



# National Measurement Office

## **National Measurement Office**

Market Surveillance: MID and NAWI Directive  
Trim Reference: E11/0015/2

Annual Report of Market Surveillance activities relating to Non-automatic Weighing Instruments and Measuring Instruments.

For the Year 2012 – 2013, these activities covered Measuring Systems for the Continuous and Dynamic Measurement of Quantities of Liquids other than Water, being Road Tanker Meter Measuring Systems dispensing liquid fuel under Annex MI-005 of the Measuring Instruments Directive and Class III Non-Automatic Weighing Instruments.

August 2013

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## **1. Executive Summary**

Directive 2009/23/EEC relating to non-automatic weighing instruments (NAWI) and Directive 2004/22/EC, relating to measuring instruments (MID) each require that Member States shall take all reasonable steps necessary to ensure that instruments placed on the market shall meet the requirements of the directives. In support of this, NMO consequently decided to focus the attention of the 2012/2013 project on 2 specific areas. These were:-

- Road Tanker Meter Measuring Systems dispensing liquid fuel, being Measuring Systems for the Continuous and Dynamic Measurement of Quantities of Liquids other than Water under Annex MI-005 of the Measuring Instruments Directive and
- Class III Non-automatic Weighing Instruments.

This project continued with the centrally controlled project methodology NMO has adopted, in order to achieve increased consistency of approach and financial control. This framework also gives benefit to overall reporting and data control.

The first area was Road Tanker Meter Measuring Systems dispensing liquid fuel, and this gave rise to 2 main conclusions:-

1. No significant non-compliance issues were found in respect of systems, but a number of individual systems were non-compliant in 'one off' ways including the setting up of operating parameters and individual sealing. Whilst it is recognised that each system is individually built, it is essential that each complies fully with the requirements of the appropriate EC Type Examination Certificate.
2. Declarations of Conformity were not always specific to an individual system and were not always readily available.

The second area was Class III Non-automatic Weighing Instruments (NAWIs) and the conclusion was that the instruments must bear the inscription of the last two digits of the year in which the 'CE' conformity marking was affixed.

The purpose of this year's project was to determine whether the instruments selected had been properly and correctly placed on the market.

As an overall conclusion, there is concern with regard to the documentation relating to the Declaration of Conformity:-

1. Not all parties involved in the supply and use of measuring instruments were aware of the significance of Declarations of Conformity
2. Not all Declarations of Conformity were specific to each individual system

Whilst it may be argued that some of the documentary problems found were due to ignorance of requirements by certain parties, or inadequate care in the preparation of Declarations of Conformity the inability to produce complete and accurate conformity documentation continues to be a serious matter.

Traceability of conformity is central to the principle of operation of the New Approach Directives and breaches of this will prejudice confidence in the operation of the principle of the New Approach Directives.

The outcome of the 2012/2013 Market Surveillance projects will be to continue to build upon the principal of central control of such projects, with delivery of subject specific investigation

being undertaken by contracted Trading Standards Authorities and individuals. Understanding of the operation of the market place will continue to be developed and special emphasis will be placed upon changes in trade practice and the practical introduction of instruments which incorporate new technologies

NMO will continue to focus projects on potentially problematic areas that have been identified using information received from the trading standards and business communities, and will utilise a risk based approach by reference to the WELMEC WG5 risk assessment model.

The central control of the projects will ensure high levels of consistency in reporting and data submission.

## **2. Introduction & Background**

Local Weights & Measures Authorities (LWMAs) on behalf of the United Kingdom, under the Non-automatic Weighing Instruments (NAWI) Directive and Measuring Instruments Directive (MID), ensure, by an inspectional process, that instruments that are subject to legal metrological control are neither placed on the market in the UK nor put into use unless they comply with the applicable provisions of the Directives.

