

Featured Company: Airtex Inc.

Meta-Lax Pumps New Life into Dies at Airtex

Located in rural southeast Illinois is the world's leading independent manufacturer of aluminum die cast water and fuel pumps for the automotive industry. Airtex, Inc., Fairfield, IL, has focused on this small market niche. It maintains a high standard of customer satisfaction through design, service, quality, and availability.

Last year Airtex improved its internal efficiency by installing a Meta-Lax stress relief center which included a Meta-Lax stress relief system and a 3-ft x 4-ft vibration table platform. Since then Ray Troup, Die Cast Tool Engineer concludes that "It would be a struggle to take the Meta-Lax machine out now. We couldn't get along without it."

To date, Airtex has Meta-Lax treated all 150+ die sets that are used in their aluminum die casting operations. Initially Ray justified the cost of the Meta-Lax system by the expense of sending inserts 135 miles to St. Louis for stress relief.

Now after a year of getting comfortable and confident with Meta-Lax processing, Airtex has a new rule: *All aluminum die cast tooling must be Meta-Lax treated at a maximum interval of 20,000 shots or after every repair or at every model changeover, whichever comes first.* "There are no exceptions," emphasizes Ray.

When asked about performance Ray explained about an intricate die with a high attrition rate due to its shape. Normally the new die component would last 12,000 to 15,000 shots before heat checking would begin to occur. If they were lucky the insert would last 70,000 shots before being replaced. Meta-Lax was applied to the next new set of inserts and at each model changeover time which is between 10,000 and 15,000 shots, and hot oil was circulated through the die. "The die is at 170,000 shots now and we haven't touched it for maintenance expect for applying Meta-Lax," Ray explained. **"I fully expect to triple the die life from this die."**

By having the Meta-Lax stress relief center the stress relieving is convenient and easy. **"It really only costs us about 10 minutes of a man's time for stress relief,"** said Cliff Reeve, Tool & Die Maker. "We don't have to sit there and watch it." The time needed for the full Meta-Lax treatment is about one hour. Both Ray and Cliff are very impressed with the ease of operation of the equipment.

Furthermore, Airtex requires Meta-Lax to be used during



No exceptions - Meta-Lax is the rule at Airtex. Triple die life is expected even from high attrition dies.

welding (Meta-Lax Weld Conditioning) on most die tooling. After a year of Meta-Lax application Ray has seen a dramatic change in the weld repair department.

"Meta-Lax is the best thing to come into the weld shop since the welder! 90% of the weld repairs stay in-house now, and 75% of that is due to Meta-Lax. That's because the repairs are less severe and the welders are more confident in the quality of the weld that they can deposit when they use Meta-Lax Weld Conditioning," Ray observes.

"We have cut our repair time down by over 60% on many dies! What took two weeks in the past takes two days now. What took 24 hours in the past takes four hours now. And both weld porosity and distortion have nearly been eliminated," Ray commented.

When asked about cost savings Ray just laughed. "Whew, I can't begin to tell you!"

Roy Xanders, Executive Vice President, is also impressed. He makes a special point to take guests around his maintenance area to show their Meta-Lax stress relief center. This serves as a good example of their on-going efforts to implement new technology which ultimately benefits their customers.

Next time you are working on a car engine and see the water or fuel pump, note that it is a very high quality aluminum die cast part. Chances are overwhelming that it was made by Airtex.

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