipped with encircling or vertical safety strands, use two Tower Safety Straps as shown.



When going around corners, past clamps, or from one safety strand to another, disengage and engage one safety strap at a time so as to **keep one of the straps engaged at all times.**

(d) On towers not equipped with safety strands, two standard **Fabric** Safety Straps should be used in a similar manner as two Tower Safety Straps except that each Fabric Safety Strap will be looped around a nearby member of the tower with both snap hooks engaged to the same Dee ring.

5. SAFETY PRECAUTIONS

5.01 Tower Body Belts and Safety Straps may be injured seriously and rendered unsafe for use if heavy objects, such as trucks, trailers, pipes or other heavy equipment are allowed to run over or fall on them. Care should be exercised to see that this does not occur. If it should occur, the belt or strap should be removed from service immediately and given a thorough examination for defects. The important defects to look for are as follows:

(a) Broken, cut, or torn outer fibers.

(b) Broken inner fibers. Defects are usually found in the section at which the injury occurred. The belt or strap should be examined in short sections and if an unusually soft flexible section is found the belt or strap should not be used. Breakage of the inner fibers is indicated by limpness and flexibility at the break.

5.02 The instructions and precautions contained in the section "Fabric Safety Straps" shall be adhered to in connection with the use of standard fabric safety straps with the Tower Body Belt.

5.03 **Never attach two safety straps together by the snap hooks for added length.**

5.04 When attaching the snap hooks to the Tower Body Belt or to safety strands on radio towers, SEE THAT THE SNAP HOOK AND THE DEE RING, RECTANGULAR STEEL RING, OR SAFETY STRAND ARE PROPERLY ENGAGED. DO NOT RELY ON FEEL OR ON THE CLICK OF THE KEEPER in the snap hook when attaching to a ring or strand as an indication that the fastening is secure; **LOOK** and **KNOW** that the snap hook is properly engaged before placing your weight on the belt.

5.05 Do not punch extra holes in the belt.

5.06 Do not fasten an uncoiled handline directly to a belt when climbing or working on a radio tower. Either use a handline carrier or form the end into a bight and tuck the bight up under the belt.

6. INSPECTION ROUTINE

6.01 Each employee on receiving a Tower Body Belt and Safety Straps and at least once a week thereafter should inspect his belt and straps in accordance with Part 7 to detect any faults which might have developed.

6.02 Each employee should at all times assume the responsibility for determining that his body belt and safety straps are in good condition.

6.03 The supervisor shall inspect the body belt and safety straps periodically.

7. INSPECTION

7.01 Examine the belt or strap to determine the condition of all parts as suggested below. If any of the following conditions are found to exist or if the condition of the belt or strap is such that there is any doubt as to its safety, it should be exchanged at once for one in good condition in accordance with local routine.

7.02 **Visual Inspection, Tower Body Belt:** The important things to look for are:

(a) Worn, broken, or defective steel reinforcing plates holding the Dee rings.

(b) The condition of the nylon and cotton webbing, especially at the reinforcing plates, to determine whether the webbing is crushed sufficiently to affect its strength.

(c) Badly worn, broken, or defective leather covering on the punched hole end of belt.

(d) Loose or broken rivets (particularly those in the loops holding the Dee rings).

(e) Broken or rotted threads in the stitching.

(f) Cuts, nicks, punctures, etc, that would affect the strength of the webbing.

(g) Broken or defective buckle.

(h) Broken or defective rectangular steel ring.

(i) Charred spots on the surface of the fabric, such as might have been caused by flames or contacts with hot soldering coppers, etc.

(j) Acid burns. Belts that have been in contact with acid shall be removed from service.

7.03 **Visual Inspection, Tower Safety Straps:** The important things to look for are:

(a) The condition of the nylon webbing, especially at the snap hook stirrup, to determine whether it is crushed sufficiently to affect its strength.

(b) Worn leather inner strips.

(c) Cuts, nicks, punctures, etc, that would affect the strength of the webbing.

(d) Loose, broken, or missing rivets or rivets with excessive wear.

(e) Defective snap hook and poor action on the keeper of the snap hook. The keeper should work freely without excessive side play, and should close securely under spring tension.

(f) Broken or rotted threads in the stitching.

(g) Charred spots on the surface of the fabric, such as might have been caused by flames or contacts with hot soldering coppers, etc.

(h) Acid burns. Straps that have been in contact with acid shall be removed from service.

8. CLEANING

8.01 Remove any paint, oil, grease, tar, etc, that may collect on the belt or strap by wiping with a clean, dry cloth. If this does not remove the surface deposit, petroleum spirits, or trichloroethylene should be used on a clean, dry cloth to remove surface deposits. Do not soak the belt or strap, but rub vigorously with the moistened cloth. **This cleaning shall be done in a well ventilated location.**

9. STORING TOWER BODY BELTS AND SAFETY STRAPS

9.01 The following precautions should be observed when storing Tower Body Belts and Straps or when they are not in use:

(a) Keep them away from radiators, stoves, steam pipes, fires, and other places where the fabric would be subjected to excessive heat.

(b) Damp or wet belts or straps should not be packed in lockers, boxes, tool cases, grips, or other containers. They should be wiped with a dry cloth and allowed to dry completely by ventilation before storing or packing.

(c) Belts and straps should never be stored with pointed or sharp edged tools unless such tools are equipped with satisfactory guards.

(d) Store belts and straps in a location free from excessive humidity to prevent mildew.

10. DISPOSITION WHEN REQUIRING REPAIRS

10.01 A Tower Body Belt or Safety Strap which has developed a major defect shall be withdrawn from service immediately and returned to the storeroom for handling in accordance with the Company's established routine. Such belts and straps shall be tagged "Dangerous, Do Not Use," and, if practicable, they should be marked to show the location of any defects that cannot be seen readily.