SEAWARD
ELECTRICAL SAFETY TESTING
& MEASURING.

What is Manufacturing Safety Testing?

The term production line, or Routine testing refers to any particular set of tests performed at the end of a production line, usually on completion of the manufacturing process. The most common and ultimately the most important part of this process is the electrical safety test, and this is where the Seaward range of production line testers operate.

It is generally expected that the item under test will be safe by design and has therefore been subjected to Type testing in conjunction with relevant approval agency requirements such as UL (Underwriters Laboratory) or BSI(British Standards Institute). The purpose of the production line electrical tests are to highlight any defects in the product prior to shipping to the end user. Such defects can be due to faulty or incorrectly specified components, incorrect wiring, damage to conductive parts due to crushing or pinching of cables or poorly spaced parts. All of which could have occurred as part of the production process, from component purchasing through to the manufacturing procedures and operator training.

There are usually two core elements that make up the production line electrical safety test requirements;

1. Earth / Ground Bond Testing - To ensure that Earthing, where required, has a sound connection to the Chassis of the product under test. This ensures that if the insulation of the product were to fail, a path to ground exists that is capable of carrying the fault current.

2. Dielectric Withstand / Hipot Testing – A stressing of the insulation, by deliberate application of high voltage, to the product under test to ensure it

is capable of withstanding an over voltage condition without causing a breakdown of the insulating properties.

In addition to the core safety tests it may also be desirable to the manufacturer to perform a number of functional tests in order to prove correct operation of the product. For example -measuring the power of the item under test can ensure the correct components were fitted and that the unit is fully working.

If you require more help, please contact us at https://www.seaward.com/de/enquiry/.