

BACKGROUND DOCUMENT N° 5

SURVEY OF SMES ON POSSIBLE SECTORS FOR INCLUSION IN THE MEASURING INSTRUMENTS DIRECTIVE

Report by Risk & Policy Analysts based on a Survey in DG ENTR's Enterprise Europe Network of small and medium sized enterprises (SMEs).

Commission or its services are not bound in any way by this research which is for the benefit of the public consultation.

1.1 Executive Summary

The survey was held from 21 May 2010 to 30 June 2010 via DG ENTR's Enterprise Europe Network of small and medium sized enterprises (SMEs).

Across the EU 298 companies replied to the survey. The majority of respondents (more than 60%) are users of measuring instruments, manufacturers represent less than 25% and the remainder are distributors, installers or importers.

None of the respondents had their products withdrawn from the market due to a decision by a Member State under the Mutual Recognition Regulation.

Approximately half of the respondents did not experience any barriers to trade. For those who experienced barriers, the associated costs rarely exceeded 25% of the company's turnover and for many companies amounted to less than 10%.

Over half of the users (55%) identified a need for more legal metrological control.

Most of the respondents were in favour of a manufacturer declaration and half of them identified the need for involvement of the notified body.

1.2 Overview

The section provides a summary of the responses from SMEs to the survey on measuring instruments undertaken through the Enterprise Europe Network. 298 companies replied to the questionnaire. The breakdown of the types of SME is given in Table 1.

Table 1: SME Distribution by Activity	
Type of Activity	Number of SMEs
Manufacturer (may also include importer, distributor, installer and user)	69
Importer, Distributor and/or Installer (may also include user)	47
User and/or Other	182
Total	298

As can be seen, more than 60% of the responding SMEs are users of measuring instruments whereas manufacturers represent less than 25%.

The number of respondents for each type of meter is presented in Table 2.

Table 2: Number of Respondents	
Type of Meter	Number of respondents
a) Smart utility meters (users: households, commercial and light industry, utilities)	75
b) Reactive electrical energy meters (users: network distribution companies, energy producers)	23
c) Radar equipment for the measurement of the speed of vehicles (users: vehicle drivers, police)	11
d) Alcohol breath analysers (users: vehicle drivers, police)	17
e) Electrical vehicle chargers (users: vehicles drivers, electricity suppliers, network distribution companies)	10
f) Rail electricity meters (users: electricity suppliers, railway companies)	2
i) Automatic weighing of road vehicles (users: transporters, road owners)	12
j) Level gauge on tank trucks (users: transporters, industry)	5
k) Level gauge on fixed storage tanks: (users: industry)	9
l) Measuring systems for compressed natural gas (CNG) (users: pump stations)	4
m) Exhaust gas analysis for motorbikes (users: technical control stations, bike repair)	6
n) Exhaust gas analysis for diesel engines (users: technical control stations, garages)	7
o) Irrigation water meters (users: farmers, irrigation water supply companies)	5
p) Foul water meters (users: households, environmental cleaning industry)	10
q) Large scale water meters (users: suppliers, network distribution companies)	15
r) Alcoholmeters and alcohol hydrometers: (users: wine-, spirits- & alcohol producers, tax authorities)	12
s) Medium accuracy weights (users: market retailers, shops, consumers)	22
t) Above-medium accuracy weights (users: industry, testing laboratories, authorities)	21
u) Tyre pressure gauges for motor vehicles (users: vehicle drivers, pump stations, technical control stations)	29
v) Standard mass of grain (users: grain farmers, EU fund paymasters)	3
Total	298

Questions asked to the companies were different according to the status of the company. Manufacturers, importers, distributors and installers were asked the same set of questions including basic information on the company, barriers to trade that they experienced and some questions on conformity assessment. Extra questions were asked to users regarding the type of activity they belong to and their opinion on a need for legal metrological control. Instrument-specific questions were also asked for some sectors.

