

P.E.P. TECHNOLOGY[®]

Tomorrow's Automated Manufacturing Technology.... Today!

1 P.E.P. Nest Replaces 14 Optimization Nests

P.E.P. Technology Module: Nesting

Customer: Milacron Plastics | **Contact:** Steve Fish / Senior Mfg Engineer

Former Software: Optimization

Cutting machines: Cincinnati CL7 and Wiedemann Lasers

Files: Pro-E and CADRA, 2D and 3d files that had been flattened

P.E.P.'s posted code is smaller. This cuts the time spent loading programs into the machine. Optimization could not reduce the code size. On a nest that has 426 parts - we used to have to do a 30 part nest, and another 30-part nest and another - 14 times! Now we can run the entire sheet in one nest, one time. The machine was not cutting while we were loading programs into it- 1 minute per program. P.E.P. saves us 14 minutes on THE LASER on that job. At \$88.00 per hour, P.E.P. cut \$22.00 off the cost of that job, every time we run it!

It was VERY hard to manage code size in Optimization. In P.E.P. it is a snap!

Programming Savings: Now this part takes 1 nest, not 14 – that means we save 13 x 2.5 minutes = 32.5 minutes!

THE REST of the Story:

More time saved with revision control. With Optimization- each nest consisted of 7 files in 7 different folders. It was almost impossible to manage which drawing was current with the real source CAD files. The least costly solution was to start out with source CAD files on every single nest, and re-convert them all, then re-nest them.

With P.E.P., and automatic revision control, the CAD conversion is done in an instant. P.E.P. automatically finds the nests that have the updated drawings, and displays them. I open the nests, update the drawings with 3 keystrokes and re-post.

What took at least 10 minutes per nest is now done in 2 minutes.

What else? Now we don't have to re-nest when moving from machine to machine – just repost the nest. In Optimization – we had to do a complete re-work of the nest to move to another machine. Minimum of 3 minutes per job

MORE CAD CONVERTER SAVINGS

Approximately 1% of the time, the shop floor would return a nest for re-work, caused by very short geometry in the parts. When PRO-E unfolds the parts, at the bend reliefs, sometimes the CAD program will insert many short geometries- arcs or lines. If these part geometries are processed through without combining into larger lines or arcs, the result is errors at the machine control and jagged part edge quality. P.E.P. automatically combines short arcs. P.E.P. eliminated 90% of these errors by combining short arcs and line segments. Most of the other 10% of the errors are caught by the error checking in P.E.P. nesting modules. The problems are caught in the programming department – not on the shop floor. Rework due to CAD errors – reduced 99%!