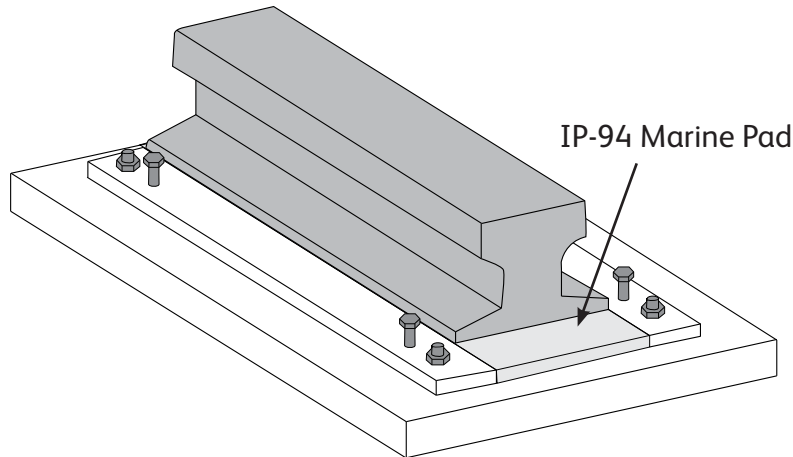


IP-94 Marine

CRANE RAIL PAD | Intermittent Soleplates Systems



Product Details

Formulated for marine environments.

Molyneux IP-94 Marine intermittent soleplate pad provides engineers the freedom to determine the soleplate size required by stress analysis as opposed to a limited choice of pad sizes determining the choice of the soleplate dimension.

Retaining protrusions prevent escape from the soleplate.

Guidance

- High resistance to corrosive marine environments.
- Reduces contact stresses and attenuates dynamic forces.

How to Specify:

IP-94 Marine/Rail Size/Soleplate Length

Example: IP-94 Marine/A100/300mm

Features

- Highly resistant to corrosive marine environments in ports and coastal facilities.
- Reduces noise & structural vibration.
- Reduces rail wear & fatigue stresses.
- Reduces runway maintenance.
- Reduces stresses in the runway structure & the crane structure.
- Resistant to water, oil, grease, mildew & fungus.
- Absorbs uneven contact between the rail and supporting structure.
- Protects the crane mechanism & increases wheel, bearing & axle life.
- Eliminates soleplate wear due to fretting corrosion.
- Distributes the wheel load over a large area, reducing high local bearing stresses.
- Has a high recovery rate to attenuate each wheel pass.

PHYSICAL PROPERTIES

Compressive modulus:	94 N/mm ²	Service temperature range (cont. use):	-50°C to 80°C
Pad thickness:	6.4mm	Permanent set at 21 N/mm ² :	0%
Compressive max. design stress:	21 N/mm ²	Shore hardness D:	55
Compressive strength:	>41 N/mm ²	Tensile strength @ yield:	>10 N/mm ²
Brittleness temperature:	<-70°C	Elongation at yield:	500%

TECHNICAL NOTES

The compressive properties of the resilient pad act as distributed springs supporting the crane rail on the soleplate and a more compliant pad distributes the vertical crane wheel loading over a larger area resulting in lower peak stresses. The drawback of using a resilient pad under a crane rail is the vertical loading causes rail uplift away from the load application which is referred to as a "bow wave". A greater rail pad compliance results in greater deformations of the crane rail in both the vertical and lateral directions. Crane installations impart time-varying dynamic loading on the facility which must be considered to prevent fatigue damage to the facility or operating personnel. The compliance of the resilient pad acts as a mechanical filter to reduce the amplitude of any impact or dynamic loading transmitted to the facility.

It is preferred that the rail joints are welded. Bolted splice joints should be maintained in a tight condition. Molyneux Engineering Department is pleased to offer help to engineers in designing the total rail support system from the choice of rail to the design of the load path through the rail support assembly. Molyneux can supply the complete system, including soleplate fabrication, the rail clips, anchors and the soleplate leveling system.