It is important to note that none of the respondents had their products withdrawn from the market due to a decision by a Member State under the Mutual Recognition Regulation.

Responses were then analysed and a summary for each type of instrument is provided below.

1.3 Smart Utility Meters

75 SMEs replying to the survey indicated that they were dealing with smart utility meters. Table 3 gives the activity breakdown within the smart utility meter market.

Type of Activity	Number of SMEs
Manufacturer (may also include importer, distributor, installer and user)	25
Importer, Distributor and/or Installer (may also include user)	14
User and/or Other	36
Total	75

As expected, users and manufacturers are the most popular activities. Other includes consulting engineers, design engineers and checkers of used equipment.

SMEs were then asked if they had experienced barriers to trade on the internal EU market. Only half of the companies answered this question and half of the respondents stated that there was no barrier. Table 4 summarises the outcomes for this question.

No barriers to trade	Barriers due to multiple testing	Barriers due to multiple marking	Barriers due to putting into use verification by authorities	Other
48%	15%	15%	6%	17%

Table 4 presents a mixed picture. Those who identified barriers to trade estimated their costs to mainly be between 10 and 25% of their turnover. Only a couple of companies stated that the costs would be over 50% of turnover.

The next set of questions relates to conformity assessment procedures and whether companies are in favour of notified body involvement. The majority of the respondents indicated the manufacturer declaration as their preferred choice of conformity assessment procedure. With regards to notified body involvement, no conclusion could be made as 50% of the respondents to the question were in favour and 50% were not. Of those responding 'yes' to the above question, 14 companies felt a need for more legal metrological control as regards placing on the market and putting into use, 9 felt a need for more legal metrological control as regards regular in-service verification and 1 company ticked both answers.

The additional question specific to smart meters asked whether additional functionalities should be more controlled or not. Once again, companies had mixed opinions on this question. 28 SMEs did not answer this question, 21 thought that functionalities should be more controlled and 26 believed that voluntary standardisation would be sufficient.

1.4 Reactive Electrical Energy Meters

23 SMEs replying to the questionnaire indicated that they were trading or using reactive electrical energy meters. Table 5 gives the activity breakdown within the reactive electrical energy sector.

Type of activity	Number of SMEs
Manufacturer (may also include importer, distributor, installer and user)	5
Importer, Distributor and/or Installer (may also include user)	4
User and/or Other	14
Total	23

Only five companies answered the question on barriers to trade. Three of them said that they did not experience any barriers. Two SMEs experienced barriers due to putting into use verification by authorities and one of them also experienced barriers due to multiple testing. The latter also estimated the costs of these barriers to be between 10 and 25% of the turnover.

As for smart meters, the preferred conformity assessment procedure is a manufacturer declaration (4 out of 7 respondents identified this option as the best).

More than 75% of the users responding to this question felt that there was a need for legal metrological control. Four users thought that there should be controls as regards placing on the market and putting into use, one as regards regular in-service verification and two users thought that control should be carried out on both.

1.5 Radar Equipment for the Measurement of the Speed of Vehicles

Eleven SMEs replying to the questionnaire indicated that they were trading or using radar equipment for the measurement of the speed of vehicles. Table 6 gives the activity breakdown within the reactive electrical energy sector.

Type of activity	Number of SMEs
Manufacturer (may also include importer, distributor, installer and user)	1
Importer, Distributor and/or Installer (may also include user)	2
User and/or Other	8
Total	11

Regarding barriers to trade, two SMEs said there were no barriers and one identified barriers due to multiple testing, multiple marking and putting into use verification by authorities. This company also stated that the costs were between 10 and 25% of its turnover. Of note is that the SME identifying the barriers is a manufacturer, the two other respondents are simply installers.

Once again, manufacturer declaration was seen as the best conformity assessment procedure. One installer stated that a full quality system with design would be the best option whereas this same option was ranked fourth by the two other companies. Only one company was in favour of notified body involvement.

