THE FLOORING SOLUTIONS PROVIDER

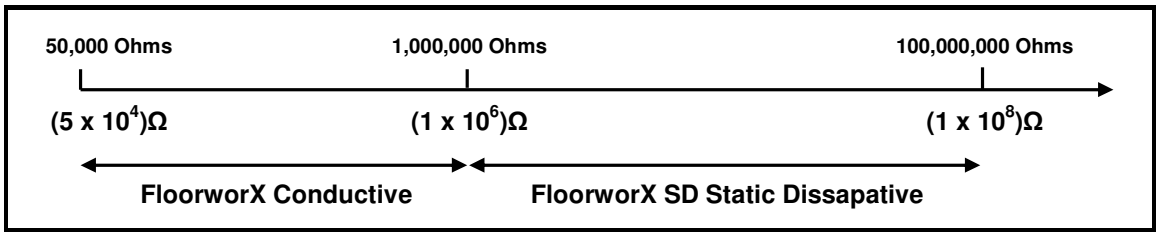
March 2019

INSTALLATION METHODOLOGY OF FLOORWORX SD TILES AND SHEETING

DESCRIPTION

FloorworX SD is a static-dissipative flexible homogeneous floor covering available in both tile and sheeting form that has been calendared and compacted with permanent anti-static properties so as to act as a continuous dissipater of static electrical charges. FloorworX SD is manufactured in accordance with EN 649 and complies with EN 1081 in terms of electrical resistance ($10^6 \leq R \leq 10^8\Omega$). The tiles are sized to be suitable for use in raised access floor installations.

Electrical Resistance of FloorworX Static Control Products



INTRODUCTION

The final appearance and durability of any FloorworX SD Tile and Sheeting installation depends largely on the condition of the surface upon which it is laid. A little time and effort spent on the proper preparation of the sub-floor will often be repaid in terms of an installation of which all concerned can feel proud.

FloorworX SD Tiles and Sheeting require a smooth, hard, clean, sound and level surface, not only for appearance but also for achieving a satisfactory adhesive bond and long-term durability. The sub-floor should be swept, or preferably vacuumed, to remove all dust and dirt.
It is important to remove any traces or patches of oil, grease or any oil-based paint from the sub-floor surface. This can be done using either paint strippers or degreasing compounds. Once clean, the sub-floor must be thoroughly washed to remove any stripper or residue and then allowed to dry thoroughly.

As per SANS 10070 Code of Practice: The installation of resilient thermoplastic and similar flexible floor covering materials, the specifier and the main contractor shall ensure that the sub-floor is acceptable to receive the specified product in respect of levelness, smoothness, soundness and cleanness.
The minimum requirement is that the sub-floor is compliant to a Grade 1-floor finish as set out in SANS10070 in terms of levelness. This optimum floor finish can be achieved by means of a high-quality, reliable, cementitious self-levelling compound, for levelling and smoothing work on interior surfaces.
(See ***FloorworX Technical Bulletin No. 32: Sub-Floor Surface Preparation***).

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The flooring contractor shall ensure that the sub-floor is sufficiently dry prior to the installation of the flooring material by testing with a suitably approved Concrete Moisture Meter. (*Tramex CME 4, Caisson VI-D4 Pinless Concrete Moisture Meter, GE Protimeter Mini or a Hygrometer).*
Laying flooring onto a wet sub-floor will not only affect the adhesive but will also cause the flooring to curl and lift.
(See ***FloorworX Technical Bulletin No. 30: Moisture in Sub-Floors and Damp-Proof Membranes***).

APPLICATION

- Ensure that all recommendations for substrate and job site conditions are met prior to beginning the installation.
- Commencing the installation is an implied acceptance of site conditions by the parties involved and liability for any failure directly related to inadequate site conditions becomes the responsibility of the installer and/or flooring contractor.

MATERIAL

- Prior to installation tiles/rolls should be checked to ensure that the correct colour, batch number and quantity have been received and that the material is in good condition.
- Use material from the same batch/dye lot and install in the roll number sequence. (The use of different production batches will always result in visible shade differences. The batch number is clearly marked on the material packaging and must be checked before commencement of installation).
- As with all newly installed floor coverings, the product should be protected from heavy traffic for 72 hours and must not be washed for 48 hours after installation.