The Directive 2004/22/EEC creates an obligation for Member States to carry out market surveillance. Market surveillance considers compliance of instruments with the essential requirements of the Directives that apply to them when they are first placed on the market, or put into service. In the UK, market surveillance is conducted by the National Measurement Office (NMO) and is supported by project work which is commissioned out to LWMAs.

Market surveillance is an essential tool in the underpinning of the concept of New Approach Directives. The principles are outlined in the “Guide to the implementation of Directives based on the New Approach and the Global Approach”. This guide is referred to colloquially as the “Blue Guide” as a result of the colour of the cover. It is also detailed in EU regulation 2005/765/EC Regulation Accreditation and Market Surveillance (RAMS).

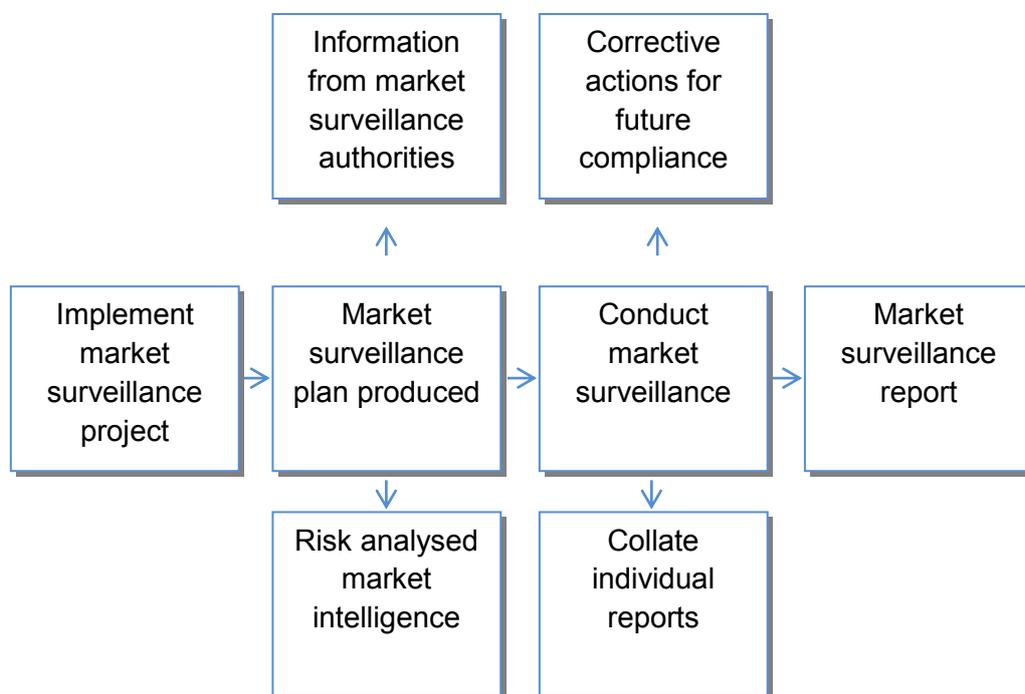
Market surveillance is expected to be carried between the point in time at which the instrument is placed on the market and put into use. NMO has taken the practical view that market surveillance may be more beneficial and give results that truly reflect the market place if conducted as soon after the instrument is in-situ but within the first 6 months of use. For example, a forecourt petrol dispenser with the wrong software or no visible evidence of conformity assessment is likely to be incorrect when first placed on the market, which then becomes a market surveillance issue.

A market surveillance report on a particular instrument should contain the following information:

1. CE marking and its affixing
2. The availability of the CE declaration of conformity
3. The information accompanying the product
4. The correct choice of conformity assessment procedures
5. Details of how the essential requirements of the NAWI and MID are met.

### **3. Methodology**

Market surveillance is a critical element of New Approach Directives, which not only gives confidence in the level of product conformity, but also helps to ensure that correct procedures are followed. MID places emphasis on market surveillance which requires increased cooperation among Member States. The activities undertaken should confirm that the conformity assessment procedures are working and, if this is found not to be the case, to identify problems quickly to ensure consumers are protected. The NMO process for implementing the market surveillance project consists of planning, investigation and a corrective action stage.