50% of the users expressed a need for more legal metrological controls. The majority was in favour of regular in-service verification.

1.6 Alcohol Breath Analysers

17 SMEs replying to the questionnaire indicated that they were trading or using alcohol breath analysers. Table 7 gives the activity breakdown within the alcohol breath analyser sector.

Type of activity	Number of SMEs
Manufacturer (may also include importer, distributor, installer and user)	3
Importer, Distributor and/or Installer (may also include user)	4
User and/or Other	10
Total	17

Three out of the six responding companies did not experience any barriers. Of those who experienced barriers, reasons were mixed. One distributor/importer stated: ‘If the device is verified for example in the Czech metrology institute and is defined according to the certificate as the evidence/validation measure instrument, here in Slovakia it doesn't apply because our directives are somehow "more superior" than the European directives - we need to re-verify or re-validate our tools/measurement instruments in Slovak state testing laboratories, where we encounter the reluctance to certify the product and validate it as the evidence/validation measure instrument. It should be clearly set out for the entire EU that if the device is certified in one country within the EU, it should be valid throughout the whole EU. This should be built at the same principle as CE marking approval across the whole EU’. However, although some barriers were identified, their associated costs did not exceed 10% of the company’s turnover.

Regarding the preferred conformity assessment procedure, manufacturer declaration ranked first for five out of six companies and full quality system with design was the lowest ranked option. Three companies were in favour of notified body involvement of two were not.

60% of the users felt like more controls should be in place. Most of the users were in favour of more legal metrological control as regards placing on the market and putting into use.

1.7 Electrical Vehicle Chargers

Five SMEs replying to the questionnaire indicated that they were trading or using electrical vehicle chargers. This includes one manufacturer and four users.

The manufacturer did not identify any barriers to trade and thought that a manufacturer declaration would be the best conformity assessment procedure.

On the other hand, all the users stated that voluntary standardisation will suffice.

1.8 Rail Electricity Meters

Only two SMEs belonging to this sector replied to the survey, one manufacturer and one distributor. Both of them identified barriers to trade. The manufacturer stated that ‘the high costs associated to metrological control, e.g. high rates paid to national authorities, [...] make the products less competitive’ and the distributor experienced barriers due to multiple testing and due to putting into use verification by authorities. The latter also estimated the costs to be between 10 and 25% of the company’s turnover. Both of them chose ‘type approval and quality design’ as the preferred conformity assessment procedure.

1.9 Automatic Weighing of Road Vehicles

Twelve SMEs replying to the questionnaire indicated that they were trading or using automatic weighing of road vehicles – eight manufacturers and four users (one of the companies ticked ‘other’ but was in fact a manufacturer/distributor – it was therefore considered as a manufacturer).

All the manufacturers identified barriers to trade leading to costs between 10 and 25% of the turnover. The reasons for these barriers were different from one manufacturer to another. 50% of the manufacturers identified the manufacturer declaration as their preferred conformity assessment procedure and only one third was in favour of notified body involvement.

75% of the users thought that there was no need for further metrological control.

1.10 Level Gauge on Tank Trucks

Five companies dealing with level gauge on tank trucks replied to the survey: one manufacturer, one installer and three users. Neither the manufacturer nor the installer encountered barriers to trade. Both of them identified the manufacturer declaration as the best option for conformity assessment procedure. Only the installer thought that involving a notified body would be important.

Of the three users, two replied to the question on the need for legal metrological control. One SME stated that voluntary standardisation will be sufficient and the second recognised a need for more control as regards placing on the market and putting into use.

1.11 Level Gauge on Fixed Storage Tanks

Nine companies replying to the questionnaire indicated that they were trading or using level gauge on fixed storage tanks. This includes four manufacturers, two distributor/installer and three users (one user includes consulting engineers).

Two manufacturers did not identify any barriers to trade. Six SMEs experienced barriers due to various reasons. Surprisingly, only two companies answered the question about the costs of these barriers and both replied less than 10% of their turnover. 75% identified the manufacturer declaration as the best option for conformity assessment procedure and only one company thought that full quality system with design would be the best option. 60% were in favour of notified body involvement in conformity assessment.