Because this flooring has **specific electrical characteristics**, it is advisable to install the product using the following method.

ADHESIVE RECOMMENDATIONS AND APPLICATION

(Ensure that the job has been correctly planned and set out prior to any adhesive application).

It is highly recommended that the sub-floor should be primed with a suitable primer (FloorworX No 33 Bonding Liquid) prior to the application of *FloorworX No 27* adhesive, which is water based acrylic conductive adhesive suitable for use with *FloorworX Static Dissipative* and *FloorworX Electro-statically Conductive* flooring. It is available in 5-litre containers and will give coverage of 3.0m² - 4.0m² per litre depending on the porosity of the sub-floor. Note that working time is considerably shorter than conventional acrylic adhesives.

INSTALLATION (TILES)

Earth grid

Mark the layout of the self-adhesive copper or aluminium tape. It is advisable to consult with the electrical contractor who will carry out the connection so they are aware of the point of termination.

Room ≤ 40 m²:

Place a copper or aluminium strip around the edge of the room, placed **150 mm** from and parallel to the walls, and diagonally across two corners. This strip should be earthed at both ends. **(See Illustration 1)**

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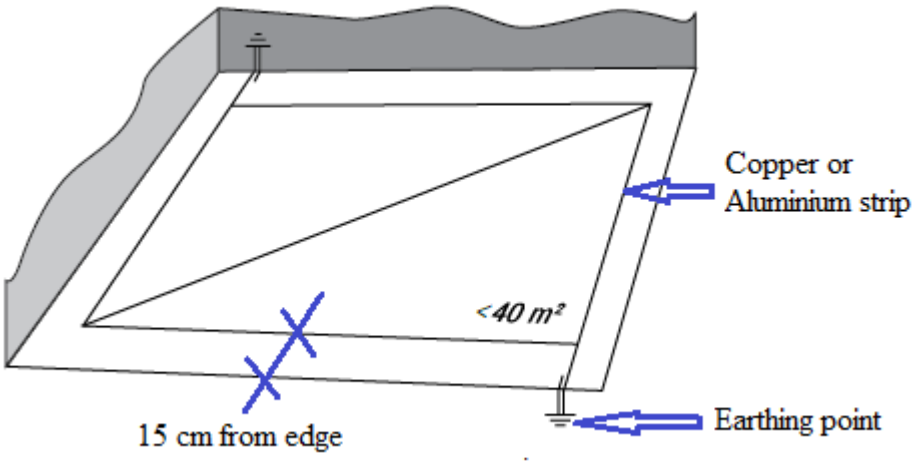

Illustration 1.

For a larger room > 40 m²:
Place a copper or aluminium strip around the edge of the room, placed **15 cm** from and parallel to the walls, and diagonally across two corners. This strip must be earthed every 40 m² of flooring. (**See Illustration 2)**

