



# BRICKING SOLUTIONS

A DIVISION OF **BROKK®**

## Chile's use of a New Conveyor

Bricking Solutions Conveyor systems can operate at lengths ranging from 10 feet to more than 250 feet (3 to more than 90 meters). The hydraulically powered conveyor is able to operate in either direction at variable speeds, and is very reliable. Furthermore, either the hydraulic or electric conveyor can be assembled and disassembled very quickly and easily. For example, two men can easily assemble a 100 foot (33 meter) Bricking Solutions Conveyor system into a rotary kiln in 30 minutes.

When used on tearout and relining jobs in rotary lime kilns, we estimated that our conveyors typically reduce time required by 25% or more. There are many reasons for these savings. Materials are moved in and out of the kiln faster and more safely than is possible with other methods. Furthermore, because our conveyor systems can run right under functioning bricking machines, they allow brick to be laid at several places in a kiln at the same time. Also, on some jobs the use of a Bricking Solutions system avoids the need to pull the kiln's burner.

There are also safety and quality reasons for using our conveyors. They eliminate the need for forklift or skidsteer traffic in the kiln, thus eliminating carbon monoxide emissions and avoiding the possibility that vehicle traffic will damage or loosen bricks. Also, reduced vehicle and human traffic in the kiln greatly reduces the amount of dust that is blown down the kiln at the men laying the bricks. There is also less noise, less heavy lifting, and fewer injuries. As you would expect, our conveyors are generally very popular with masons.

The first Bricking Solutions belt conveyor in Chile was delivered five years ago to Cemento Melon. The purpose with purchasing this device was mainly to speed up the transport time of bricks into the kiln, which, due to difficult access, was a bottleneck when relining the kilns. Secondly, the plant considered that with a belt conveyor, more bricks could be brought into the kiln faster using less labor.



After having used the belt conveyor for the first time, the plant personnel commented that the number of damaged brick had decreased to almost nil. Compared to the old method using wheelbarrows for the transport, the belt conveyor contributed to better installation quality by reducing manhandling of bricks.

Since delivery of the first units to Cemento Melon, local contractors have also started using belt conveyors. With few exceptions, all rotary kiln relining's in Chile are made with the aid of conveyors for brick transport.

Timewise, the mucking out of demolished brick, e.g. in Celulosa Arauco is near twice as fast with the belt conveyors, compared to using wheelbarrows. For bringing brick in to the kiln, one person loading and one person unloading, bring a full pallet of brick into the kiln in less than 10 minutes. Add to this, that the bricks enjoy a "soft treatment" compared to other transport methods.

In Celulosa Arauco #1 kiln, the belt conveyor is also used for transporting brick up to the burn floor from the ground. Four sections (12 meters) of the conveyor are put in a 45 degree angle for the floor down. This enables the crew to keep a minimum of brick on the very cramped burn floor.



In summary, the benefits of the conveyor systems have been:

1. Reduced downtime, as distribution of brick to the bricking rig almost always is a bottleneck.
2. Reduced downtime, as mucking out of old brick is considerably faster
3. Productivity maintained and improved with less helpers, i.e. savings in labor cost
4. Less manhandling of bricks
5. Two people can easily carry and assemble the conveyor system. Time required will naturally depend on the length of the conveyor and the conditions in each job site.