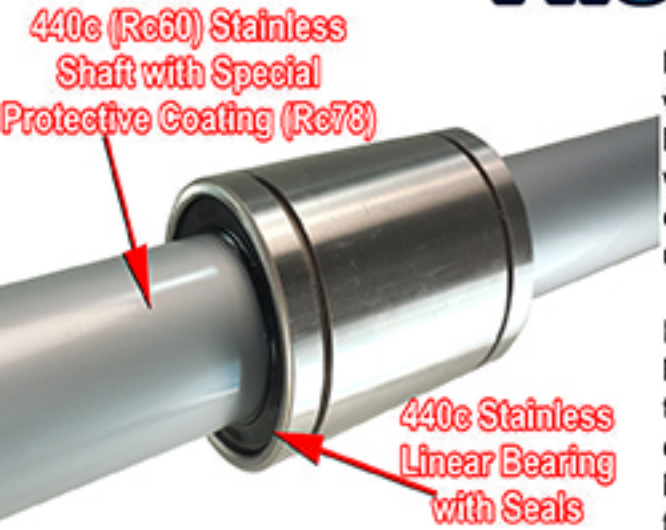
The Problem

Our customer is a manufacturer of loading dock ramps. These systems are installed in every state and experience all climates and conditions. Each dock section employs a 1" shaft and linear bearing for length adjustment. Delivery Trucks are side-loaded so the platform is adjusted outward to meet the truck body so loaders /unloaders have a safe walkway between building and truck. If the ramp cannot be properly adjusted because its rusted, frozen solid, gaps between the loading dock and the truck body become fall-through hazards for workers.

Why is this system failing? In many northern facilities, accumulated snow and ice are sprayed down with glycol and then salted. The system originally used standard Rc60,1060 steel shafting and standard steel shelled, 52100 linear ball bearings. A bad choice for such a tough, corrosive environment. Quickly, these systems were rendered useless, frozen in place and hazardous.

The Answer



LM76 was called to review the situation and asked to come-up with a recommendation. Given that our customer had a very large installed base, the cost of changing out the design format with a new design was out of the question. Thus, we we had to come up with the best possible fix that would allow for a fast and uncomplicated field retrofit package.

First, we changed-out the original steel shaft with a 440c stainless shaft. Although the 440c is more corrosive resistant than the steel, it has carbon introduced into its chemistry so it can be case hardened (required for linear ball bearings). For additional hardness (from Rc60 - Rc78) and superlative corrosion resistance we coated the shaft with a special thin dense chrome.

For a direct plug-in bearing we chose a 440c stainless linear ball bearing with special scraper seals. No Jive, just solutions...from LM76. For more information, please call Mike Quinn.

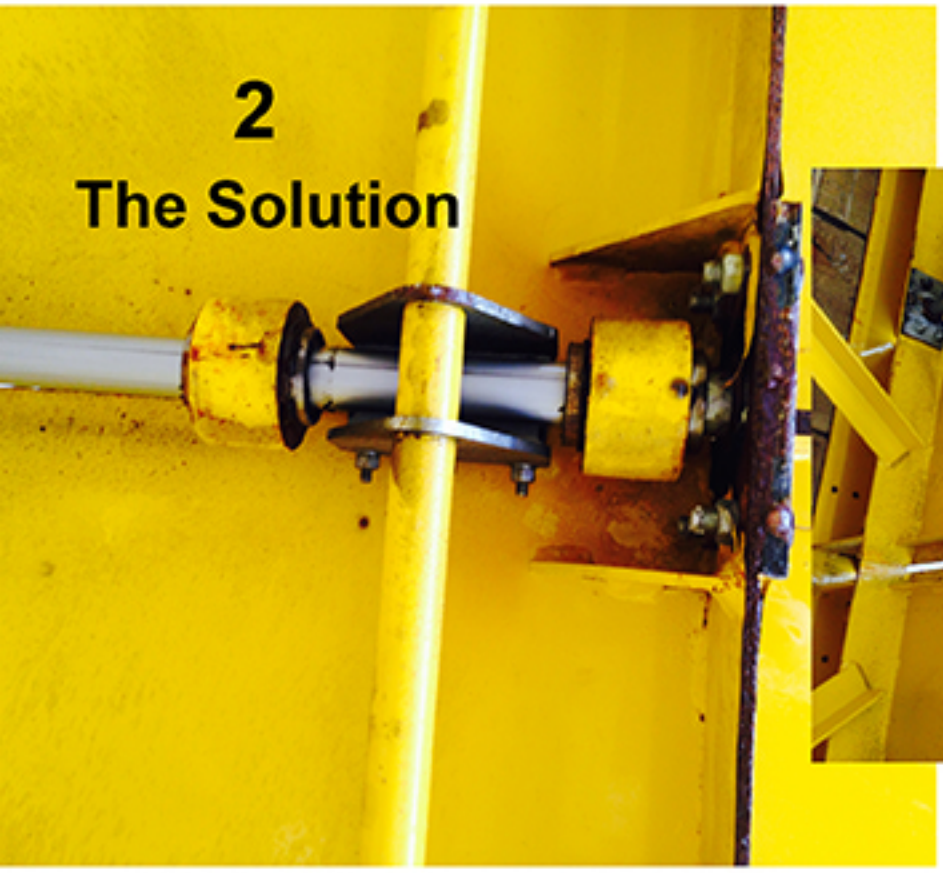
LM76 Linear Bearings
"America's Linear Bearing Flag Ship"

1-800-513-3163 **www.LM76.com**

Extending Dock Stand

1
The Problem

2
The Solution



A Working System

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