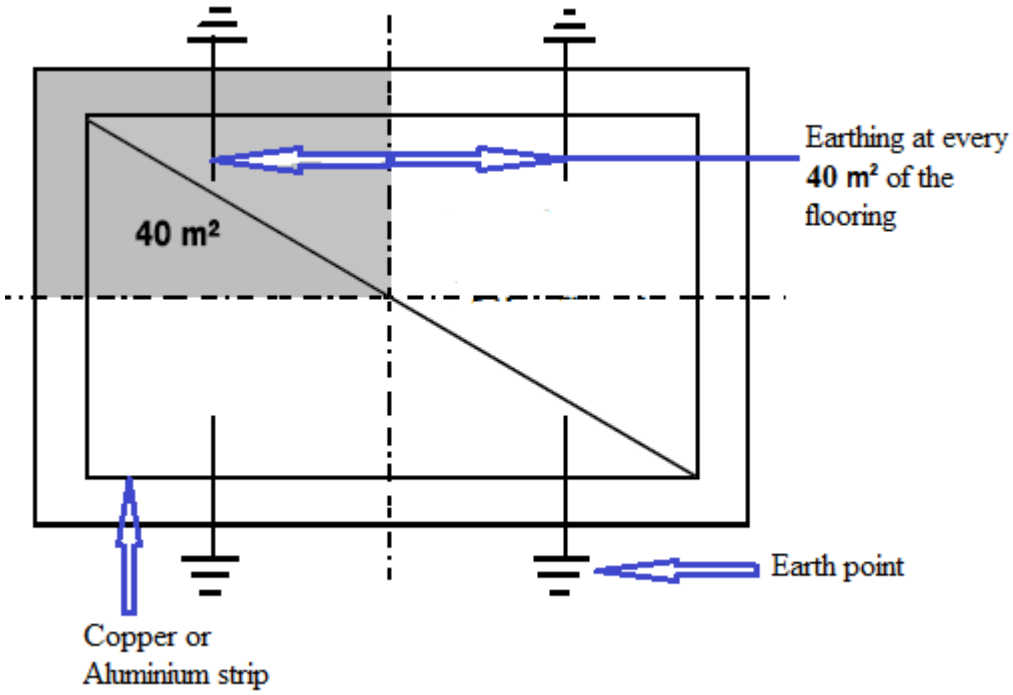

Illustration 2.

TILE APPLICATION

The tiles must be taken out of their boxes at least 24 hours before they are laid.

IMPORTANT:

Laying direction:-Tiles to be tessellated or installed directionally. **Warning: When cutting the tiles, be careful not to cut into or damage the copper or aluminium strips/grid.**

It is the manufacturer's recommendation that the tiles be heat seam welded.

ADHESIVE APPLICATION

Stir the adhesive thoroughly before use.

Evenly spread the adhesive using a TKB - A2 trowel.

Allow sufficient time for the volatiles in the adhesive to flash off.

Lay the *FloorworX Static Dissipative* flooring into the adhesive once it has changed from a wet to a tacky stage.

Lay the tiles in a staircase pattern along the lines on the substrate. **(See Illustration 3)**

Take care not to cut/damage the strip while applying the adhesive.

Joint Seam welding: Allow at least 24 hours before welding.

Tiles should be butt jointed without forcing so that the guide of the grooving machine can be inserted, alternatively groove by hand.

(See ***FloorworX Technical Bulletin No. 41: Seam Welding of Vinyl Flooring***).

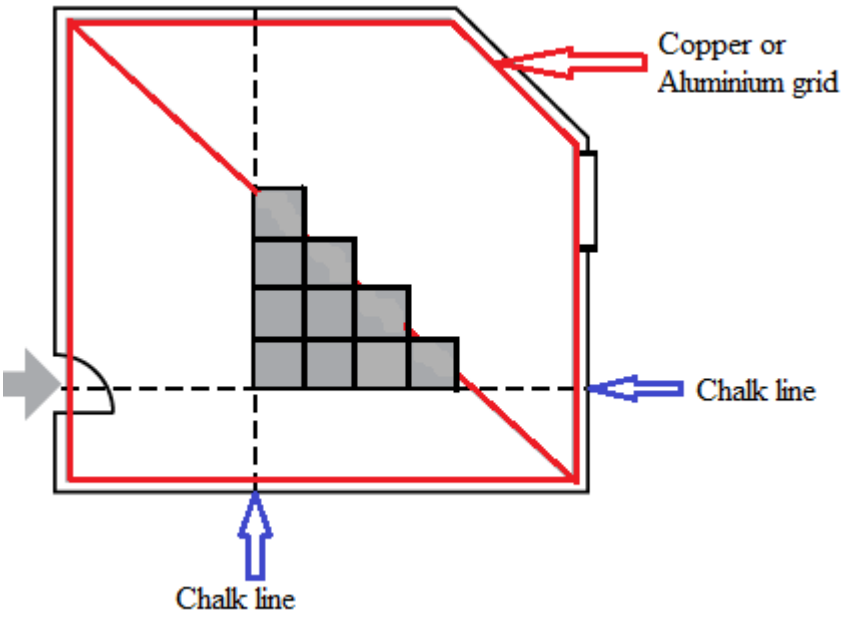

Illustration 3.

