

ALPINE ENGINEERING & DESIGN, INC.

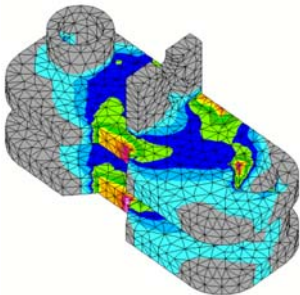
Streamlining Production

Volume 1, Issue 1

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Inside this issue:

Slug pusher design highlights	1
Service Spotlight	2
Contact Information	2



Our FEA Experts
Page 2

Slug Pusher Design improvements:

- 100% increase in production speed
- Quiet operation
- Adjustable to all brick sizes produced on the line
- Multi-million cycle

The Need for Speed

Speed and quality are common concerns with the production of any product. A major brick supplier approached the engineers at Alpine Engineering & Design, Inc. hoping to eliminate a bottleneck on one of their brick production lines.

The objectives were to develop a system that addressed:

- **Efficiency**
- **Speed**
- **Quality**

Brick plants around the country have approached this same problem in a number of ways. Our engineers put together a mathematical model of half-a-dozen alternatives to find out which one was the best.

Surprisingly, some methods adopted by other brick plants were not really any faster than the simple approach used for decades by those in the industry. These

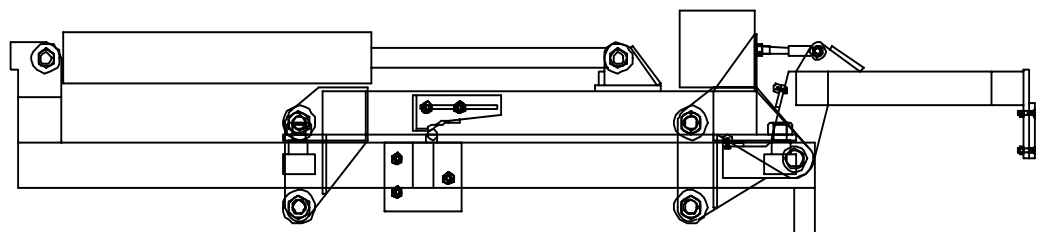


OLD BRICK SLUG PUSHER

alternatives used by other brick plants seemed like an improvement, but in reality, did nothing more than complicate the machinery.

Finally, we decided on a unique approach that would allow the brick production line to nearly double its production rate. The improvement would be achieved without the need for increased hydraulic flow or pneumatic pressure.

Great Designs



After a few field measurements, our engineers designed a slug pusher that exceeded the project goals for production capabilities. The design was done to stand up to millions of cycles with only routine maintenance to the hydraulic and pneumatic actuators.

New and Improved

“This project went smoother than any we have done for a long time.”

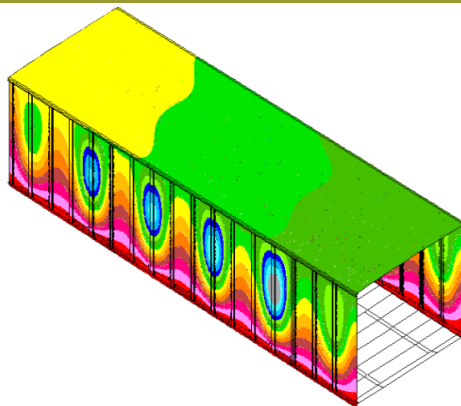
Maintenance Supervisor,
Brick Production Plant

The new slug pusher was designed to fit in the existing framework and required no alterations for installation. In 4-5 hours the old pusher was removed and the new one slid into place.

The next day, brick production moved on without missing a step. On day two the production line speed was turned up and the pusher worked just as it was designed, increasing the brick line's production as desired.

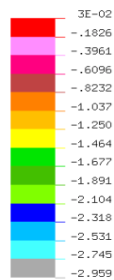


Our FEA Experts

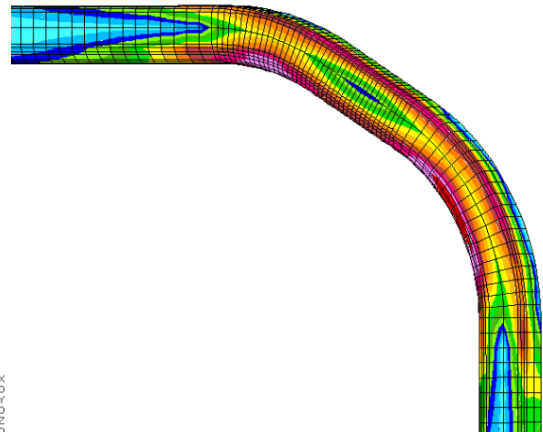
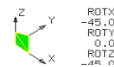


.38 G CONCRETE LOAD ON 10000 LB. DECK LOAD
LIFT A DECK TRAILER WALL

VIEW : -2.958531
RANGE : 0.0309642



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Finite Element Analysis or FEA is a computer method of finding the stresses in a part or assembly. How many times have you fixed a cracking part only to find that later it cracks somewhere else? With FEA we can find these problems before the product is ever put to metal. If it is a problem that you are presently having, we can find a solution that won't just cause another problem later.

With computerized FEA it is truly a "garbage in" "garbage out" situation. Many companies have the capability to do FEA and get pretty pictures out. In our over 15 years of experience doing FEA, we have learned how to model many different products for different reasons. Sometimes it is to find the right thickness to optimize the design. Sometimes it is to examine stress concentrations that are causing cracking. We put the right conditions in to get accurate output and then are able to analyze that output to determine what is REALLY going on.

Let us put our FEA abilities to work to solve your problems.

Alpine Engineering & Design, Inc. Experts in Product Development



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