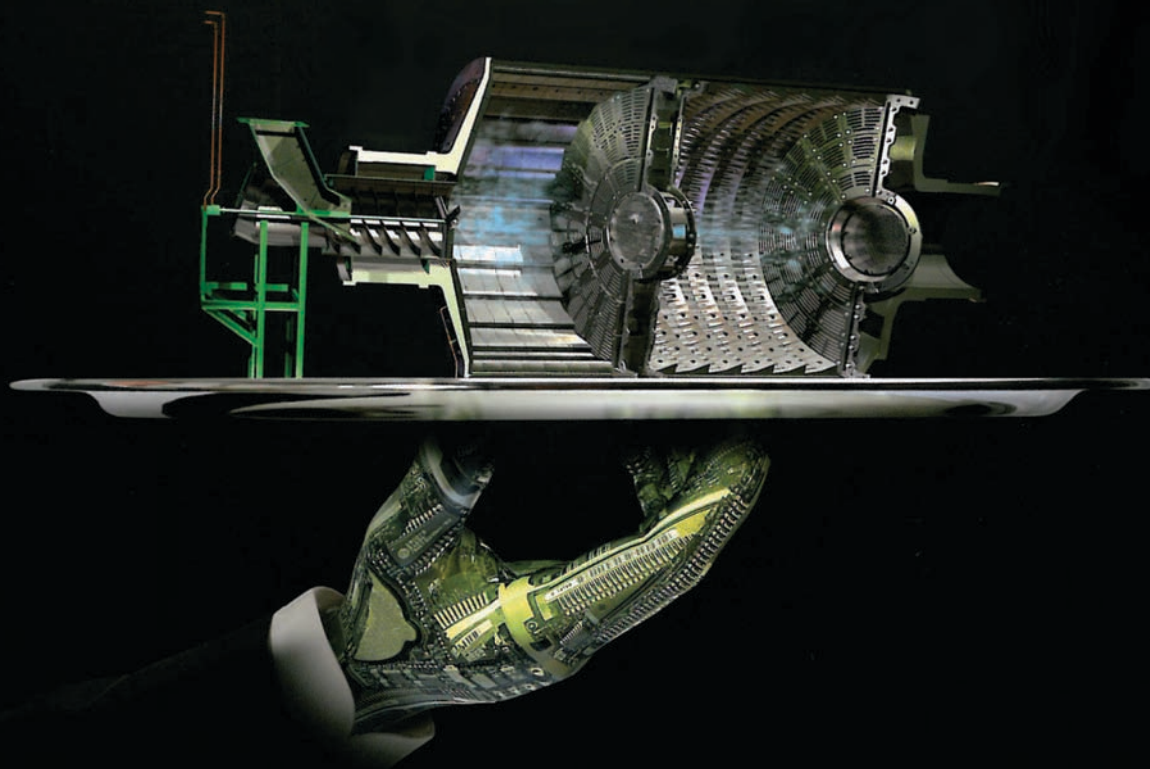


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# Be Prepared

Coleen Machiel Burdge,  
Bricking Solutions,  
USA, gives a personal  
view on why taking  
preventative measures  
is the best way to  
eliminate potential  
problems in the kiln.

## Introduction

Growing up I couldn't figure out why my Mom had a preoccupation with wearing clean underwear. I'm certain you've all heard it, "Make sure you have clean underwear on in case of an accident." What was she thinking? I think her main focus really had nothing to do with clean underwear. It was her loving, caring way of teaching us the importance of being prepared, to avoid problems before they occurred. As I look back on all the lessons my Mom taught me, this has been the most important and useful one.





## Preventative measures

In order to avoid any problem before it occurs, there must be preventative measures in place. A yearly physical and bi-yearly teeth cleaning are preventative forms of medicine to ensure our health. We take our cars in for oil changes and have tune-ups before long trips to prevent major



Figure 1. 1978 Expand-O-Ring.



Figure 2. Pre-assembly of EOR during machine evaluation at Essroc Picton in Canada.



Figure 3. New Flat Deck Easy Flex FDMOR for the Lafarge Harleyville plant.

problems while driving. Our computers can be scheduled to automatically run virus checks and system evaluations to ensure they are in good working order. The world around us is full of preventative symbols. There are stop signs and traffic lights to create order and prevent accidents. Caution and danger signs warn us about unsafe areas, trying to prevent a mishap and keep us safe. Cement plants use sophisticated computer scanning systems to watch for hot spots in a kiln that could cause emergency shutdowns.

