GANG-NAIL GUIDELINES No.105

ANOTHER MITEK ADVANTAGE

BEHIND CLOSED DOORS

Electrical enclosures on reliable machines can stay closed for a long time, sometimes years, without a second thought. Do you know what's going on behind closed doors?

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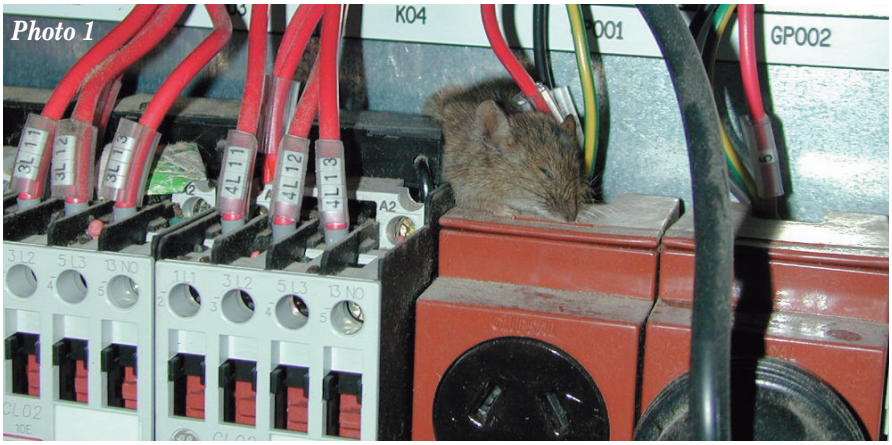
We all know that the factory environment can sometimes be a hostile one and truss and wall framing plants are no exception, particularly for a poorly maintained electrical enclosure.



■ *Rodents are fond of PVC insulation and a warm electrical cabinet.*

Wood dust, extremes of temperature, moisture, and rodent attack are very harmful to electrical and electronic components, and can lead to unscheduled downtime, costly electrical repairs, and in severe cases an electrical fire.

Sealing electrical enclosures and cabinets is essential to prevent ingress of dust and moisture.

Creating a 'positive pressure' in the cabinet using a small regulator can be helpful, but only where the supply of clean and dry compressed air is assured.

Preventing entry of fury critters like the one in photo 1 is important.

It's well known that rats and mice like the taste of PVC insulation. In some cases it may be necessary to lay bait around or even inside electrical enclosures.

Heat build-up is the trade-off to sealing your electrical enclosures.

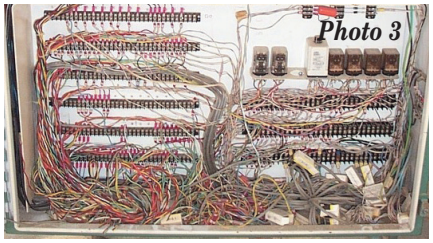
Most customers have little or no say in the type of cooling provided on their machines at the time of purchase, however if heat build up is a problem there are plenty of options available.

A basic fan with a filter pad is a low cost option that provides a moderate level of cooling, however the cabinet is no longer sealed and the filters clog quickly in a dusty environment. Such filter pads require regular cleaning.

Heat exchangers are a low maintenance, medium cost option that allow the cabinet to remain sealed whilst moving heat across a metal barrier.

■ *Electrical cabinet or personal locker? Electrical cabinet access should be controlled.*

Heavier cooling requirements will require higher capital outlay on a solution such as a vortex tube cooler, which runs on compressed air and has the added benefit of pressurising the electrical cabinet.



■ *Wiring 'spaghetti' can hide dangerous wiring faults and make fault finding tedious.*

Restricted access is important to ensure cabinet doors remain closed.

Apart from the safety implications, personnel access can have an impact on dust ingress into electrical enclosures (see photo 2).

Only authorised persons should be permitted to open electrical enclosures, and only while maintenance functions are performed.

Maintenance of electrical cabinets for both new and old machines should be common place in dusty environments.

All plants will already have a 'testing and tagging' schedule in place for electrical appliances in the workplace, and I encourage plant managers to expand this regime to include regular inspections of their electrical enclosures.

Gaps should be plugged, and dust removed with a vacuum cleaner. Using compressed air to blow out a cabinet is not advisable as it can blow saw dust deep into electrical components.

Wiring 'spaghetti' (see photo 3) and lack of labelling is common on older machines and should be rectified. Messy wiring can hide dangerous wiring faults and make fault finding tedious.

So for the sake of safety and efficiency, maintain your electrical cabinets and make it your business to know what goes on behind closed doors! TTN