

Energy Savings & In-Line Wire Drawing

The first In-Line Wire Drawers were designed and built in an era plentiful and cheap energy. But those days are gone. Today every company is energy conscious, yet many still rely on hydraulic in-line drawers built 10 to 30 years ago for their production lines. And while these machines, robust as they are, still function, they are consuming up to twice as much electrical energy as the new VF drive machines. RMG has created an energy comparison sheet that can be used to calculate approximately how much energy can be saved by updating to VF drive technology. This is not new unproven technology, RMG has been building machines with and customers have relied on VF drawers since the 1990's.

Visit the **Reps** area of the RMG website; rmgfelm.com for the Energy Calculator



Model 56
with Descaler

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A Case Study - Descaling and Drawing

Equipment:
FSS6500 Rod Flipper
MD10 Descaler
Model 56 Inline Drawer
Model 16 RMG Straighten & Cut

Application:
In March of 2009 we sent out an email regarding a successful demonstration of a descaling and multiple drawing line for a customer in Pennsylvania.

Their justification for the line was based on using hot rolled rod vs. finished wire. Their potential savings for material was expected to be .07 - .11 cents per pound. Their product is powder coated and chrome shelving racks.

In June of 2009 they purchased one line for an application using .250" and .359" diameter green rod for finished wire diameters of .177", .192", .212", .301" and .312" with the largest area of reduction being 53%. Their total annual consumption for these wire sizes is 7,983,200 lbs. In addition to the inventory reduction of 5 coil sizes to 2, the total annual savings are expected to be **\$560,000** at the conservative .07 cents reduction per pound using green rod.

The total cost for the line was \$115,000. They received the equipment on September 1, 2009 and were running by September 15, 2009.

Obstacles:
It took 4 visits over the period of 9 months to

receive approval for the purchase of this first line. Some of the concerns were safety, environmental (dust and debris from descaling), space requirements and their current wire supplier stated "they had no idea how complicated it would be to draw in-line". The biggest hurdle was from corporate; *"the savings are too good to be true"* and *"if the savings are accurate we would have done this 20 years ago"*.

The safety concerns were overcome with the explanation of our safety interconnects for the equipment and guarding. They purchased a dust collection system for the MD10 and the inventory reduction allowed them the additional space required.

They also had the opportunity to visit one of our customers in Ohio who has been using this equipment for 15 years successfully and is a supplier of their own green rod. This was the reinforcement needed for corporate approval.

Results:
This customer had anticipated it would take 6 months to prove out the process for all 7 finish diameters. They successfully completed production of all 7 sizes in December 2009, 3 months ahead of schedule. Their existing wire supplier was present for *continued page 2*

A Case Study - Descaling and Drawing; con't

the final test and said he had been proven wrong regarding the "complications". **Their savings for the last quarter of 2009 were projected to be \$136,000.** A part of the success for this line was helping them find a supportive draw die and lubricant supplier since they had no experience with drawing.

We had originally been told that if all of the testing went as planned they would **start** discussions for a second line in June 2010. We delivered a second triple draw line (cost \$130k), in June 2010 that is starting with .218" rod and finishing at .124", feeding into an existing Model 15 that will have a "Clutchless" retrofit

kit installed this October. Each drawer has a double draw box and the largest area of reduction is **70%**. They have been successful in bending and welding the final product without any problems. This additional range in capacity brings the total possible weight processed per year to 8,978,600 lbs with a potential savings of **\$628,000** annually. The only limiting factor is throughput capacity; may be more lines to come.

Opportunity:

Their engineering department is now looking into reducing some of the wire sizes used for shelving products. Due to the significant increase in tensile

strength they might be able to use smaller diameter wire and yet maintain the integrity of the support. They are also looking into bringing back some of their product from China because of the material savings.

Other Markets:

Recently we have sold similar lines into the gardening product and automotive seat component markets. We believe the shopping cart, pet cage and lawn care/snow removal product markets are also great candidates for this application.

Kirk Prosser, V.P. Marketing and Sales, RMG

These vendors helped in making the Case Study descaling/drawing line a success. If anyone has any sources they would like to share for these products or other products you think might be of interest to the group, we would be happy to add them to the list.

Nucor Steel Connecticut

Contact: Coreena Frashefski
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Phone: 800 221 0323
Email: Coreena.Frashefski@Nucor.com

Aztech Lubricants

Contact: Michael Colvin
29047 State Hwy 59, Wayne, OK 73095
Phone: 405 310 0034
Email: mcolvin@aztechlube.com

Paramount Die Company

Contact: Ron Garceau
Wire Drawing Systems and Descalers
1206 Belmar Drive, Belcamp, MD 21017
Office: 508-867-6324
Company: 410-272-4600, EXT 206
Email: RGarceau@paradie.com

As I See It Current Industry Trends

There is universal acceptance that the recession is over, however there is universal agreement that we're not going back to business as usual.

Industries, regions, companies, etc. are all returning to activity at different rates and to different timetables. It is hard to predict.

In our core industry, machine building and capital equipment, we are seeing a delayed recovery. Primarily this is due to two main reasons;

1) the business of our customers has not returned to prior levels and they have sufficient capability and capacity to meet their current customer needs and 2) productivity has increased during these lean months and companies can do more with less. During the recession many industries downsized operations, not only people but machines and equipment too. Now as orders come in they can perform profitably at a lower level of sales.

For our business to grow we need customers that require more capacity, new capabilities, better productivity, safer operation and possibly energy savings. These will drive new machinery sales in the near term and are the things we can offer our customers.

Kirk Snyder, President, RMG

This Month's Q&A

Q: Can an older RMG/ GC Patterson or Lewis Machine Straighten & Cut (S&C) Machines be converted to Clutchless Cutting Technology?

A: Possibly. All RMG/ GC Patterson S&C machines built after 1993 can be converted. Most stationary shear Lewis Machines of the mid 1990s vintage or later that utilized a Hillard or Warner clutch/brake unit can also be converted to Clutchless Cutting Technology. Rule of thumb, if the machine does not use a large flywheel on the cutter (shear) drive it most likely can be converted. Since Clutchless Cutting Technology requires

the cutter's rotational mass to be started and stopped on every cycle, machines with high mass cutters (flywheels) are not good candidates for conversion. Power requirements on these types of machines would be high and the cutter's performance would be very sluggish at best.

The benefits of Clutchless Cutting Technology include less mechanical complexity for better; reliability, reduced maintenance, greater machine up-time, reduction in noise and increased productivity.

Mike Kern, RMG Engineering