SHEETING APPLICATION

Unroll the flooring 24 hours in advance in the room where it will be fitted so it can acclimatize.

The joints between rolls should, wherever possible, and taking into account the width used, be placed away from anticipated high traffic zones.

The rolls must run towards the wall with the main window, or lengthways.

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IMPORTANT:
Adjacent Sheeting should always be installed in the same direction. **Warning: When cutting the sheeting, be careful not to cut into or damage the copper or aluminium strips/grid.**
It is the manufacturer's requirement that the sheeting is heat seam welded with the designated welding rod.

ADHESIVE APPLICATION
Stir the adhesive thoroughly before use.
Fold the rolls in half then evenly spread the adhesive using a TKB - A2 trowel. (The adhesive may be applied to the earth strip).
Take care not to cut/damage the strip while applying the adhesive.
Allow sufficient time for the volatiles in the adhesive to flash off.
Lay the *FloorworX Static Dissipative* flooring into the adhesive once it has changed from a wet to a tacky stage.

- Lay the material along the chalk line.
- Fold back the other halves and follow the same steps.
- Do not overlap two adhesive films when you apply more adhesive. **(See Illustration 4)**

Joint Seam welding: Allow at least 24 hours before welding.
Sheeting should be butt jointed without forcing so that the guide of the grooving machine can be inserted, alternatively groove by hand.
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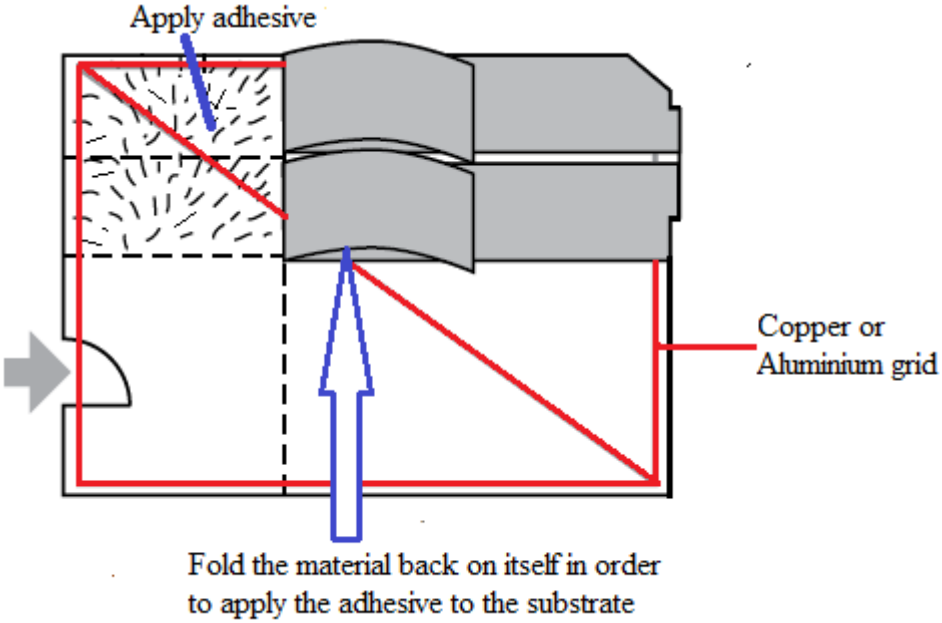

Illustration 4.

PRECAUTIONS

- Do not spread too large an area of adhesive since it will harden and dry before the flooring is laid.

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- Do not apply adhesive if the temperature of the sub-floor is below 6ºC.

Ensure that excess adhesive on the tile surface is immediately wiped off with a clean, damp rag and not allowed to harden.

POTENTIAL PROBLEMS

When the correct procedures have not been upheld a variety of problems will arise.

- If the tiles are laid into the adhesive too late then no bond will occur and the tiles will not adhere to the sub-floor.
- If the tiles are laid into the adhesive to early, any volatiles that have not flashed off will be trapped. This will prevent the adhesive from curing and will result in a poor bond. Should this happen the tiles will peak or lift.
- If the trowel notches are too small, insufficient adhesive will be applied to the sub-floor resulting in a poor bond.
- If the trowel notches are too large, an excessive amount of adhesive will be applied to the sub-floor, resulting in adhesive weeping between tiles.

