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Sorting And Containment Services Using Radiography

Mike Forbes

Lab services can help guard against a product defect is not discovered until well after the part is already on trailers, in transit, on the customer's floor or in assembled products such as vehicles.

Despite all the planning and due diligence in the pre-launch control plan, production issues can occur. While adhering to JIT and lean manufacturing principles can lower production costs, the necessitated minimal inventory volumes can magnify the cost of faulty products entering the supply chain. Often, a product defect is not discovered until well after the part is already on trailers, in transit, on the customer's floor or in assembled products such as vehicles. However, a lab services team can travel to the location of the product to provide on-site inspection, sorting and containment services to minimize possible production disruptions.

Real-Time Radiography

Real-time radiography is a non-destructive testing method that is capable of viewing a radiographic image in real time without the hindrance of developing film or having to deal with hazardous chemicals. It has the capability to magnify the area of interest, making the interpretation of an indication a much easier process. This process is called micro focus.

When a product has been quarantined or contained, radiography is a method that can be utilized to sort the product, separating the "flawed suspect" and verifying "good" product. Real time is a more cost effective method, since multiple parts can be ran continuously without the material cost of film and chemicals.

Types of Product Sorting Utilizing Real-Time Radiography

- Aluminum Cast Products
- Electrical Components, i.e. bad connections
- Enclosed mechanical devices, i.e. missing components
- Dense material contaminate, i.e. food products, screws/metal shearings
- Circuit boards, i.e. bad soldering points, missing components
- Numerous other nonconformance issues

Real-time radiography is not without limitations, but is a very efficient methodology. Some of the limitations are due to the density of products surrounding the area of interest and the permanent record is not as clear as film radiography. However, flawed products can be sorted and further examination can be performed utilizing other methods.

Regardless of the issue, sorting numerous amounts of product in a quick, clean, safe and cost effective way keeps the supply chain moving without having costly downtime or shutting down a major supplier.