

HyComp H310™ Solution Quadruples Lifespan of Forging Manipulator

■ A partnership with TriStar gives you a competitive edge.



A client in the high-performance alloy industry came to Saint-Gobain HyComp with a problem with their rotary forging manipulators. Forging manipulators are the heavy-duty grabbers and grippers that are used during metal forging to precisely position very large metal parts while they are being fired and shaped.

The problem was that the two-part bronze bushings on the circular gripping surface were failing at around 6 months (the maintenance schedule called for the part to be replaced once a year).

The customer reached out to Saint-Gobain HyComp thinking that one of their high-temp composite bearing materials would work well in the application and knowing that HyComp had the engineering expertise and capacity to manufacture the critical parts.

HyComp H310 Was the Clear Choice

HyComp H310 is an aerospace-grade blend of high-temperature resin thermoset polymer sheet molding compound (SMC) with one-inch chopped carbon fiber reinforcement. It has the highest strength of the HyComp materials at temperatures up to 600°F and is best for lower speeds and high loads.

Creating a Better Bushing – Custom Mold Tooling and Precision Machining

The OEM design consisted of one large bushing and one large thrust ring. This wouldn't work with HyComp's standard tooling so they came up with a three-piece design that combined the thrust ring and bushing.

The H310 Bushing Successfully Solved the Problem – Increasing Uptime and Saving Money

To test the new part at the customer site, two forging manipulators were run simultaneously. One using the old bronze part, and the other with the new H310 bushing. The bronze part continued to generate dust from wear and, again, only lasted 6 months before failing.

The H310 part ran for over two years before needing replacement. This was the way forward for this client. They ordered additional manipulators, generating \$130K in sales for HyComp within two years.

We're ready to put our engineering expertise to work for you from prototype to production.

Engineering | Custom Fabrication | Manufacturing



CJ Composite

- Self-Lubricating
- Low weight | High Strength
- Chemical Resistance
- Direct replacement for Bronze



Ultracomp®

- Self-Lubricating
- High Load | Low Speed
- 54,400 PSI Compressive Strength
- Exceptional Resistance to Vibration and Impact



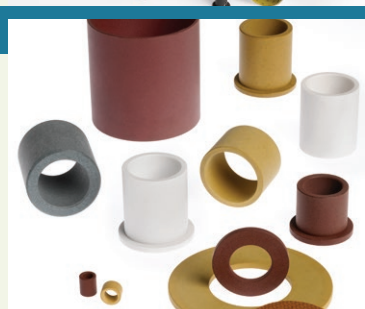
TriSteel™

- Self-Lubricating
- High Load | High Speed
- Metal Backed Bearing System
- 100% Lead Free



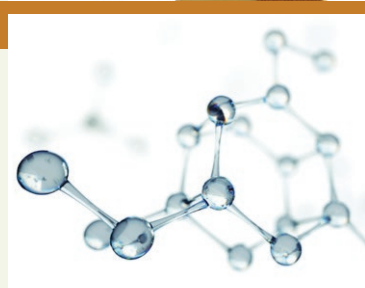
Rulon®

- Self-Lubricating
- Low weight | High Strength
- Low Coefficient of Friction
- Chemically Resistant



Enhanced Materials Division

- Plasma Surface Treatment
- Asymmetric & Symmetric Filtration Membranes
- Specialized Primers & Coatings
- Material ID & Selection



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