75% of the users replying to the question recognised a need for further legal metrological control. Two thirds of these users were in favour of control as regards regular in-service verification.

1.12 Measuring Systems for Compressed Natural Gas (CNG)

Four companies belonging to this sector replied to the questionnaire: two distributors, one user and one engineering consultancy. One distributor identified barriers to trade due to multiple testing and putting into use verification by authorities estimating the costs to be between 10 and 25% of the company's turnover. The other distributor did not experience any barrier. The distributor experiencing barriers preferred conformity assessment procedure was 'type approval and quality system' and was in favour of notified body involvement whereas the other distributor preferred the manufacturer declaration and was not in favour of notified body involvement.

Both users felt there was a need for more legal metrological control, one as regards placing on the market and putting into use and the consultancy as regards regular in-service verification.

1.13 Exhaust Gas Analysis for Motorbikes

Six companies replying to the questionnaire indicated that they were trading or using exhaust gas analysis for motorbikes. This includes one manufacturer and five users.

The manufacturer experienced barriers due to multiple marking and putting into use verification by authorities with associated costs between 10 and 25% of the company's turnover. The best conformity assessment procedure identified by the company was the manufacturer declaration and they were not in favour of notified body involvement.

Three out of the five users did not recognise a need for further metrological control. One user said that there was a need for more legal metrological control as regards regular in-service verification and the other as regards placing on the market and putting into use.

1.14 Exhaust Gas Analysis for Diesel Engines

Seven companies replying to the questionnaire indicated that they were trading or using exhaust gas analysis for diesel engines. This includes one manufacturer and six users. The manufacturer identified barriers to trade due to multiple testing, multiple marking and putting into use verification by authorities. Its preferred conformity assessment procedure was the manufacturer declaration and it was not in favour of notified body involvement. Regarding the users, 50% of the respondents (2 out of 4 respondents) considered that voluntary standardisation will suffice. The two other respondents thought there was a need for more legal metrological control.

75% of the respondents felt a need of a level playing field for this sector.

1.15 Irrigation Water Meters

Five SMEs belonging to this sector replied to the questionnaire: one manufacturer/distributor, one distributor/installer and three users. Only the manufacturer replied to the barrier to trade question, stating that water quality standards differed across Member States, especially in Germany or in the UK where higher standards were in place. Costs associated with this barrier were estimated to be less than 10% of the company's turnover. The preferred conformity assessment procedure for the manufacturer was the manufacturer declaration. Notified body involvement was not deemed necessary.

All the users identified a need for more legal metrological control as regards placing on the market and putting into use. Only two users indicated needs for the sector: one was in favour of better market surveillance and the other in favour of more choice in conformity assessment.

1.16 Foul Water Meters

Ten companies replying to the questionnaire indicated that they were trading or using foul water meters. This includes two manufacturers, one distributor and seven users.

The three SMEs indicated that there were barriers to trade. Two of them identified multiple marking as a barrier. Only one company estimated costs between 10 and 25% of turnover whereas the two others said they were less than 10%. 66% of companies preferred the manufacturer declaration as best conformity assessment procedure and only one company expressed the need for notified body involvement.

More than 70% of users indicated a need for more legal metrological control. Three quarters of the eight respondents felt a need for a level playing field.

1.17 Large Scale Water Meters

Fifteen companies replying to the questionnaire indicated that they were trading or using large scale water meters. Table 9 gives the activity breakdown for this sector.

Type of activity	Number of SMEs
Manufacturer (may also include importer, distributor, installer and user)	5
Importer, Distributor and/or Installer (may also include user)	3
User and/or Other	7
Total	15

80% of the companies did not experience any barriers to trade for this sector. Three out of five SMEs ranked the manufacturer declaration as their preferred conformity assessment procedure. Three companies are in favour of notified body involvement.

