

The Westland Corporation

PROCESSOR

Westland Corporation

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Just Maintaining?

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Dave Larson

In today's ever changing world market, keeping your pulse on the many aspects of a plastics processing operation can be challenging to say the least.

To obtain efficient and effective operating results requires everyone in your organization devoting the full utilization of their skills and energies.

It also requires more than just keeping track of your bottom line.

There are many factors out of our control that affect our business, from conflicts on the other side of the world to our own governmental regulations.

However, the ability to recognize an opportunity; knowing when to act on an opportunity; or knowing when to take a step back is essential.

When opportunities arise, the sometimes everyday choices we make can ultimately mean the difference between failure and success.

Those choices make the difference between just maintaining or taking the steps to grow your business and your profits.

In this newsletter you will read about the new screw milling machine Westland recently acquired. That was a big decision.

However, we were not (and will not be) satisfied to maintain the status quo. We are continually working to find opportunities to better serve our customers in ways that will benefit us both.

Standard maintenance practices for molding machines are also discussed. Maintenance is one of those everyday decisions that also make a difference between profit and loss.

Another way you can move beyond just maintaining your organization is to take advantage of the screw design and processing

assistance Westland offers our customers.

This service is one of those opportunities that can make an immense difference in your business.

Why not call us today with your most difficult processing challenge. Put us to the test.

We look forward to the opportunity to prove we are committed to more than just maintaining relationships with our customers.

The ability to recognize an opportunity ...

DO YOU KNOW?

Compared to space, where the air pressure is zero, the weight of the atmosphere on earth is 14.7 pounds per square inch at sea level, which is called one atmosphere. One atmosphere equals 29.92 inches of mercury. Due to the heating and cooling of the earth's surface, there are daily fluctuations in air pressure. These changes can be measured with the use of a barometer.

The standard sea-level atmospheric pressure is 29.92 inches of mercury. Low pressure (generally below 29.92) is linked with unstable weather conditions. High pressure (generally above 29.92) is associated with clear, cool weather.

**Where in the U.S. does the barometric pressure fluctuate the least?
The most?**

(Answer Inside)

OUR CONFIDENCE IS SHOWING

Worldwide Machine Search Ends in Kansas

Dave Larson, President, and Dan Johnson, Vice President, had been looking for a machine to satisfy larger screw production demands for over three years. This worldwide search included travel to Austria, Germany and Canada.

The new screw milling machine, (delivered in late April) that best fit Westland's need, however, was custom designed and manufactured in our backyard by AEI (Automation Engineering & Integration, Inc.) located in Hutchinson, Kansas.

With this addition to our plant, we can machine 8" screws up to 240" long. It also further enhances our ability to do complex screw designs. Using our 3-D modeling technology, we can create a new screw design in a virtual world and quickly move it from engineering directly into actual production.

This investment gives evidence to Westland's confidence and excitement about the future. It also further solidifies our commitment to providing quality product and service to our customers.

MACHINE MAINTENANCE

Prevent Wear While Keeping Energy Costs Down

Proper maintenance is vital to a plastics processing operation, as it helps in preventing premature and excessive wear. It can also play a big role in keeping energy consumption costs down.

The following information is general and includes universally accepted procedures that can prevent premature wear. However, we recommend you consult your machine manufacturers established guidelines for their recommended routine maintenance guidelines for your equipment.

ASSEMBLY & DISASSEMBLY

Special care must be taken when assembly and disassembly are required. These components have very tight tolerances and sealing surfaces that must retain the molten plastic at extremely high pressures and temperatures.

Before assembling a new or refurbished screw into a new

or used barrel, make sure both components are clean and free of any plastics or damage.

The screw must slide freely into the barrel by hand. If greater force is required, damage may occur to the screw and barrel during the first few hours of operation.

All seal faces, such as on the end cap and nozzle, must be clean and flat to provide a good seal against the mating part. Failure to do so will result in leaking of molten plastic, which can be harmful to anyone working around the machine, and

may cause damage to the components.

Due to the heat applied to these components during operation, it is necessary to apply a nickel based

anti-seize compound to all threads, bolts and screw drives before assembling. This will allow for these components to run together for greater lengths of time without seizing together, making it much easier to disassemble in the future.

END CAP ASSEMBLY

It is extremely important to tighten any sealing surface (end cap and nozzle) properly. The mating surfaces must come together evenly and square to provide a good seal.

When thread on end caps and nozzles are used, and torque wrenches are not available, extreme care must be exercised when tightening, keeping in mind that over tightening will cause damage to the sealing surfaces. (See the next page to request a copy of our end cap assembly instructions.)

Because there are differences in the thermal expansion in the steels that are used for barrels, end caps and nozzles, it is necessary to

Continued On Next Page

These components have very tight tolerances and sealing surfaces that must retain the molten plastic at extremely high pressures and temperatures.



