



Location:
North America-based Metal Coater

Application:
Metal Finishing

Problem:
The need for dependable, easy-to-replace bearings.

Solution:
Rex 6000 Series SHURLOK Adapter Mounted Bearings

Results:
Anticipated savings of up to \$20,000 per year due to reduced applicator shaft repairs and bearing replacement. Annual production efficiency gains of another \$100,000 because of the greater reliability of the bearings.

Summary:
With the Rex 6000 Series SHURLOK Adapter Mounted Roller Bearings, plant experiences reduced costs of repairing or replacing bearings and shafts while simplifying their removal and replacement.

Rex 6000 Series SHURLOK Adapter Mounted Bearings Save Thousands at Metal Center

By incorporating Rex® 6000 Series SHURLOK® Adapter Mounted Roller Bearings into its paint application process, one of the largest independent metal coaters in North America stands to cut the cost of repairing or replacing bearings and shafts, while also simplifying their removal and replacement.

The customer applies decorative and protective coatings to continuous coiled steel for use in commercial and residential projects, as well as by other industrial users. Coatings are applied to the steel by rollers that are covered with a urethane material. Approximately every three months, the rollers must be removed and sent out so the urethane coating can be rebuilt to its original thickness. This requires removing the bearings on the ends of the turned shafts that support the rollers.

The customer previously used set screw-mounted bearings, which were not ideal for this application. The mountings would fret to the shafts, and the mounting collars were sometimes damaged during removal, making it necessary to replace them. After two or three removals and reinstallations, the set screws would become loose in the mounting collars, and new set screws would not resolve the problem. As the collars loosened, the bearings would migrate to one side of the applicator roll shaft. This either stopped the applicator from rotating or moved it off-center on the metal strip, causing a defect in the coating that made it necessary to re-run the coil. In addition, when the bearings loosened, the shafts would wear and had to be rebuilt or replaced, adding unnecessary costs.



Applicator rollers in operation

To simplify the removal and installation process and reduce maintenance costs, the customer replaced the original bearings with Rex 6000 Series SHURLOK Adapter Mounted Roller Bearings. They feature a Positive Locking System that maintains mounting tightness during operation. The tapered adapter sleeve provides up to 25 percent greater shaft grip and eliminates the shaft damage caused by loose bearings. In addition, the SHURLOK Bearing is easier to remove from the shaft without causing damage, saving both time and repair costs. Installation is further simplified by the standard Spyglass™ Optical Strain Sensor (OSS) technology, which provides visual feedback to achieve the proper shaft grip. It eliminates damage to the shaft and bearing caused by improper tightening during bearing installation. It also enables the 6000 Series Adapter Sleeve and Mounting Collar to be reinstalled multiple times.

Another benefit of the 6000 Series bearings is the "M" heavy contact seal, which minimizes paint infiltration and keeps particulates out of the bearing while keeping lubricant in. Anticipated savings of up to \$20,000 per year is expected due to savings from applicator shaft repair and bearing replacements. Annual production efficiency gains of another \$100,000 are also projected because of the greater reliability of the bearings. Plans are being developed to apply the same solution to other applications at additional plant locations.



Paint rollers with and without mountings



Spyglass OSS illumination.