

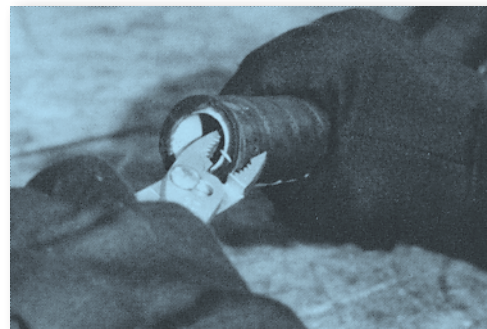
STATIC ELECTRICITY GROUNDING

What is a static bond?

- The grounding of a static-eliminating or static-conducting component.

Static Electricity Grounding Importance:

- Movement of some dry material through a rubber or plastic hose can generate enough static electricity to be hazardous. Not only could a static spark ignite a fire or cause an explosion, but enough charge could build-up in the hose to cause a severe shock if contacted.



Helix wire being bent into the inner surface of the hose tube.

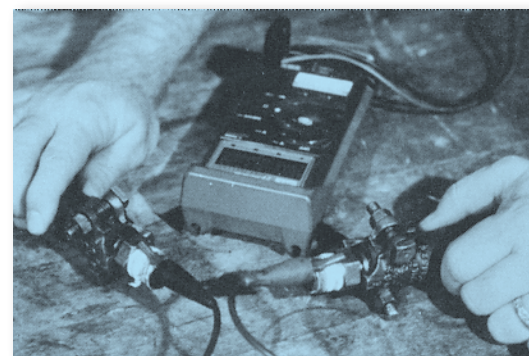
Grounding can be achieved through use of:

1. Static conductive stock in the tube or cover.

2. Bent wire method

Use with a hose that is wire-reinforced.

- Locate the helix wire or the static wire.
- Pull the wire out with pliers.
- Bend the wire into the inner surface of the hose tube.
- Use caution not to puncture the tube.
- Attach the couplings so the bent wire and the coupling make contact. (The bent wire must not extend the full length of the stem, since it could create a leak at the coupling.)
- Place the assembly on a non-conductive surface and check it for electrical continuity with an ohmmeter that measures electrical resistance. (The maximum allowable resistance is 20 thousand ohms per foot of hose.)
- Record all test data on a hose inspection card and file it with maintenance records.

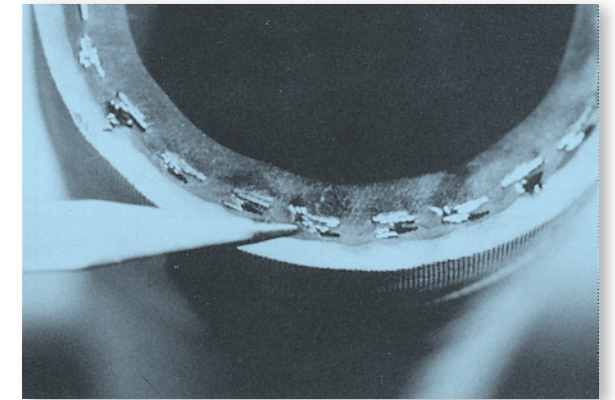


Hose assembly being tested with ohmmeter.

3. Metal staple method

Use with a hose that has a carbon fiber static conductor or wire reinforcement where the staple can be inserted easily against a static conducting member.

- Cut the hose end square to the desired length.
- Locate the static wire, wire braid or carbon fibers.
- Place one leg of an aluminum, copper or stainless steel staple into the wire reinforcement or carbon fiber. (For acid chemical hoses use only stainless steel staples.)
- Place the other leg of the staple inside the tube making sure the staple straddles the tube wall and is snug against the end cut.
- Pinch the staple with pliers to force the leg against the inner surface of the tube wall.
- Clean the staple and coupling shank ends with an emery cloth or steel wool.
- Attach the coupling so the staple and coupling make contact.
- Place the assembly on a non-conductive surface and check it for electrical continuity with an ohmmeter that measures electrical resistance. (The maximum allowable resistance is 20 thousand ohms per foot of hose.)
- Record all test data on a hose inspection card and file it with maintenance records.



Close-up of hose end showing wire braid in hose.



Placing the staple.



Pinching the staple into the tube wall.