CRACK TESTING WITH ACCURATE LENGTH AND DEPTH MEASUREMENT

Magnerscan is the trademark used for a testing system, developed by us, to enable the on-site examination of tanks and vessels, primarily in the liquid food processing industry, for defects such as cracks and pinholes that may cause contamination of the finished product. When defects are detected, they are normally repaired on the same day in order to prevent proliferation of bacteria in the defects (cracks and pinholes).

Magnerscan is a method of detecting defects, such as cracks, incomplete weld fusion, corrosion cavities, porosity and other defects that may cause contamination and/or cross-contamination of the finished product in stainless steel pressure and non pressure vessels. The Equipment comprises a multi channel scanning system in order to enable a quick and sensitive scan across large surface areas. Also attached is a single channel probe system to enable scanning of small areas, such as corners and pipe attachments, normally inaccessible with the multi channel system.

In the past, dye penetrant techniques required the vessel to be removed from service, CIP Cleaned, access equipment erected and Chemical Dye Penetrants sprayed onto the surface (requiring breathing apparatus and subsequent removal from site by disposal experts in order to carry out testing). Such procedures resulted in lost production time and the possibility of introducing chemical contaminants into the product path of the vessel.

KEY BENEFITS OF MAGNERSCAN OVER OTHER TEST SYSTEMS

- ✓ Easily transportable 1 man operation. 200 times faster than eddy current test
- ✓ Inspection gives immediate results without degreasing the surface
- ✓ Very high protection level when testing regularly and generating test Certificate
- ✓ Inspect large surface areas quickly using array of unique sensors
- ✓ User friendly equipment having audible and visual crack detection alarms
- ✓ Sensitive to small cracks and pinhole defects
- ✓ Unlike dye penetrant, this method also ignores scratches
- ✓ Inspects complex shapes and sizes such as nozzle attachment pipes, around a fillet weld, internal probe areas using swan neck scanner

MAGNERSCAN METHOD

The method has been developed by EIT International as an alternative and more cost effective testing method to dye penetrants. The method is able to detect surface and sub surface defects electronically, without the use of harmful or non-food safe chemicals. The system is able to detect defects by swiping the scanner across the examination surface, then either listening or viewing through visual and audible defect displays. Sensitivity can be checked against standard cracks in an approved stainless steel test block having simulated cracks at varying depths.

The scanner heads are to be placed on the surface, in order for the system to recognise the construction material of the vessel.

There are ten sensitivity settings for this instrument, to ensure detection of large through defects at the lower end of the scale, and small surface defects at the higher end of the scale. In some cases, the client may only require the detection of large through defects.

Scan across 100% of the examination surface by swiping the probe, ensuring overlap of the scanning heads, this is to ensure 100% coverage of the vessel.

Contact EIT International today, email: enquiries@eit-international.com