

Maintenance of crane rail tracks fixed with Gantrail products



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Gantrail products are designed and normally specified to minimise the need for crane rail track maintenance. However, any track that is used is potentially subject to deterioration and damage and it is prudent to carry out some periodic inspection to assure the operation of the equipment is safe and reliable. Gantrail are always pleased to undertake inspections and maintenance on behalf of our customers.

FREQUENCY OF INSPECTION

The frequency of crane track maintenance needs to be set on the basis of the use of the track. A track in a steelworks may be inspected monthly whereas one for a little-used maintenance workshop may only be inspected once per year. The frequency of inspection may also need to take account of the plant and equipment insurance requirements. In all cases tracks that are used in the year should be inspected once per year.

CRANE RAIL CONDITION

Crane rails are subject to wear and the head of the rail should be inspected to determine that the amount of wear is still acceptable. It is sometimes necessary to change rail due to head wear, which has reduced clearances. They may suffer mushrooming or non-symmetrical wear. These indications may show that there is a problem with the crane or the rail. Rails seldom break in the individual lengths that were originally installed but they do fail at welds. Crane rails sometimes expand or contract and move gradually along the support structure. This is acceptable if it does not result in the rail moving significantly along the track. End stop blocks or rail anchors are sometimes used to stop excessive movement.

GANTRAIL CRANE RAIL CLIP CONDITION

The Gantrail clips are designed to hold the rail in close alignment. If the clips are not properly fitted, if they have been wrongly specified or if the forces from the crane are higher than anticipated, it is possible for the clips to be pushed away from the rail. Thus an inspection should look for any sideways movement of the rail. It is not recommended that the clip nut torque be checked unless there is movement of the rail. Torque wrenches are not very accuracy tools. Thus it is possible to find all the clip nuts are apparently loose due to an inaccurate torque wrench or some corrosion having seized the nuts. If the tightness of bolted connectors is checked periodically this can lead to their failure.

GANTRAIL PAD CONDITION

The Gantrail pad fits beneath the rail and should not be showing significantly outside the base plan width of the rail.

CONDITION OF CRANE GIRDERS

Crane girders can suffer fatigue damage at the top flange to web joint. This may need to be inspected in very heavily worked areas such as steelworks mill buildings. It is normally outside the scope of Gantrail inspection skills and should be entrusted to a structural engineer or specialist inspection company. If there are any indications of fatigue the inspection should be by magnetic particle method or other appropriate non-destructive method.

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RAIL ALIGNMENT

Incorrectly aligned rails can have a significant influence on the reliability and safety of crane operation. If alignment problems are expected a survey is essential. Gantrail can undertake such a survey or advise on the method.

CONDITION OF CRANE GIRDER SURGE CONNECTIONS

The forces from crane wheels are applied to the girder at its upper surface. The girder is fastened to a column. Thus there must be some means for carrying the force from the top of the girder to the other parts of the structure. Often this is not the connection to the bottom of the girder where it sits on the column.

The various details used to attach the girder top to the building often suffer damage. Gantrail has a tie back (girder surge) connector, which eliminates the maintenance problems and is particularly suitable for larger structures. Whatever detail is used it should be subject to periodic inspection.

A world of crane rail expertise.

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