ATEX Directive 94/9/EC and the Fuel Oil Delivery Truck

Mechtronic over the past 6 months have been fielding telephone calls relative to the conformity of our and other manufacturers metering systems fitted to fuel oil delivery trucks relative to the ATEX Directive 94/9/EC. In order to clarify the situation I have issued a statement which is published on our web site that confirms that all of Mechtronic's equipment meets all of the required standards and directives. I have also tried to answer many of the questions put to me regarding this subject as follows.

Due to the complexity and misinterpretation of the ATEX Directive 94/9/EC new guidelines have been produced and issued labelled 'ATEX Guidelines 3rd Edition June 2009' a copy of which can be downloaded from
http://ec.europa.eu/enterprise/sectors/mechanical/files/atex/guide/atexguidelines_june2009_en.pdf

The guidelines cover both electrical and mechanical equipment.

The ATEX directive covers equipment that is to be used in a 'potentially explosive atmosphere'. As far as Road Tankers are concerned the tank truck is only in a 'potentially explosive atmosphere' when:

1) The tank truck is loading.
   Loading is defined to be the period between when the master switch is turned off, hose couplings have been made between the gantry and tank truck and once loading has finished, the hose couplings have been disconnected and stowed, tank truck valves capped and master switch turned on. Even though the tank truck is still on the loading gantry the area around the truck is now deemed to be safe, i.e. not in a potentially explosive atmosphere.

2) The tank truck is discharging Petroleum Spirit.
   Again discharging is defined to be the period between when the master switch is turned off and hose connections are made and finished when all hoses are stowed and valves capped and master switch turned on.

All of Mechtronic's equipment is powered from the switched side of the Master Switch and therefore electrically dead when in a potentially explosive atmosphere. As the equipment is not intended for use in a potentially explosive atmosphere it does not fall within the scope of the ATEX directive 94/9/EC (Paragraph 3.7.1). As such and in accordance with the guidelines 'shall not be classed as ATEX equipment nor be marked according to Directive 94/9/EC'

Due to the very nature of the tank being part of a vehicle it is totally impossible to ATEX certify the whole truck. ATEX certification of an internal combustion engine, alternator, starter motor, engine management system, lights etc., would be totally cost prohibitive and technically demanding. It was against this back cloth that the industry made regulations to minimize as far as practically possible the hazards encompassed within the truck. The introduction of fire screens, double pole battery master switches etc., have all come about in an attempt to make the truck as safe as possible within the confines of practicability but the truck still remains the weakest link in the chain. Totally killing all power to the truck when in a potentially explosive atmosphere has been and still is the best and most

effective way of ensuring safety. By following this method Mechtronic Ltd and the other equipment manufacturers have complied with best practice.

Other areas of Europe due to local standards and legislation and indeed different operational requirements need to have the equipment live and working in a potentially explosive atmosphere. To do this the equipment must be ATEX certified. Once certified this equipment can of course be used in any operating environment. People will argue that this does give an increased level of safety but when everything is electrically dead, including the ATEX certified equipment, the argument does not make a lot of sense. It makes even less sense when it is considered that this equipment is working along side all of the other truck equipment that is not and can not be certified.

ATEX Directive 94/9/EC Mechanical Equipment

Once again the 3rd Edition Guidelines have clarified the position regarding mechanical equipment fitted to road tankers. For any equipment to fall within the scope of the directive it must be capable of causing an explosion through it's **own** potential source of ignition. (Paragraph 3.7)

1) Hand operated valves do not fall within the scope of the directive (paragraph 5.2.2 page 34). Manual API valves, fawcet valves, vapour recovery valves and the 10" fill lid fall into this category.
2) All other pneumatically operated valves i.e., foot valves, vapour transfer valves, guard bar locks etc are all deemed, due to the materials of construction, not to be capable of causing an explosion through their own sources of ignition and therefore fall outside of the scope of the directive. (paragraph 5.2.2 page 34).
3) The PV vent valve and EPRV due to the materials of construction, are not capable of causing an explosion through their own sources of ignition and are also classed as simple devices, therefore fall outside of the scope of the directive. (paragraph 5.2.1 page 33).

Any item that falls outside the scope of the directive shall not be classed as ATEX equipment nor be marked according to Directive 94/9/EC. (Paragraph 3.7.3).

I trust that the above clarifies the situation regarding ATEX and pump metering equipment supplied by Mechtronic Ltd. If any further clarification or discussions are required please email me at tjp@mechtronic.ltd.uk

Kind Regards

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