# Swedac participated in a European joint project to check the correct functioning of electricity meters and heat meters used in households

- The market surveillance MID european project, with a budget of 500.000 EUR, has been confinanced by the participant states and the European Commission.
- 43 professionals of 12 different states have worked together in the first such European joint project.
- 40 different types of meters from all around Europe have been checked to verify their conformity to the European legislation.

Measuring instruments are a key element in our daily life and their malfunction can have an important impact on our finances, our health or our safety. Even though we are usually not aware of it, we use them every day. It can be measuring the electrical energy, gas or water that we consume, weighing the products we buy in shops, calculating the amount of medicines that patients have to take or determination of the speed of a car circulating on a road.

Due to their importance, those of them that have a major relevance in our life have to fulfill a very strict legislation that have, in some cases, a European range. The aim of this legislation is to ensure that this kind of meters work properly and have the right accuracy characteristics, are not influenced by different environments where they can be installed and cannot be manipulated to achieve a fraudulent use. Electrical energy meters and heat meters are two of those kinds of instruments.

According to the Commission's estimations, around 14 million electrical energy meters are sold annually in the EU. This implies that this kind of instrument represents around 18,8% share of the measuring instruments EU annual market, occupying the first position in this statistic. This figure will surely rise in the near future by the continuous efforts being made by the EU Institutions to promote the roll-out of smart metering systems, which is

provoking the massive substitution of millions of electrical energy meters currently installed in the EU.

A similar situation, even though at smaller scale, can be argued for heat meters, 800.000 of which are annually sold in the EU, representing around 8,9% share of the measuring instruments EU annual market. The use of heat meters is highly promoted by the Commission as these meters are a key factor to improve energy efficiency in the domestic sector.

Even though this kind of instruments are usually installed and controlled by big companies with quality control departments and that makes the probability to have a meter in the market that does not comply with the European legislation very low, the presence of such meters could have a tremendous impact on the consumer finances and in its confidence in the control system. Aware of this, the market surveillance authorities of the twelve European countries shown on the table bellow decided to join their forces and resources to undertake a cross-border European project for testing them, to check if they fulfilled the requirements and worked properly.

| Participant name | Country |
|---|---|
| Bundesamt für Eich- und Vermessungswesen | Austria |
| Czech Trade Inspection | Czech Republic |
| Danish Safety Technology Authority | Denmark |
| Finnish Safety and Chemicals Agency | Finland |
| Landesbetrieb Mess- und Eichwesen NRW | Germany |
| Consumer Rights Protection Centre | Latvia |
| Verispect bv | Netherlands |
| Metrology Institute of the Republic of Slovenia | Slovenia |
| Consejería de Economía y Hacienda de la Comunidad de Madrid | Spain |
| Swedish Board for Accreditation and Conformity Assessment | Sweden |
| Federal Institute of Metrology | Switzerland |
| National Measurement and Regulation Office | United Kingdom |

*List of participant market surveillance authorities*

Forty-three people from all around Europe have worked together in this project that was implemented between September 2014 and April 2016 and which main objectives can be summarized as follows:

- To verify that the utility meters put onto the EU market comply with the provisions of the European legislation.
- To enhance the efficiency and effectiveness of the market surveillance system concerning measuring instruments in Europe.
- To improve the coordination of the practical enforcement work carried out in relation to measuring instruments in Europe to promote equivalent, effective and sufficient levels of metrological supervision across Europe, and thus achieve a level playing field for economic operators and an equal level of consumer protection across the EU.

- To strengthen the confidence of EU citizens in the national and European market surveillance systems.
- To promote and organise the exchange of information and guidance on market surveillance concerning measuring instruments in Europe.
- To show manufacturers, importers, and different stakeholders involved in the energy sector that Member States are taking coordinated actions of market surveillance in this particular field.
- To promote the use of risk assessment in the definition and implementation of market surveillance programmes in Member States.
- To promote consistency of interpretation and application of normative documents in Europe and propose actions to facilitate implementation.
- To identify specific technical or legal problems that can arise while carrying out a market surveillance project concerning measuring instruments and propose solutions to those problems.

The project's budget went up to 500 000 EUR and was awarded with a Commission's grant of 70% of the total costs (around 350 000 EUR).

Forty different types of electricity meters and heat meters from twenty-six different manufacturers have been tested during the project. The final results were presented to all the European market surveillance authorities in their annual meeting, held at the beginning of April in Stockholm. According to them, all the electricity meters passed the tests even though some of them presented administrative non-conformities that were solved by the affected manufacturer. On the other hand, heat meters seem to have had more problems passing the tests and market surveillance authorities have been forced to take measures to put some of them into conformity and have even withdrawn two of the eighteen tested types from the European market. Due to these results, market surveillance authorities have decided to monitor carefully this kind of meters and test them again in the near future.

The project is considered a complete success and has opened new ways of collaboration among European market surveillance authorities.