Having determined the areas for the 2012/2013 market surveillance project, NMO identified local authorities who were suitably competent and had the equipment and resources in their area to carry out market surveillance on:

- Bulk Fuel Vehicle Mounted Meter Measuring Systems
- Class III Non-automatic Weighing Instruments

### **4. Measuring Systems for the Continuous and Dynamic Measurement of Quantities of Liquids other than Water**

The Market Surveillance project focussed on Road Tanker Meter Measuring Systems dispensing liquid fuel

## **Background**

1. Road Tanker Meter Measuring Systems dispensing liquid fuel have been controlled for many years by the Weights and Measures Act and subordinate legislation.
2. Approval of such systems has been within the National Type Approval framework and that of the 'Old Approach' Directives.
3. As time has progressed, the design and functions of these systems have become more complex, and sophisticated peripheral equipment has been incorporated within the systems, such as product return systems and temperature compensating facilities.
4. The advent of MID compliant systems has come at a time when peripheral equipment with management functions is becoming more commonplace and this too must be MID compliant.

In the United Kingdom, these systems are usually built to the order of a specific customer. The distinction between "placing on the market" and "putting into use" of the instrument is therefore not of great significance, since the complete lorry mounted system will be built, delivered to the customer and put into use as a complete entity, and without further alteration or modification. The final outcome should always be that of a fully compliant instrument being supplied and then put into use.

"Placing on the market" means making available for the first time in the Community an instrument intended for an end user, whether for reward or free of charge.

"Putting into use" means the first use of an instrument intended for the end user for the purpose for which it was intended.

## **Method**

Local Weights and Measures Authorities (LWMAs) were invited to take part in the 2012-2013 Project and to conduct Market Surveillance on Road Tanker Meter Measuring Systems dispensing liquid fuel (Measuring Systems for Liquids other than Water) which had been placed on the market and put into use under the Measuring Instruments Directive. The implementing legislation is the Measuring Instruments (Liquid Fuel delivered from Road Tankers) Regulations 2006, as amended.

Thirty individual systems were examined by staff from nine different Local Weights and Measures Authorities (LWMAs).

1. All systems inspected had been through the Module B+D or the B+F Conformity Process
2. No significant overall non-compliance issues were found with the systems themselves, and they generally operated correctly and in compliance with the EC Type Examination Certificate.
3. In most instances, systems complied fully with the appropriate EC Type Examination Certificate, although in a few instances, there was an inconsistency with the details on the vehicle designation plate.

4. A number of systems were able to be started without a ticket in place, and with an inconsistency in respect of the 'time out' and 'no flow detected' setting up parameters.
5. In a number of instances, seals were found to be missing on electronic modules located in the vehicle cabs, air elimination systems and temperature probes. Conversely, a number of seals were found which were in addition to those required, such as on the product return interlock boxes and temperature probe sockets when no probe was fitted.
6. Some 'M' markings on systems bore an incorrect year marking.
7. Individual issues found included the incorrect fitting of an air eliminator vent pipe, an incorrectly set up system in respect of printing parameters and flow rate setting, and a system on which a foot valve to a particular compartment was likely to have never been operative.
8. In a number of instances, there was confusion about Manufacturers Declarations of Conformity and Certificates of Conformity provide by Module F Notified Bodies. One supplier of sub components supplied a written assurance of compliance of those components and this was mistakenly thought by some parties to be a Declaration of Conformity for the completed system. Some manufacturers supplied Declarations of Conformity that were generic and not specific to a particular system. A number of operators of vehicles were unaware of the significance of the conformity declarations and could not produce them or provide access to them.
9. Some Manufacturers Declarations of Conformity did not cover all pertinent Directives.