More than 60% of users did not feel a need for more legal metrological control. For those who were in favour of more control, they were equally split between control as regards regular in-service verification and as regards placing on the market and putting into use.

11 out of 12 companies have products marked with the marking. One third of the responding companies did not want any changes to the current situation. Three companies indicated needs for better cross border market access and three others for a level playing field.

1.18 Alcoholmeters and Alcohol Hydrometers

Twelve companies dealing with alcoholmeters and alcohol hydrometers replied to the questionnaire. Surprisingly, no manufacturer was identified as respondent. The respondents include one importer, two distributors and nine users.

The two distributors identified barriers due to multiple testing and putting into use verification by authorities whereas the importer stated 'the sale of alcoholmeters in Denmark is national and our enterprise cannot sell to other countries. These rules are not the same in Bulgaria and Romania, meaning that companies there can sell the same products cheaper. This should be standardised to ensure the same rules for everybody'. The latter also estimated costs between 25 and 50% of the company's turnover. The manufacturer declaration was the preferred option for the distributors. Two out of the three companies were on favour of notified body involvement.

Half of the respondents did not feel a need for more legal metrological control. Of those who thought that more control should be performed, almost all of them expressed a need for more control as regards placing on the market and putting into use. Level playing field was again one of the fields that stood out from the responses.

1.19 Medium accuracy weights

22 companies replying to the questionnaire indicated that they were trading or using medium accuracy weights. Table 10 gives the activity breakdown for this sector.

Type of activity	Number of SMEs
Manufacturer (may also include importer, distributor, installer and user)	1
Importer, Distributor and/or Installer (may also include user)	3
User and/or Other	18
Total	22

Only one SME identified a barrier to trade (too much paperwork). 75% of the companies indicated manufacturer declaration as their preferred conformity assessment procedure. Only one company was in favour of notified body involvement. More than 75% of the responding users did not feel a need for more legal metrological control.

Opinions regarding needs for the sector are mixed. Five companies said there should not be any change, and four expressed a need for a level playing field.

1.20 Above-medium accuracy weights

21 companies replying to the questionnaire indicated that they were trading or using above-medium accuracy weights. Table 11 gives the activity breakdown for this sector.

Type of activity	Number of SMEs
Manufacturer (may also include importer, distributor, installer and user)	4
Importer, Distributor and/or Installer (may also include user)	1
User and/or Other	16
Total	21

Two companies identified barriers to trade leading to costs between 10 and 25% of turnover. Reasons for these barriers were multiple testing and multiple marking. Manufacturer declaration came on top of the list for conformity assessment procedure. Only one SME expressed the need of notified body involvement.

Almost three quarters of the users indicated a need for further legal metrological control for various reasons. Half of the respondents have marked products. 60% expressed a need for this sector for multiple reasons.

1.21 Tyre pressure gauges for motor vehicles

29 companies replying to the questionnaire indicated that they were trading or using tyre pressure gauges for motor vehicles. Table 12 gives the activity breakdown for this sector.

Type of activity	Number of SMEs
Manufacturer (may also include importer, distributor, installer and user)	2
Importer, Distributor and/or Installer (may also include user)	5
User and/or Other	22
Total	29

Five companies did not experience barriers to trade and two did experience barriers due to multiple testing. Costs estimated with these barriers were estimated to be less than 10% of turnover. All the respondents chose the manufacturer declaration as their preferred conformity assessment procedure. Four out of seven SMEs did express the need for notified body involvement. 80% of the users identified a need for more control. Most of them requiring control as regards placing on the market and putting into use.

The majority of the companies have national-marked or unmarked products. Several companies indicated a need for better market surveillance and for a level playing field.

1.22 Standard Mass of Grain

Three SMEs belonging to this sector replied to the questionnaire: one manufacturer, and two users. The manufacturer identified barriers to trade due to multiple testing, multiple marking and putting into use verification by authorities. The costs of these barriers were estimated to be less than 10%. The preferred conformity assessment procedure chosen by this company was the full quality system with design. Only one user replied to the question about the needs for more legal metrological control and it stated that voluntary standardisation will suffice.

