

Coatings and corrosion protection of Gantrail clips



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Gantrail clips and soft mounting crane rail soft mounting system are used both inside and outside and in all parts of the world. In many applications it is necessary to protect the clips from corrosion or achieve a consistent aesthetically appearance to the remainder of a structure. This note sets out some of the factors, which must be considered in coating clips and Gantrail products when protecting them from corrosion.

THE FUNCTION OF THE CLIPS

The function of the Gantrail Clip is to hold the rail in position. The choice of clip normally requires consideration of the forces that the rail may be expected to apply to the clips. As the Gantrail clip parts rely on friction for resisting forces from the rail, they are best when they are used in the bare metal condition. The metal surface may be that of the steel or spheroidal graphite (SG) iron of the clip or the zinc surface of galvanised clips. It is also important that the area below the clip is bare metal. If any surface is to be coated or painted before the installation of the clip, it may be necessary to reduce the rated load capacity of the clip. Some paint systems contain oils, which can act as an effective lubricant between the components of the Gantrail clips.

CORROSION PROTECTION

Corrosion protection may be required for functional and/or aesthetic purposes. The degree of protection will depend on circumstances. In practice, it is normally impossible to avoid some rusting of the rail installation for outdoor applications. The head of the rail is almost impossible to protect. It is recommended that the surface below the Gantrail pad is not painted. This reduces any tendency for the pad to be forced from under the rail. Thus the details of any corrosion protection scheme should be chosen to meet the real needs of the application.

GALVANISING

Galvanising is probably the most effective means of supplying long term corrosion protection. It may be used with additional paint systems to provide even longer life. However, galvanised parts cannot be welded, thus galvanising is not suitable for the bases of type 9 clips. It is possible to galvanise soleplate assemblies with the clips welded in position but there is a danger of the captive bolts not fitting the clips after completion of the hot dip galvanising process. Thus, it is recommended that only the upper parts of type 9 clips are galvanised or that precautions are taken to drain zinc from the bolt holes. All other Gantrail clips may be galvanised. Bolts, nuts and washers for galvanised clips are normally spun galvanised for best performance. Bright zinc plating is not a very effective corrosion protection.

PAINT SYSTEMS

Guidance on paint systems for a given application is beyond the scope of this note. Published information is contained in standards, handbooks and trade literature. Comprehensive information is contained in British Standard BS 5493:1977, Code of Practice for Protective Coating of Iron and Steel Structures Against Corrosion.

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