



# CASE STUDY:

## Cost Savings by an Aluminum Die Casting Producer

**BACKGROUND:** Our customer, a major producer of aluminum die cast components based in the Midwest, wanted to see if PST surface treatment or a competing technology such as Ion Nitriding would be more cost effective in producing 90,000 shots. They engaged us to perform a test run to add up all the costs involved, given the same shot sleeves.

**BOTTOMLINE:** With PST, our customer found that the shot sleeves did not need to be re-treated and re-machined for the entire 90,000 shots, while ion-nitrided sleeves needed to be re-machined and re-honed every 30,000 shots, with the attendant downtime of changing shot sleeves. Over the entire production run of 90,000 shots, our customer saved more than 35% with PST.

	Ion Nitriding	PST Treatment
Cost Per Shot Sleeve	\$1,185	\$1,185
Cost of Treatment	\$100	\$750
Cost per Re-Machining and Honing	\$250	---
Cost per Downtime to Change Shot Sleeves	\$500	---
Total Cost for 30,000 Shots	\$1,285	\$1,935
Total Cost for 60,000 Shots	\$2,135	\$1,935
Total Cost for 90,000 Shots	\$2,985	\$1,935

PST cost may appear high on surface, but over the entire production run, it ended up saving significant money for our customer

Each PST-treated shot sleeve is good for the entire 90K shot run, so there are no re-machining or downtime costs involved

Because of the higher initial cost of PST, there is a break-even point of 50K shots, where ion-nitriding would be more cost effective than PST

**For the 90,000 shots, cost savings with PST of \$1,050, or more than 35%**

However, as the number of shots go up, PST becomes a much more cost effective treatment solution

Contact us today to get your tools and components treated with PST. Our sales engineers will explain to you the PST Process and demonstrate PST's superior technology with an initial proof-of-concept application at only a nominal cost to you.