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ARMADILLO LTP

CRANE RAIL PAD

INTRODUCTION

In any highly loaded rail support system it is recognised as best practice to incorporate some form of resilience in the supporting structure. A rail will be secured with sprung clips. Building some resilience into the system reduces the amount of load and wear the system sees. A well supported rail system will return longer, trouble free service than a rigidly installed system. There are many types of resilient rail support pad, the recognised criteria are, to be of a sufficient hardness to properly support the rail even in extremes of high operating temperature, while at the same time being resilient enough to distribute the wheel load evenly to the supporting structure. A high resistance to wear and abrasion is a critical feature to prolong pad life. The inevitable movement between pad and rail when thermal expansion rates are not matched results in the rail being allowed to move over the top of the pad. It is this action which results in a concentrated wear rate and in some cases this action can "work" the pad out from beneath the rail, giving a premature failure or the need for additional maintenance.

Armadillo LTP rail pad is a time proven product on numerous installations around the world. The critical feature of the product which sets it apart from almost all other crane rail pads is the addition of the LTP reinforcement which vastly increases the lateral stability but more significantly the reduction in the coefficient of friction beneath the top of the rail pad and underside of the rail. This not only reduces the amount of wear the pad is subjected to but more importantly eliminates the "walking" out of the pad which is characteristic of many other pads.

PHYSICAL COMPOSITION

Armadillo LTP comprises of three basic components.

- Neoprene elastomer which offers excellent resistance to both oil attack and ageing.
- Cellulose fibre reinforcement to give the pad an even stronger resistance to deformation, while retaining flexibility.
- LTP Top surface. Providing both unrivalled lateral stability while simultaneously offering high wear resistance and subsequent reduction in friction

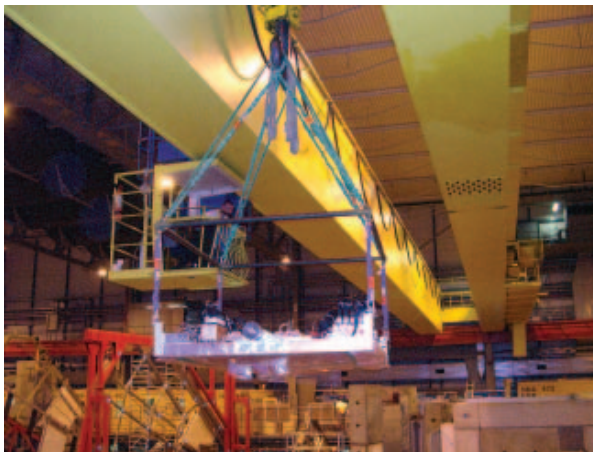
PHYSICAL PROPERTIES

Ultimate Compressive Strength	75 N/ square millimetre
Tensile Strength	10 N/ square millimetre

AGEING RESISTANCE

Typical values are as follows:

Tensile Strength	+ 12%
Elongation	- 5%
Hardness	+ 4 IRHD



EXAMPLES

Examples of succesfull applications which have benefit from the advantages of LTP reinforcement are as follows:

- Pot Ovens
- Aluminium smelting plants
- Drag lines
- Quarry applications
- Coke Ovens
- Steel ore mills
- Ore plants

LATERAL RIGIDITY

In applications where the manufacturing tolerances of the support structure are not tight the pad may have insufficient support to adequately hold it in place. Another factor which causes the pad to be forced out from beneath the rail is if large surge loads are expected, here the rail can be deformed with the resultant force being concentrated on the pad. In both cases it is the low friction LTP surface which gives the rail added lateral stiffness and resists the effects. The addition of LTP does not adversely affect the load distribution of the pad.

ARMADILLO VIBRATION & SHOCK CONTROL
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