

MFL TANK INSPECTION PREPARATION.



What preparation is required before a magnetic flux leakage (MFL) tank inspection takes place?

To successfully conduct an MFL tank bottom inspection certain plate conditions must be met and preparations carried out.

First off all the product must be drained from the tank and the tank should then be cleaned to a satisfactory standard.

Cleaning techniques will vary depending on the type of product stored in the tank, the time since the tank was last cleaned and opinions held by the engineer in charge of the cleaning operation.

Acceptable cleaning methods of non-coated tank bottoms include shot blasting, grit blasting / sand blasting, high pressure water jetting, ultra-high pressure water jetting etc.

The media used in the blast cleaning process should be removed from the tank floor before the inspection takes place. It is very difficult to completely remove all of the shot from the surface of the floor.

Two problems can occur if the MFL scanner passes over any loose shot or any other loose ferrous material.

a) The shot will become embedded in the scanner rollers and cause excessive vibration.

b) Spurious defect indications will be detected / recorded if any shot passes underneath the sensor head. The aim of the cleaning process is to remove any contaminants such as product residue, corrosion build, scale and loose ferrous material from the surface of the tank floor which can affect the quality of a MFL inspection.

Product residues can also give off toxic or flammable gasses. The floor should be clean enough for a good visual inspection (you should be looking at the surface of the steel, not a layer of product residue / scale etc).

Surface oxidisation / rust will not present a problem for MFL inspections.

Coated tanks are generally far easier to clean, if the coating is in a good condition then a simple sweep of the floor can be sufficient. Silverwing's range of MFL scanners are capable of inspecting through non-magnetic coatings.

ACCEPTABLE CONDITIONS



UNACCEPTABLE CONDITIONS