## Saving money

The main focus of avoiding problems before they occur is directly related to reducing costs. The current economic climate in the US has everyone on alert seeking ways to stretch the dollar. All preventative measures aid in recognising possible issues or problems before they become major setbacks. Preventative maintenance or repairing current equipment rather than replacing or even upgrading can make a substantial impact on any budget. Frankly, such tasks should be carried out even during economic upswings. The truth is it is more cost effective to pay US\$30 for an oil change every three months or 3000 miles than to replace the engine because it seized up due to lack of oil. Simply being prepared can reduce monetary outgo.

## Emergency shutdowns

Every plant manager knows the importance of avoiding emergency shutdowns and the pressure of the ticking outage clock. They have taken the steps to ensure the proper refractory type and size has been purchased. They have researched the most innovative bricking machine on the market to install the refractory properly. They know quality installation of proper refractory materials equals longer refractory life, meaning fewer emergency shutdowns.

Even though the average bricking machine is "built to last" and can take quite a licking and keep on bricking, without proper preventative maintenance and repair it too can seize up. With a little more than an ounce of prevention, those emergency shutdowns and outage clock pressures can be almost eliminated. Preventative maintenance and repair hits a chord even more important than monetary savings – that of safety. What plant manager would not want to look after his crew by providing the safest environment possible with regular preventative maintenance and repairs of modern refractory installation equipment?

## Customer support

In the later part of 2008, Bricking Solutions began strategising the best way to support customers during the economic crunch. As a company that has always designed and engineered custom equipment to meet the needs of its customers, it also has a 40-year history of standing behind everything it manufactures. Choosing to take that up a notch, the company decided the best way to support any customer would be to also stand right next to them. As a support system, it would ensure its modern refractory installation equipment was at peak performance at each and every outage by offering a Pre-Outage Bricking Machine Evaluation and Repair Service for older models along with the long standing New Machine Commissioning and Training Programme.



Since November 2008, Service and Repair Technicians have visited thirteen North American cement plants as well as one in Luxembourg. Their main objective has been to ensure customers achieve the optimum usefulness of their modern refractory installation equipment while giving their crew the upper hand for the safest and best possible re-bricking campaign. During the basic two-day evaluation, the Service and Repair Technicians lead the crew in pre-assembly of the bricking machine while training them on the safe assembly and use of the machine. An inspection and evaluation of frames, castors and brakes, planking, fall protection, lights, and other equipment allows the technician to suggest parts needing repair as well as a review of possible upgrades to better and safer (newer) technology. The machine is also evaluated to ensure all components meet, if not exceed, all safety requirements for that area. The evaluation is then presented to the plant in a comprehensive report showing necessary repairs to bring the machine up to working standards as well as any upgrades or other equipment to increase safety, speed and quality of refractory installation.

Of the fourteen machines evaluated, the oldest one was built in 1976 and the newest one was built in 2005. All plants participating in the evaluation programme thus far made the decision based on the economic climate; purchasing a new machine vs. repairing current equipment. Most evaluation reports focused on replacement of worn-out parts as well as noting missing

spare parts to always be on hand. Very few structural issues were found, even on the older machines. Many of these needed updated safety features, such as fall guard protection. In cases where parts needed fabrication, the technician took measurements to ensure replacement parts would fit. All but one evaluation took place on site at the plant. One machine was sent directly to Bricking Solutions for an in-house evaluation.

The evaluation and repairs reported by the technician cost an average of US\$6518. Only one plant chose to upgrade its 1978 Expand-O-Ring to a new Flat Deck Easy Flex FDMOR for its updated safety features. Using the cost of this newer machine, the other thirteen plants saved 90% based on their choice to repair their current machine rather than upgrade. Not to mention the amount they already saved by choosing a bricking machine known for its safety features, quality installation increasing refractory life span, and installation speed reducing outage time.

## Conclusion

Proof is in clean underwear. By being prepared, as Mom taught them, the fourteen plant managers not only created a safer environment for their crew, but also made a significant impact on their budgets. Whether times are tight or the sky's the limit, preventative maintenance and repair provides any plant with an opportunity to eliminate potential problems prior to entering the kiln. A 90% saving on any budget is evidence of smart business. 📍



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