SMOOTHING OUT AND ROLLING (TILES & SHEETING)

Smoothing and rolling must be done in two passes:

- The first pass should be done manually using a smoothing block.
- The second pass should be done carefully by smoothing over the entire surface using a 68 Kg articulated three sectional roller to flatten the lines of adhesive and to ensure that the adhesive coats the back of the flooring properly. This is done immediately as the flooring is laid, and again after work is finished.
  (See Illustrations 5 & 6)

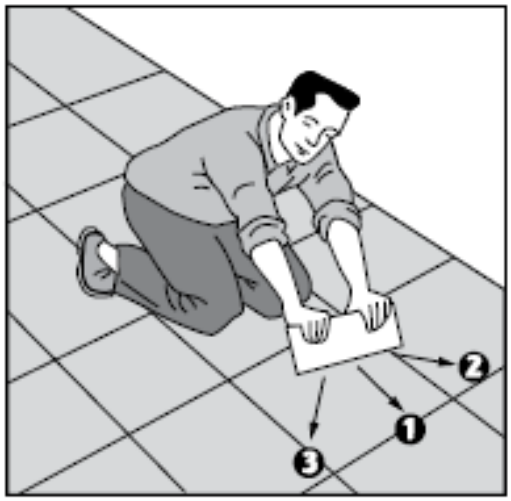

Illustration 5.

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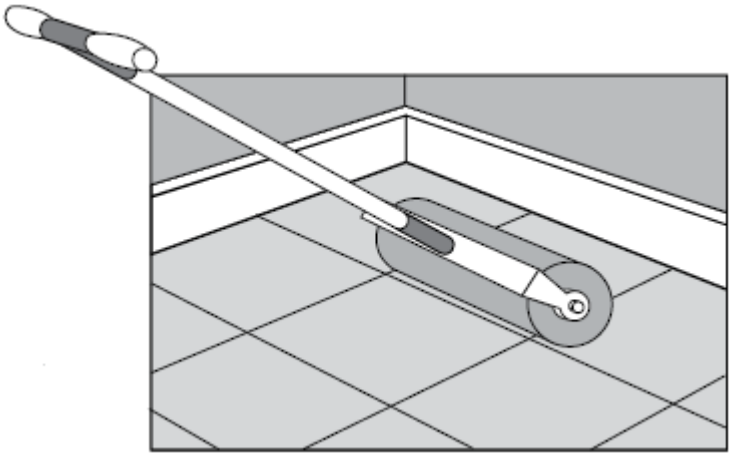

Illustration 6.

UNDERFLOOR HEATING

FloorworX SD Tiles and Sheeting may be installed over underfloor heated floors providing the maximum surface temperature of the substrate does not exceed 27°C under any condition of use. To enable a secure bond of the adhesive to the substrate, the underfloor heating system should be turned off, or set to the lowest temperature, for a minimum of 48 hours prior to installation of the Tiles or Sheeting material. The temperature of the substrate must not exceed 18°C during the installation of the flooring material. If necessary, an alternate heating source should be used to maintain the room temperature at a minimum of 18°C prior to, during, and for 72 hours after installation. The temperature of the underfloor heating system can be increased 72 hours following the installation. When raising the floor temperature, do so gradually so the substrate and flooring material can adapt to the temperature change together. A rapid temperature change could result in bonding problems. Failure to follow these guidelines can result in the floorcovering de-bonding, joints opening, and on some occasions discolouring, all which can occur within a long or short period of time.

TIME BEFORE FIRST USE

- For normal foot traffic, the floor can be used 48 hours after completion of work.
- For installing furniture or moving loads on wheels, wait 72 hours after completing the work
- It is advisable not to use rubber feet on the furniture.

EARTHING CONNECTIONS

The below Illustrations **(7 – 11)** are some examples of how the copper or aluminium strips and grid can be terminated. Note these are not the only options.

