ANDROMAT TODAY

Volume 2, Issue 3 September 2014

Wiring & Electrical

"It's a shocking experience"

Scott Wilson
Henschel Andromat Inc

Your Andromat contains several hundred feet of electrical wiring and cables. Every inch is critical to the proper operation of the manipulator. Just like the nervous system in the body, the wires carry the electricity to all the parts of the machine.

Many machines today utilize electrical signals from the operator station to interface with other electrical parts to create a movement or action. Like the Andromat, these machines have a "brain" which will receive the signals and send out resulting signals based on its programming. We often refer to these brains as PLCs or programmable logic controllers. Basically an industrial PC. Through programming, the PLC will answer the most basic question of "If this then what?". Of course today's PLCs can perform complex math instructions as well as high speed motor controls.

continued on page 2

INSIDE THIS ISSUE

1	Wiring and electrical
1	Brains and nerves
2	I thought I smelled something burning
2	Troubleshooting
2	Flex it out
2	Conclusion

Henschel Andromat Inc

Come To The "A" Team

160 Commercial Court

Alabaster, AL 35007

P- 205.664.2484

F- 205.664.2481

www.andromatusa.com

Colors of Fall

Andromat Today is a quarterly trade publication for discussing Andromat issues important to the end user. Each issue will contain useful tidbits of information as well as any news updates from the company. Look for your issue of *Andromat Today* in your inbox.

Not getting your issue? Submit your email address to *service@andromatusa.com* and we'll ensure you are added to the list.

Do you have a topic for *Andromat Today*? Send us what you would like to see and your name could appear in an upcoming issue. Send your requests to *service@andromatusa.com.*

continued from page 1

“I noticed a funny smell now my filter clogged indicator in on”

“The filters were changed last week so I doubt it is clogged. What did you smell?”

“It reminded me of the fires we use at home to burn the insulation off of old copper wires for scrap.”

Does this exchange sound familiar? As I am sure you guessed, this sounds like a wire has grounded and the result is a constant on filter light. Over time wires and cables can degrade. This is especially true of moving equipment. Vibration can cause a single wire to rub against a surface. Even a very small movement will eventually cause the insulation to be worn to the point of the copper conductors coming in contact with a metal surface. Then POW!, an arc of electricity coupled with melting insulation material.

What To Do?

Troubleshooting an electrical problem can be a daunting task if you’re unsure of what to do. The best tool you could have is a wiring diagram of the system. Running a close second is a multi-test meter; commonly referred to by a brand, “Fluke meter”. By following your schematic or road map, the multi meter will help you locate the source of the burnt smell, and ultimately the source of the problematic indicator. Once repaired, all will function as normal.

“The Entire Machine Is Down, I Think We Broke A Cable”

Cables can degrade and fail as well. We use multi conductor cables to provide a path for numerous signals to travel from point to point in a flexible package. In our Andromat, you will find examples of these cables in the azimuth area. These cables must be able to flex and twist as the machine rotates. From the factory, these cables are cut to specific lengths and placed in a particular fashion to allow for the optimum flexion possible. It is important to note that when replacing cables, especially in the azimuth area, to ensure the new cables are of the same or better quality. Also ensure the new cables are positioned in the same manner as original cables. Troubleshooting cable problems can be especially tricky. Again, use of the wiring schematic and a multi meter should get you answers.

‘the schematic is the same as a roadmap’

Conclusion

When you look at an electrical system, it may seem impossible to service. Remember to break the system down into its more elemental parts. Then concentrate on just the area giving you the problem. Use your roadmap and test meter and the solutions will follow.