Westland Corporation's New Screw Milling Machine

retorque the end cap bolts and nozzles after the machine has reached operating temperature.

REMOVING THE SCREW

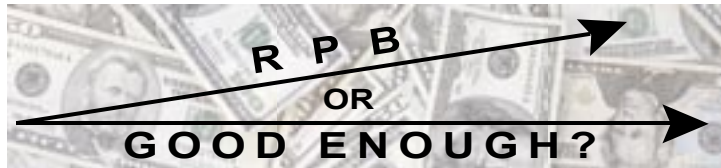
While the machine is at operating temperatures, purge all material out of the screw and barrel.

Using screw pull-back, retract the screw to its fully retracted position. With the hydraulic pumps off and all electricity to the machine turned off, remove the screw drive retainer and end cap (barrel head). Keep in mind these components are extremely hot.

Turn the power on to the machine and allow the barrel heat to reach operating temperature. Slowly inject the screw forward until it is in the full forward position.

Using screw pull back will disconnect the screw from the drive quill. Continue screw pull back until the drive quill is in the fully retracted position.

Place a bar inside the quill and use inject forward to push the rod against the screw, forcing the screw out of the barrel. This may have to be done several times to get the screw where it can slide out freely. Turn heater bands off and allow barrel to cool.



to the big dance and very proud they made it to the sweet sixteen.

Solutions Versus Improvements

When is good enough good enough! Consider the Wichita State Shocker basketball team. This past season they went to the NCAA tournament for the first time in many years. The Shockers even competed at the Sweet Sixteen level, but were defeated by George Mason University. The entire city of Wichita was thrilled that the Shockers were good enough to get

But, in the long run, was good enough, good enough?

What about your game plan? Is good enough how you characterize your processes throughout your organization? If so, it may be costing you more than you think!

THE SEDUCTION OF GOOD ENOUGH

In June of 2005, Seth Godin posted an entry titled "The Seduction of Good Enough" on his weblog. One of the points made was that humans tend to work on a problem until they get a good enough solution, instead of a solution that is right. Another weblog rephrased it by stating "much of what passes as advancement is really just a solution that was 'good enough' for the moment."

Compare that to what Godin terms RPB – the relentless pursuit of better. Godin states that RPB is the exact opposite of good enough.

GOOD ENOUGH STATEMENTS

Does your operation identify with any of these "good enough" statements?

"I've been running the same screw and barrel for years."

"The reject rate and/or energy costs are just part of doing business."

"A general purpose design screw will meet all my expectations."

"I'm running the best cycle time possible."

Screws and barrels that have been running for years are costing you money. As little as .005 of an inch wear on a screw or barrel can mean thousands of dollars lost in production. By simply welding the flights and rechroming, a rebuilt screw reduced one of our **Continued On Back Page**

**For A Free Copy
Of Our End Cap
Assembly
Instructions
contact**

**Westland
at
800-247-1144**

or email your request to:

**westland@
westlandusa.com**



DO YOU KNOW?: Honolulu, Hawaii has the smallest difference in pressure extremes. For the continental U.S. it is San Diego. The largest variations between record highs and record lows is found in St. Paul Island, Alaska. In the continental U.S., Charleston, SC holds the record.

From www.extremeweatherguide.com and EXTREME WEATHER: A GUIDE & RECORD BOOK by Christopher C. Burt, published by W.W. Norton Co, New York.

**Continued From Page Three -
Good Enough?**

customer's RPM by 28%. This reduced the melt temperature along with cycle time from 49 seconds to 38.5, with less than .05% scrap rate. The customer reported to Westland that the payback on this repair cost was just two (2) weeks.

You can turn an ordinary injection molding machine into a high performance one with modifications to your injection units through specially designed screws and barrels.

A Westland customer experiencing high reject rates was operating outside the recommended window of the resin manufacturer. Their special material required a residence time of no more than 1.5 minutes to have minimum degradation.

Westland recommended, designed and manufactured a downsize set, taking the size of the injection unit

from a 32mm to a 28mm. This also reduced the ounce capacity from 3.5oz to 2.6oz.

The end result was a residence time of 1.40 minutes, versus the 2.41 minutes previously experienced. This molder reduced their scrap rate by 30%.

The relentless pursuit of better won out over good enough.

A rebuilt or specially designed, high performance screw can mean the difference between just maintaining versus improving your process and profits. In today's competitive market, good enough will not keep up with the continuing scientific advancements being made in resins and their processing.

Call us today to discuss how we can help you go beyond good enough. You will benefit from our commitment to the relentless pursuit of better!



**Is Your Process
Just Good Enough?**

**Are you running with worn
screws and barrels?**

**Send your components to
Westland for a complete and
thorough inspection.**

**We will quote you the repairs
needed to bring your process
and profits back up to speed!**

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