What's happening IN MASONRY

Gary Porter, Executive Director of the Masonry Advisory Council is called upon with questions about construction concerns and for masonry advice from a variety of Architects, Engineers, Contractors, Developers and Distributor sources. He is dedicated to ongoing education of masonry and shares helpful tips from his professional experience that may be beneficial to you.

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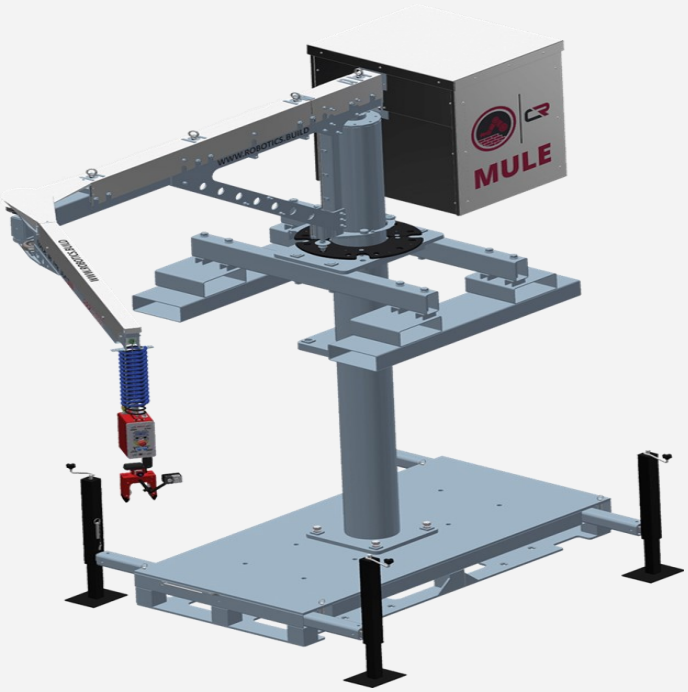
The Mule

I recently attended the National Concrete Manufacturers Association (NCMA) annual meeting which was held in conjunction with a machinery expo displaying concrete block making machinery and other associated equipment. This is where you usually see new inventions in the masonry industry. A few years back a company named Construction Robotics, displayed a machine called SAM (Semi-Automated Masonry) which was a bricklaying robot. This machine was designed for "brick" laying and can lay 4 times what a normal mason can in the same duration. My question was where is the machine for laying concrete block?

Brick can range from 2-3 pounds to maybe 10 pounds, but concrete block are much heavier. An 8" concrete block weighs about 35 pounds. So laying concrete block all day takes a greater toll on the body than laying brick all day. It has been in development for a few years, but Construction Robotics has a machine that is designed to assist a mason in laying concrete block. This machine is called the MULE which stands for Material Unit Lift Enhancer. This machine can assist in the lifting of concrete block up to 135 pounds. I was able to experiment and lift many block and set them down. The real lifting is done by this machine. The mason just needs to guide and set the concrete block in a bed of mortar.

This machine can save a mason's back and possibly avoid a workman's comp claim for a strained back. At the demonstration of this device at the convention, I did not get to actually lay the concrete block in a bed of mortar, but I can envision a pair of mason's, one spreading the mortar, while the other working with the MULE, to be very productive. I think one person needs to be working the MULE continuously to get the full benefit of this machine.



There are videos of the MULE working at:

www.construction-robotics.com/

The creators are saying an increase in production of 4 times! This needs to be evaluated considering the composition of the crew using the device. I think this additional production may be possible and even more so with heavier units. They are saying a return on investment of 6 months. Once again this depends on if you are using this device every day and what your labor costs are.

Another item worth considering in evaluating the effectiveness of this machine is that many construction articles I read lately are mentioning an aging work force, a lack of young people going into the trades and just not enough workers. This machine may not solve all these problems, but it does allow someone who cannot lift heavy objects to now be capable of doing that. The available pool of potential masons just grew a little larger. If one of these devices were available back when I was laying concrete block, maybe I would still be laying concrete block? Also, there would be less worker comp claims, rotator cuff, hip and back injuries for the many workers whose bodies just wore out from repetitive heavy lifting.

Like SAM the bricklaying robot, the MULE has a unique place in the masonry world. This is not going to take away all concrete block laying jobs, but it may be an effective tool to aid by making a difficult task a little easier.