- **It is essential that all earth connections are done by a qualified electrician.**

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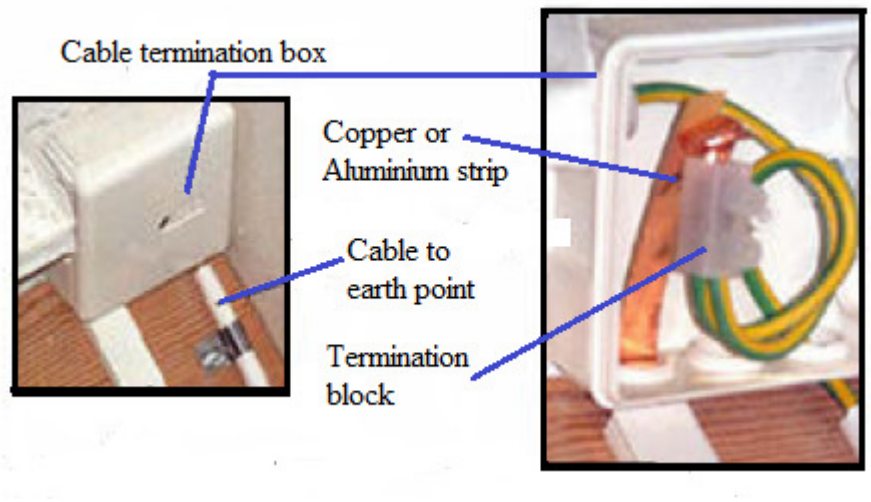

Illustration 7.

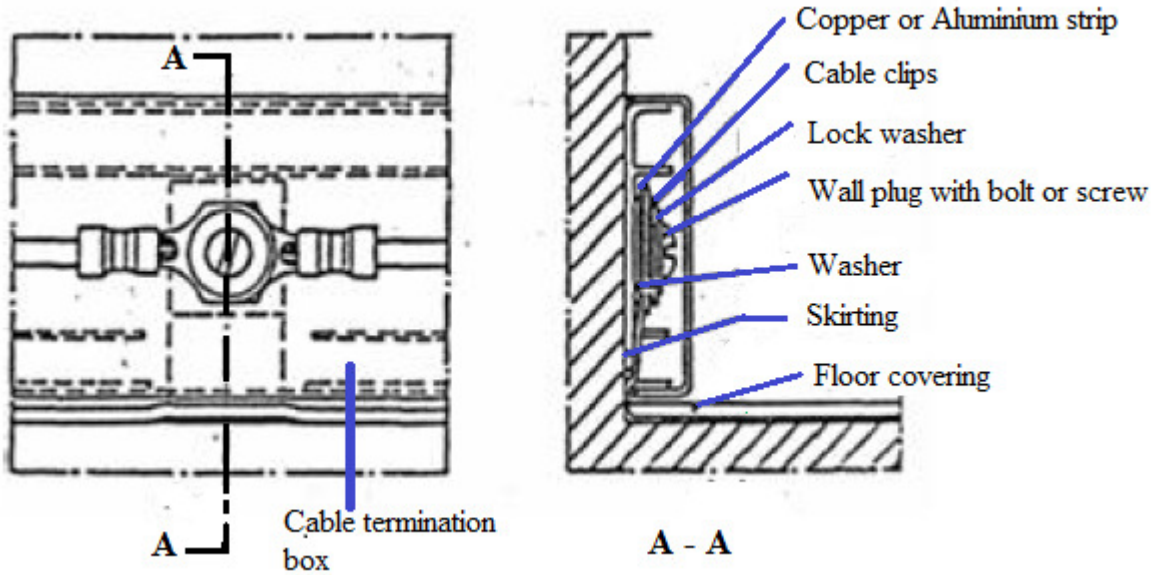

Illustration 8.