#### Recommendations in respect of Road Tanker Meter Measuring Systems dispensing liquid fuel

1. The significance of Declarations of Conformity needs to be recognised as being of great importance by all involved parties, especially as instruments get older, and alterations are made.
2. Declarations of Conformity should clearly cover all pertinent Directives.
3. Declarations of Conformity should clearly cover each individual meter measuring system, and not be generic to an EC Type Examination Certificate.
4. The manufacturer should make sure that Declarations of Conformity are complete and given to the tanker operator.
5. The operator should be aware of the significance of Declarations of Conformity when the instruments are new.
6. Sealing and securing of significant components needs to be as required by the EC Type Examination Certificate, and additional seals should not be applied.
7. The correct year should be marked on the 'M' sticker.
8. It is recognised that systems are complex and individually made, but it is essential that each system fully complies with its applicable EC Type Examination Certificate.

## **5. Class III NAWI'S**

This year three shop scales were purchased and subjected to type approval testing and all of them passed all of the tests. One of the weighing machines did not have the inscription of the last two digits of the year in which the CE marking was affixed. Also the last figure of the notified body number was partly missing. The relevant notified body and the manufacturer were made aware of this and the situation will be rectified for the future. A reminder about the requirement to have the last two digits of the year in which the CE marking was affixed inscription was sent to all notified bodies and to the NAWI industry.

## **6. WELMEC WG5 Risk assessment**

In May 2011, WELMEC Working Group 5 published WELMEC 5.5 entitled 'A Risk Assessment Guide for Market Surveillance: Weighing and Measuring Instruments'

This document assists in the targeting and planning of market surveillance activities and the relationship between probability of non-compliance, and the subsequent level of impact of non-compliance.

The rationale behind this Guide is twofold:-

- a. It assists in addressing the need for selective and focussed market surveillance which recognises the need to use scarce resources in an effective way.
- b. Regulation (EC) No 765 / 2008 of the European Parliament and Council requires Market Surveillance Authorities to take account of principles of risk assessment, complaints and other information.

This WELMEC Guide recognises a number of pertinent factors which should be addressed in order to determine a risk score. These factors will include assessment of the type of measuring instrument in question, its use and age etc.

It is a useful additional tool for planning the future market surveillance programme, and will be supported by our intelligence processes, both within the United Kingdom, and across the European Union.

## **7. Conclusions and Implications**

Market surveillance is an obligation which is the responsibility of each Member State. It can be an effective tool for determining compliance in particular sectors in each individual Member State, and when effectively focussed, can highlight specific problems or developments which could be either local, or EU wide in their implication. Whilst it is an obligation, it should continue to be positively embraced as a tool for ensuring consistency across the Single Market.

The compliance of Road Tanker Meter Measuring Systems for liquid fuel was generally good in respect of their construction and consequent actual performance, but in a number of instances, individual compliance problems were identified.

Declarations of Conformity were available, when requested, in most instances but were not necessarily complete or instrument specific.

The compliance of Class III NAWIs was good except for the inscriptions issue.

## **8. Recommendations**

- 1) Future market surveillance projects are organised by the NMO using market surveillance officers authorised by them
- 2) Such projects should continue to be focussed so that specific outcomes may be obtained and valid intelligence determined so that future work can be effectively directed. The WELMEC 'Risk Assessment Guide for Market Surveillance: Weighing and Measuring Instruments' is a valuable tool in assisting this process.
- 3) The specific recommendations of this report are that:-
  - Declarations of Conformity should be complete and accurate and cover each specific measuring system. All involved parties in the supply and use of instruments should have ready access to this documentation and be aware of its significance.
  - Declarations of Conformity should include compliance with all pertinent Directives
  - Complex measuring instruments that are individually built, such as Road Tanker Meter Measuring Systems dispensing liquid fuel, must comply in all respects with the EC Type Examination Certificate. In particular, they must be compliant in their construction, setting up, securing and sealing.