Survey Questions

The survey concerns measuring instruments.

Most are not harmonised by EU legislation.

This survey does not imply that the Commission proposes to regulate and does not bind the Commission or its services in any way.

The first question is a sorting question.

Please fill in one questionnaire per category of instrument.

1. Choose the instrument:

- a) Smart utility meters (users: households, commercial and light industry, utilities)
- b) Reactive electrical energy meters (users: network distribution companies, energy producers)
- c) Radar equipment for the measurement of the speed of vehicles (users: vehicle drivers, police)
- d) Alcohol breath analysers (users: vehicle drivers, police)
- e) Electrical vehicle chargers (users: vehicles drivers, electricity suppliers, network distribution companies)
- f) Rail electricity meters (users: electricity suppliers, railway companies)
- g) Road pricing metering (users: vehicle drivers, road owners)
- h) Temperature recording devices for HACCP (users: food producers, transporters, shops and supermarkets)

- i) Automatic weighing of road vehicles (users: transporters, road owners)
- j) Level gauge on tank trucks (users: transporters, industry)
- k) Level gauge on fixed storage tanks: (users: industry)
- l) Measuring systems for compressed natural gas (CNG) (users: pump stations)
- m) Exhaust gas analysis for motorbikes (users: technical control stations, bike repair)
- n) Exhaust gas analysis for diesel engines (users: technical control stations, garages)

- o) Irrigation water meters (users: farmers, irrigation water supply companies)
- p) Foul water meters (users: households, environmental cleaning industry)
- q) Large scale water meters (users: suppliers, network distribution companies)
- r) Alcoholmeters and alcohol hydrometers: (users: wine-, spirits- & alcohol producers, tax authorities)
- s) Medium accuracy weights (users: market retailers, shops, consumers)
- t) Above-medium accuracy weights (users: industry, testing laboratories, authorities)
- u) Tyre pressure gauges for motor vehicles (users: vehicle drivers, pump stations, technical control stations)
- v) Standard mass of grain (users: grain farmers, EU fund paymasters)

3. Are you:

- a) Manufacturer
- b) Importer
- c) Distributor
- d) Installer
- e) User
- f) Other, please indicate:

Additional questions for manufacturers, importers, distributors and installers

A1. As concerns the instrument you have referred to above:

- a) What is the annual turnover of your business/budget?
- b) How many employees does your company have?
- c) In which country are your headquarters located?
AT, BE, DE, ..., SI, SV, SW, UK

A2. As concerns the instrument you have referred to above:

- a) In how many Community countries are your products referred to above marketed and/or put into use?
More answers possible: AT, BE, DE, ..., SI, SV, SW, UK
- b) Are your products sold outside the EU? Y/N
If YES:
 - a. How many percent of sales are outside the EU: ..%
 - b. In which country or countries?
More answers possible: Norway, Switzerland, Turkey, other non-EU Mediterranean countries, Eastern Europe, Africa, Asia, North America, Latin America, Australasia.

A3. What are the barriers to trade that you experience on the internal EU market (more answers are possible)

- a) no barriers to trade
- b) barriers due to multiple testing
- c) barriers due to multiple marking
- d) barriers due to putting into use verification by authorities
- e) other

Please specify any of your answers:

A4. (Optional) Have your products been withdrawn from the market subject to a decision by a Member State under the Mutual Recognition Regulation¹:

Yes/No

If so, could you please give the name of the Member State and the reference number of the decision.

A5. (Optional) What are the costs of barriers to trade in % of turnover?