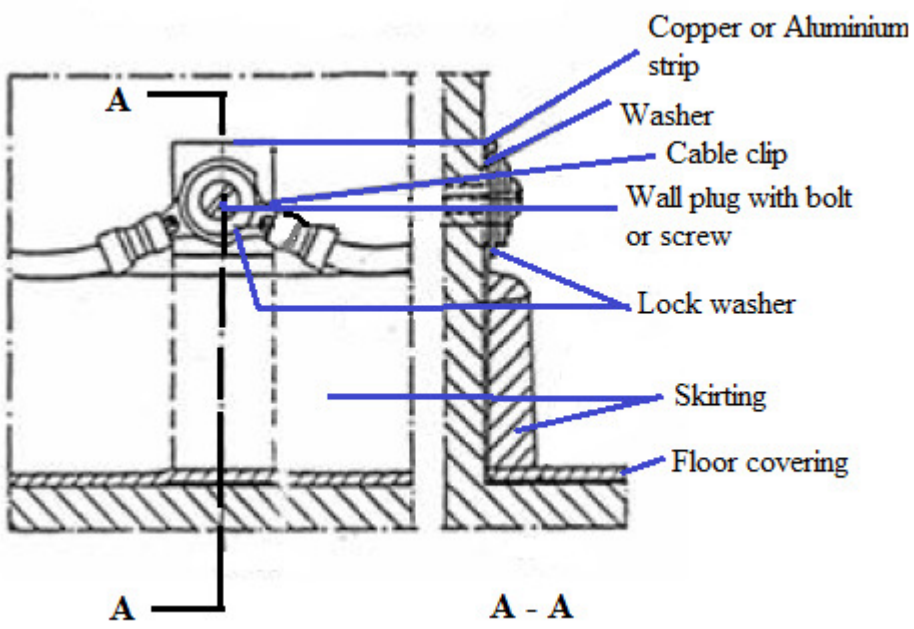

Illustration 9.

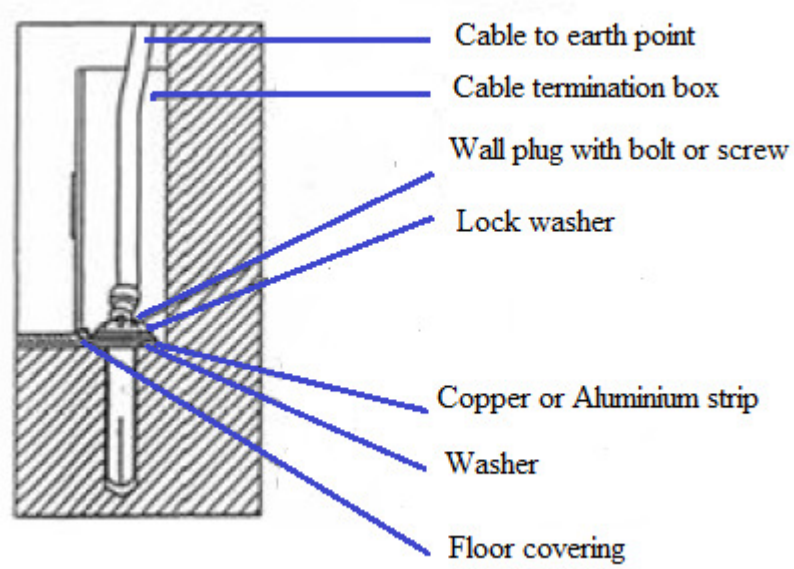

Illustration 10.

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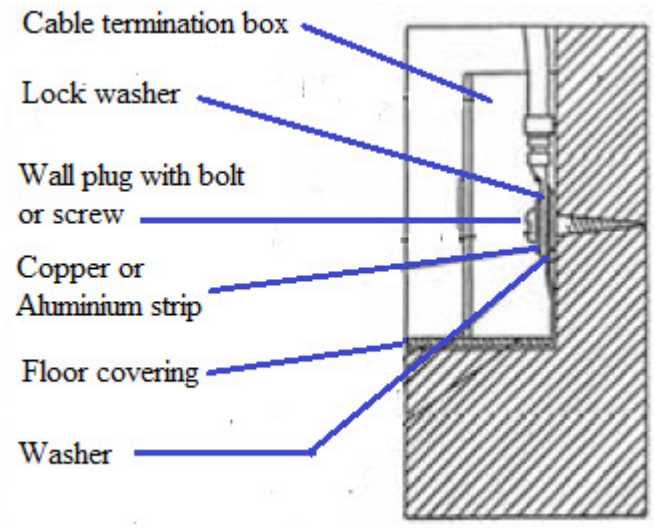

Illustration 11.