

Corrosion Prevention & Treatment

On site galvanising using Zinc Tape

This method is used to minimise the problems of corrosion on sections of the lighting column where the existing hot dip galvanising has been consumed or damaged. It is also used to add further corrosion protection on new galvanised columns where in situ conditions require it (e.g. coastal region, constant moist soil etc.).

Normally applied in one single layer, it can be double layered for additional protection.

Cathodic Protection

Lighting columns can be protected using a simple and cost effective galvanic anode – it is easy to install and maintenance free. This method of protection is suitable for new installations and for existing structures.

Both methods can be installed in their outright, but can also be installed in combination for added protection – where this is required.

Zinc Tape

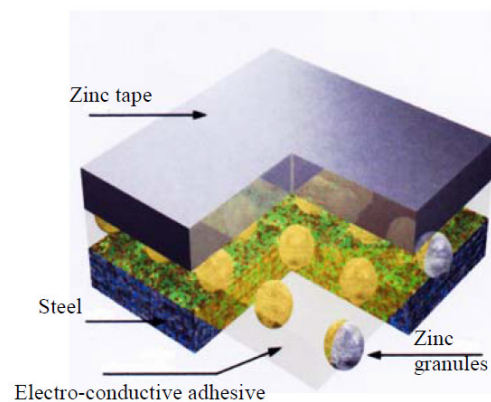
Zinc Tape with its electro-conductive adhesive is especially suited for application as a rolled zinc coating for both new and existing lamp posts and other street furniture. The purpose is to minimise the problems of corrosion on vulnerable sections of new and existing street furniture, where the existing hot dip galvanising has been consumed and to add further corrosion protection on new galvanised poles

Key Features

- Stopping any direct corrosion;
- Active anticorrosive protection due to the electrical contact between the surface to be protected and the zinc layer, which, in the presence of an electrolyte, acts as a sacrificial anode;
- Presence of an adhesive layer, anchored on the surface to be protected, which is an additional defence against corrosion,

The Product

- The product is designed to cover the surface of iron, steel, aluminium and light alloys in order to protect them from corrosion.
- This is achieved by putting the zinc tape in contact, through proper pressure, with the surface that needs to be protected from corrosion.
- The zinc tape is an electrolytic rolled high purity zinc foil (99,99% Zn), with a nominal thickness of 0.080 mm.
- On the one side it is provided with an adhesive pressure-applied layer, which is electro-conductive thanks to the addition of a special zinc-powder in the appropriate particle-size.
- This process allows the adhesive to create an electrical couple between the surface that needs to be protected and the zinc tape, so that the zinc can act as galvanic anode.



Application

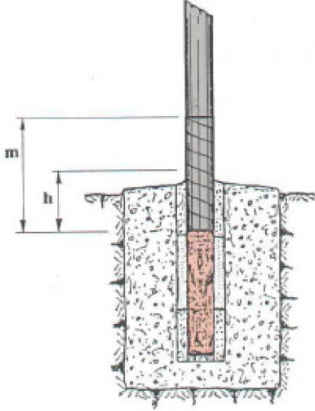
Already installed lighting columns

Application of zinc tape on existing lighting columns where the original hot dip galvanising has either been consumed or non-existent.

Preparation

- Excavate a part of the underground portion of the pole, and if necessary partly remove the bed of concrete directly around the pole. If the bed of concrete is water proof and in perfect condition then there will be no need to remove the concrete.
- Dig around pole such that it will be possible to clean and wrap the pole surface.

- The portion requiring surface preparation is shown in “m”, where “m” is 600mm and “h” is 400mm (see figure below).



- Clean the section requiring coating by mechanically wire brushing the surface.

Application

- Application of the zinc tape should be by “cigarette” wrapping.
- The zinc tape is normally applied in one single layer; however as added protection and longevity the application of a double layer of zinc tape on the upper part of the underground portion of the lighting column may be warranted – indicated by “h” in above diagram (200-300mm below ground and 100mm above ground).

Factory shop application

- For added corrosion protection, zinc tape may be applied to new galvanised poles in the areas that are most susceptible to severe corrosion – and also dependent on in situ conditions where pole is to be installed.

Cathodic Protection

This method of protection utilises a magnesium strip with steel core.

It is installed at a depth of 100mm below ground level and is attached to the lighting column via the earth stud.

Key Features

- Suitable for existing or new installations
- Easy to install and maintenance free

- Magnesium sacrificial galvanic anode

