Primed and ready to spray

***World Aerosols* spoke to Prime Controls' Mark Mohn to understand the importance of aerosol can leak detection and to find out about the company's preferred method of detection**

Double sheet detection company Prime Controls has been providing products and services to the canmaking sector for just over 26 years. The family owned business claims that nearly all of the cans in the world have been inspected by their products; therefore making them the ideal people to answer questions about aerosol can leak detection.

Please introduce yourself for our readers. What is your background in the aerosols industry?

My name is Mark Mohn and I am the sales manager for the metal container division at Prime Controls, which is headquartered in Dayton, Ohio, USA. I have worked with air tester equipment for the food and aerosol canmaking industry for the past 23 years. My roles have been in sales of upgrade equipment, repairs, along with field training and installation support. I have been at Prime Controls for over 9 years, and was previously with Hyde Park Electronics for 13 years.

What is Prime Controls' involvement in aerosol leak detection?

Prime Controls has been involved in leak detection indirectly for over 50 years. Larry Tucker, our founder, used to work for Hyde Park Electronics, servicing and selling the leak detection controls for the Borden air testers. In the 1990s Prime spun off of Hyde Park, starting a new company dedicated to the can making industry.

In 2010, Larry determined the existing leak detection controls manufactured by Hyde Park (model MD2, MD3, and MD20) would soon be out of support, as they stopped supplying and servicing them. We also saw a need to develop the technology that was out of date to fit the times.

So, Prime developed the MD30 TestAlert System that retrofits current air tester leak detection controls (Hyde Park models MD2, MD3, and MD20) with the latest in technology. Prime didn't want to develop a "me too" product. Instead, we listened to what the industry was asking for and developed a system that provided aerosol can manufacturers with more information during the leak or hole detection process. The MD30 TestAlert is also used to better troubleshoot the air tester and keep it at its best performance.

Why is leak detection so important for aerosols producers, and is it a growing concern?

Leak detection is a crucial part of the can making process. To ensure a quality final product, the canmaker must be able to guarantee the can is free of leaks or holes that could compromise the end product. Leak detection is the last line of defence from a bad can making it to the filler and/or customer. In order for aerosol can manufacturers to maintain customer satisfaction and loyalty, while reducing the risk and cost of replacing defective goods or even worse, a refused shipment; aerosol can producers must make certain their products are free of defects.

Backed by 25+ year of experience, Prime Controls is a world-leading provider of metal sensing solutions for the canmaking industry

Get the most out of your Borden Air Tester with the MD30 TestAlert Leak Detection System

Why did the current leak detection system replace the obsolete MD2, MD3 and MD20 controls?

The old MD2 and MD3 systems were developed in the mid-1960s as the first electrical method of testing on Borden air testers. The MD20 system was developed in the mid-1990s and was being phased out by its manufacturer, Hyde Park Electronics. Prime felt it was time to develop the next generation of these products to incorporate the latest in technology and better improve the performance of the systems, and were in a unique position to do so. Our founders truly understood air testing. This deep understanding of the leak detection process enabled us to step in and answer the market's need for an updated system.

How do the complete light and air tester controls work?

Light testing and air testing are two different methods of testing for two different types of containers.

Light testing is used for 2-piece cans where there are no seams, and where high speeds are required. The can is put into a rotary machine which puts the open end of the empty can against one of our sensors (model LT20). The can moves on the machine past a bank of our LED lamps (model LT102), and if there is a hole, our sensor sees this small amount of light and provides a signal that a defective part is present.

Air testing requires more time and is the only reliable method of testing a can with a seam (3-piece). There are different methods of testing, but in our instance, the can is sealed inside a larger pocket and then pressurised with air. If there is a leak in the can, pressure builds up in the pocket, outside the can and is detected at a point on the machine.

Specifically engineered to upgrade three-piece can leak testers with the latest in technology, the MD30 TestAlert replaces older obsolete controls such as the MD2, MD3 and MD20

How are leaks detected in aerosol cans by the controls?

Our system controls many of the necessary functions of the machine including controlling the infeed, tracking the can through the machine, charging the can with air, detecting leak pressure in the pocket, rejecting the bad can, and verifying the bad can has been rejected. The MD30 TestAlert system keeps track of which pocket of the machine the leak comes from, and is able to tell the operator if that pocket is becoming faulty before it fails, along with a wealth of other diagnostic information.

Is there a particular method of can leak detection that works better than others and if so, why is that?

I believe that Pocket Testing which is used by the Borden/Alcoa/Randolph tester is the best method of testing because a lower pressure sensor can be used that has a much better level of resolution at a low pressure. The MD30 TestAlert will easily detect a leak of 0.050psi (3.4mbar). Other methods of testing, such as decay testing, require the transducer to measure the full 100psi (6.9bar) pressure, and a small leak is difficult to detect. Prime Controls also has solutions for decay testing.

Is it ever possible for problems to occur when testing for leaks in an aerosol can?

Most of the problems that occur, and where we spend the majority of our time helping the customer, is with mechanical problems. Our system is completely electronic, but interfaces with and points out problems with the mechanical machine. For instance, when you take your car in to get checked out, they hook it up to a diagnostic machine, which then points out issues that are occurring in the car. This is very similar to the type of information the MD30 TestAlert system provides. Some of the diagnostic information that proves helpful to aerosol can manufacturers is information about how they can maintain their machines. For example, since the air tester needs a good seal to detect a leak, the seals are critical to keep all pockets on a machine consistent. This consistency greatly improves the company's ability to detect the smallest leak possible. That is where our system shines. We not only detect leaks (holes), but we can notify the can manufacturers when its time to schedule preventative maintenance.

What type and make of aerosol can does Prime Controls typically work with?

We work with all sizes and shapes of 3-piece aerosol cans, supplied by the major aerosol canmakers. The MD30 TestAlert System is installed all over the world. It is trusted by all the major aerosol can manufacturers. As these plants invest in improving their operations, they find the MD30 TestAlert replacement provides an easy way to improve.

For more information visit:
www.primecontrols.com/canmaking