The unit shown above is one of many manufactured by American Process Systems specifically for the mixing of metallic and semi-metallic friction materials.

This CPB-45 Cylindrical Plow Blender has a working capacity of 45 cubic feet (2,000 liter) and was designed to mix hot pre-form friction product with fiberglass fibers for the manufacture of heavy duty O.E. brake blocks.

In order to extend the life of the mixer with a highly abrasive product, the cylindrical shell was constructed of all T304 stainless steel and has reinforced endplates. All welds are continuous and internal welds are ground smooth.

The T304 solid agitator shaft is constructed with bolt-on mixing plows and posts of 17-4 hardened stainless steel, which, when hardened, achieve a Brinell hardness of 420. While not quite as hard, the cost savings over plows made of Nihard castings is substantial and the performance has proven to be so satisfactory that the customer has since ordered additional units.

The high pressure jacket, manufactured in our own ASME certified facility, maintains the proper product temperatures while the integral dust collector assures safe working conditions. All electrical enclosures are built to NEMA 9 (explosive dusts) specifications.

To prevent the product from invading the seal area and possibly scoring the agitator shaft, the mixer was completely piped for air to be brought to a manifold and then supplied to each of the seals. Each seal has air pressure regulators and visual air flow meters which allow for monitoring of the proper air flow.

Because the process requires that each batch be started under load, the drive assembly houses both a gear reducer and a fluid coupling.