- a) less than 10%
- b) between 10 and 25%
- c) between 25% and 50%
- d) over 50%

A6. (Optional) Which conformity assessment procedure do you prefer (please rank using 1 for your first choice, 2 for your second etc):

- a) Manufacturer declaration
- b) Type approval and verification
- c) Type approval and quality system
- d) Full quality system with design

¹ Regulation 764/2008 on mutual recognition which has entered into force on 13 May 2009.

A7. (Optional) Are you in favour of notified body involvement in conformity assessment?

Conformity assessment in EU harmonisation requires the manufacturer to use a notified body which is an independent body designated by the authorities.

- a) Yes
- b) No

Instrument Sectors under Review

a. Smart utility meters

A smart meter is a utility meter for the measurement of consumption of electricity, gas, water, or heat. It allows one way or two way communication and can provide additional functionalities (covered by MI Directive 2004/22/EC).

b. Reactive electrical energy meters

Meters to measure the reactive electrical energy utilised by an electricity user (*note that standard electricity meters measure 'active electrical energy'*).

c. Equipment for the measurement of the speed of vehicles

Equipment (usually radar) which may be fixed or mobile used for the measurement of traffic speed on roads.

d. Alcohol breath analysers

Devices which measure the alcohol content of a breath sample. Various different technologies are available depending on the particular purpose of the instrument.

e. Electrical vehicle chargers

Plug-in electric (including hybrid) vehicles necessitate an external source of electricity and a charger in order to recharge the vehicle's batteries in exchange for payment. The scope of this work also includes chargers used in electrically power assisted cycles.

f. Rail electricity meters

An on-board device to measure the electricity consumed (and generated) by electric trains and engines along with other parameters such as train position recording, data transmission for analytical and billing purposes.

g. Automatic weighing of road vehicles

Allows the fully unattended dynamic weigh-in-motion of vehicles at high and low speeds in situations including but not exclusive to the following: fare and toll systems, traffic detection and monitoring, road safety and guidance, and the screening of vehicles for weight compliance.

h. Level gauge on tank trucks:

Measuring systems intended for the continuous measurement of quantities (volumes or masses) of liquids other than water transported in rail and road tankers (as in international standard OIML R85)

i. Level gauge on tank trucks and fixed storage tanks:

Measuring systems intended for the continuous measurement of quantities (volumes or masses) of liquids other than water in fixed storage tanks (as in international standard OIML R80).

j. Measuring systems for compressed natural gas (CNG)

Measuring systems intended for the continuous measurement of flowing quantities (volumes or masses) of compressed natural gas (CNG).

k. Exhaust gas analysis for motorbikes

Exhaust gas analysers are used to detect concentrations of combustion products emitted from a vehicle's exhaust. They can be used to test for compliance with emission standards, diagnose engine faults and measure combustion efficiency.

l. Exhaust gas analysis for diesel engines

Exhaust gas analysers are used to detect concentrations of combustion products emitted from a vehicle's exhaust. They can be used to test for compliance with emission standards, diagnose engine faults and measure combustion efficiency.

m. Irrigation water meters

Water meters intended for the measurement of the flow of water used for irrigation purposes (which are not covered by the existing Measuring Instruments Directive).

n. Waste water meters

Water meters intended for the measurement of the flow of waste water (which are not covered by the existing Measuring Instruments Directive).

o. Large scale water meters

Water meters intended for the measurement of the large-scale flow of clean cold water in distribution networks (which are not covered by the existing Measuring Instruments Directive).

p. Alcoholmeters and alcohol hydrometers

These are instruments for measuring (directly or indirectly) the alcoholic strength of water/ethanol mixtures (including beers, wines and spirits).

q. Medium accuracy weights

Weights used as counter mass on mechanical weighing instruments in trade and commerce.

r. Above-medium accuracy weights

Weights used as reference for the verification of weighing instruments.

s. Tyre pressure gauges for motor vehicles

Instruments found in commercial garages, petrol stations and tyre fitting shops which display the pressure when inflating pneumatic tyres.

t. Standard mass of grain

Instrument used to measure the standard mass of grain per storage volume (also known as bulk density and specific weight).