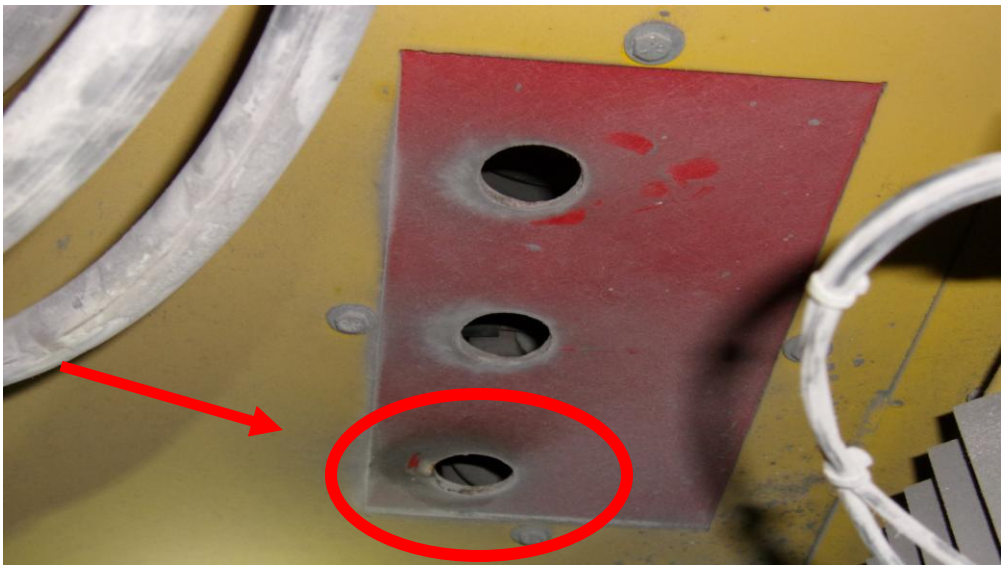
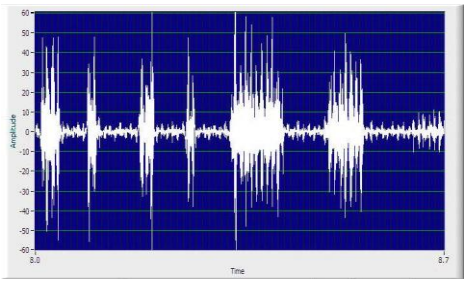
Ultrasound Analysis



- *Ultrasound can be used on a number of different electrical equipment to diagnose problems or prevent them for happening.*
- *Ultrasound can only be used to detect corona with systems at 1000volts and above. Tracking issues and arching can still be useful in all voltage zones.*

What can Ultrasound testing do for you?

What exactly is ultrasound to begin with? Ultrasound is used to detect the ionization of air due to the discharge of electricity through three major problems; arching, tracking, and corona.
Ultrasound listens for the ionization of the air and converts the sound wave into a readable sin wave to help determine the problem. The above picture shows a major arching issue that was found on the inside of a power center. The picture below shows an example of what arching looks like in a time series spectrum.



Long durations of discharge can be seen on the graph in this spectrum. This would be the period in which the actual discharge can be seen even visibly on the affected area.

As you can see in the above picture the arching is evident around the bottom insulator board. This is actually where the current is attempting to go to ground through the wire and the insulation on the cable to the board. The picture below shows the damaged insulation on the cable

As you can see the insulation was damaged on the cable causing it to arch and go to ground. All of this was found with ultrasound technology and was found relatively quickly. Once the technician realizes that there is a problem, whether it is arching, tracking, or corona, the problem area just has to be found and then fixed. In the case of this incident money was being lost on electricity that never made it into the machine. With routine simple checks with ultrasound problems like this and others can easily be prevented and fixed with minimal downtime.

Spend a little money now to save big money later.

Any questions feel free to contact Larry Massey
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