

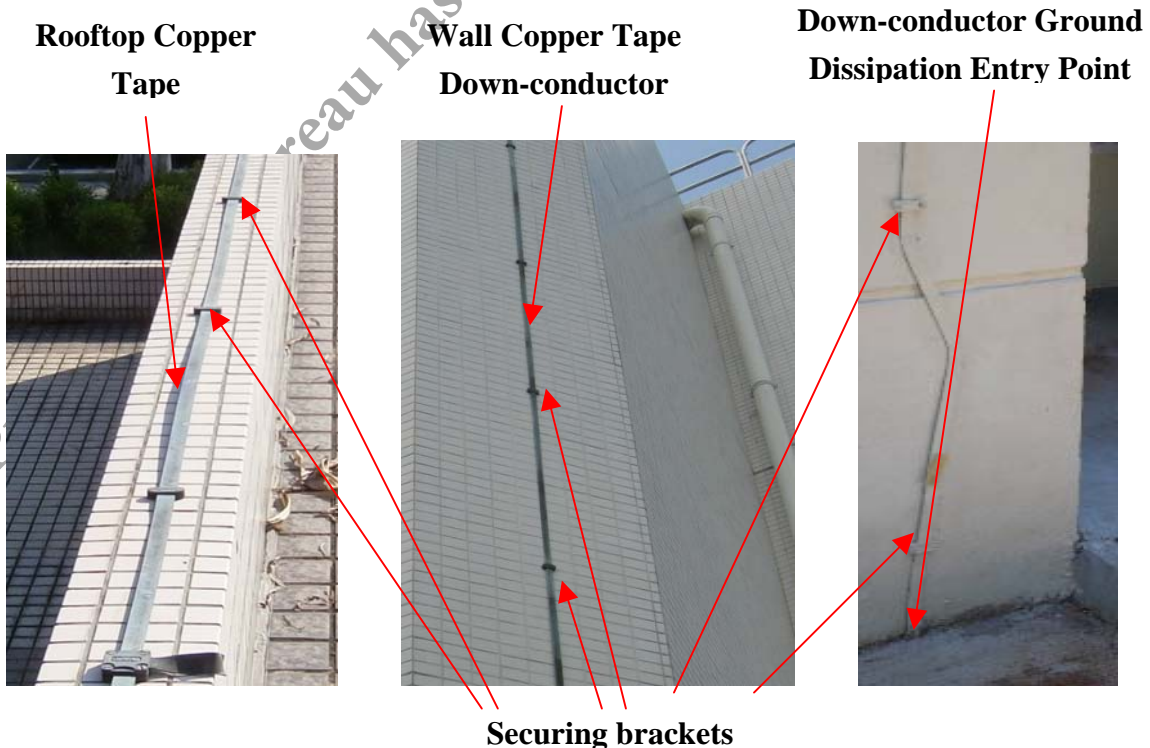


Security Guidance
Preventing Theft of Lightning Protection System Components

Copper tape is a component part commonly used in lightning protection systems. Following a lightning strike to a building attachment point or a lightning rod, copper tape conducts electrical energy to a grounding system where it is dissipated safely.

2. Copper tapes need to be on the exterior of a building shell and exposed in order to gain maximum protection. With the relative high price of copper in the scrap metal market, copper tape is very vulnerable and often targeted. Criminals removing copper tape do not only cause damage in terms of costly replacement but more importantly rendering the protection system useless. Consequences can be catastrophic. Human lives can be at stake and mission critical systems could be damaged resulting in service interruption or stoppage.

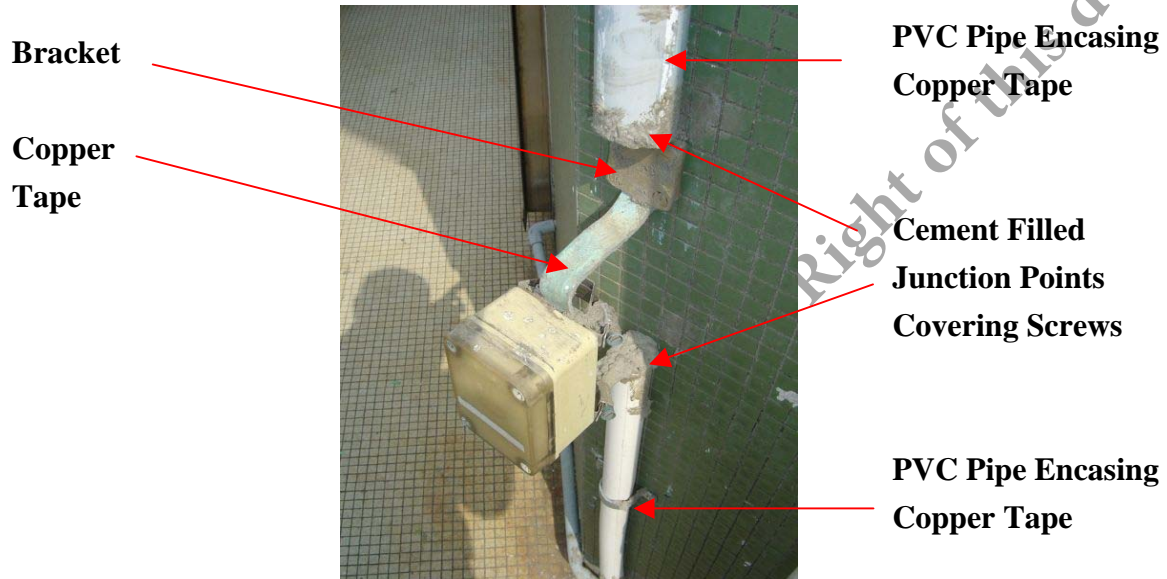
3. Criminal attacks on copper tape usually takes place at levels that can be reached without any climbing aids such as entry points into the ground and exposed sections of the copper tape on rooftops. The tape is usually cut and then pulled through the brackets and in this way a large section of tape can be removed.



Security Advice

Ground Entry Points

4. For copper tape at entry points to the ground, the technique of target hardening can be adopted. Screws can be inserted along the length of the copper tape up to a height of 2.5 meters before being encased with PVC pipe. The two ends of the PVC pipe can then be sealed with cement up to 30 cm from the openings. However, completely filling the PVC casing with cement is not recommended. This method has been tested at victimized locations in HK for a number of years with no adverse effect on the performance of the lightning protection system or theft of copper reports received since installation.



Rooftops

5. For copper tapes installed on rooftops, the key security issue is access control. The PVC pipe and cement encasing method will not be effective because large portions of the copper tape needs to be exposed. However, building management can implement the following security measures to reduce thefts:

- Installing alarms on roof access doors with real time monitoring, and response by building management or security personnel;
- Installing a CCTV system to maintain visual monitoring of the rooftop access doors and copper tapes; and
- Arrange frequent visit to the rooftop by building management staff or security personnel.

Enquiry

6. Please contact Crime Prevention Bureau at phone number 27212486 if more information is required.

Crime Prevention Bureau
August 2011