

<b>Project Title:</b>	<b>Improvements to Industrial Packing Machine</b>
<b>Client:</b>	Armstrong World Industries
<b>School Year:</b>	2001-2002
<b>Students:</b>	Kevin McNutt and Benjamin Stanley
<b>Summary:</b>	<p>This paper investigates two problems with the packing machine from the first production line at Armstrong World Industries in Kankakee, IL. The two aspects of the packer that are giving Armstrong problems are the speed of the packer and the top flap glue system.</p> <p>Part one of this project deals with the excessive speed of the packer. Currently the packer is running much faster than needed. The packer runs at a speed that is almost twice that of the incoming tile. This high speed causes faster possible solutions were considered. For the final design, a variable frequency drive was selected and proved to accomplish the goal of slowing the packer down. Although the drive slowed the packer down, some unexpected side effects occurred that are left for future consideration.</p> <p>Part two of this project deals with the inconsistency of the top flap glue system. The current glue setup produces over-spray, which is a waste of raw materials and also an eyesore. Seven possible solutions were considered. The final solution involves a stationary glue system mounted above the tile stack. This new glue system uses one extra glue line, one extra glue head, and two multi orifice nozzles. This part of the project produces a desirable outcome, but also brings up unexpected side effects that are left for future consideration.</p>

