

Position paper on the proposed ErP LOT1 Implementing Measures – as sent by EC 31st March 2011 –

INTRODUCTION

LAB^{TQ} (previously LABNET) has been carefully studying the documents proposed for the implementation of LOT 1 and circulated on 31st March by the EU commission .

Document Notes whereas (11) says: “Measurements and calculations of the relevant product parameters should be performed through reliable, accurate and reproducible measurement and calculation methods, which take into account the recognised state of the art measurement and calculation methods including, where available, harmonised standards adopted by ... etc. “

We welcome this statement that aims both to guarantee a fair competition between the products on the market and the accuracy of the information provided to the end user; aims that LAB^{TQ} has been pursuing as well for some time.

This short document comments on the detail of the measures proposed and suggests some simple improvements that should enable the achievement of the joint aims outlined above.

Also, we explain why they will be best achieved with a system combining market surveillance and third party testing.

1. WHY ACCURACY IS IMPORTANT

At a certain stage of development only a few % points of efficiency can differentiate a good appliance from a very good appliance. Is this worth the effort?

Yes, because only 1% of energy consumption multiplied by the 6 millions of appliances replaced annually and consuming 20.000 kWh as an average, represents a considerable amount of energy and a few hundred thousand tons of CO₂ saved every year !

2. ADVOCATING THIRD PARTY TESTING

2.1. Third party testing will avoid system abuses

Today, if accepted as given, the proposed ECO design implementing measures will permit manufacturers to measure the efficiency of their own appliances in their own laboratories, themselves. Only some of them have accredited laboratories and will be able to perform those test correctly, but many do not.

Considering that the proposed acceptance criteria for the market surveillance is at such variance from the declared value, the propensity for incorrect labelling occurring in the field is

very high. It may happen that a traditional non-condensing boiler may be quoted by the manufacturer as a "category A" appliance; a position normally only achievable by high efficiency condensing boilers.

We can predict that it is easy to foresee what will happen in some cases; boosting a result by 3 or 4 % could happen with no risk to the manufacturer. As the limit between categories A & B is today just letting the very best of the condensing boilers get the A label (or National equivalent), it is foreseeable that some boiler manufacturers having appliances just below the limit (and there may be many) will be tempted to boost their results.

True third party testing by an appropriately-accredited organisation does not permit this temptation!

As a result, the energy saving that should have been achieved will not be, and those manufacturers producing genuine A-rated appliances will be placed in an unfair competition. **This is the main reason why the major manufacturer organisations (EHI, EUROVENT, EHPA) and other industries (MARCOGAZ, etc.) are in favour of third party testing as well.**

Third party testing gives a fair basis for the comparison of appliances and a guarantee that the end user will have the energy savings that are promised by the label and installer/product fiche.

2.2. Independent, accredited European testing laboratories have a high level of competence that has pushed the quality of testing and measurement to an ever-increasing ceiling

The laboratories testing boilers have been constantly developing and investing in new improved test methods in collaboration with, and under the guidance of the EU. They have been working together during the last 20 years (within their organisation LABNET and more recently LAB^{TQ}) on frequent inter-comparisons test and improving the measurement capability so that today full load efficiency of central heating boiler can be measured with differences (reproducibility) lower than 2,5% among those laboratories.

Abandoning third party testing will result in the lost of all those efforts and quality

2.3. Cost of third party testing low for small manufacturers.

It is often argued that the cost of testing is high for small manufacturers; this is not true! It is proven that the cost of testing for the small manufacturers will be much higher if they had to bear the cost of accurate testing that includes expensive measurement instruments and calibration, qualified personnel and possibly accreditation, themselves. Anecdotally, the third party testing costs for efficiency are currently reputed to be less than 0,1% of total boiler development costs.

2.4. Third party testing will continue anyway for some products.

Gas appliances, including boilers and water heaters, are today CE marked according to the Gas Appliances Directive 2009/142/EC using third party testing. Data needed for the implementation of Directive 2009/125/EC can easily be obtained at little additional cost during the GAD testing process.

3. A FEW TECHNICAL COMMENTS ON FIGURES PROPOSED FOR THE MARKET SURVEILLANCE AND OTHER ASPECTS OF TESTING

It appears to us that the basis for the market surveillances (tolerances on tested samples) have been proposed without taking into account the reality of the actual state of the art in testing and approval of appliances. We believe that the proposed measures will not guarantee effective market surveillance. As you will see below, the tolerances suggested are not adapted to the reality and quality of testing of today. They are at the same time too weak (efficiency) and too severe (NO_x).

3.1. Tolerances for efficiency measurement

The proposed tolerances in the working document on eco-design boiler regulation for the market surveillance do not reflect the **state of the art for testing and measurement** by accredited laboratories.

Several inter-comparison test have been conducted by European laboratories (within LAB^{TQ} /LABNET) during the last 20 years, and according to the results obtained, central heating boiler nominal efficiency nowadays are measured with an accuracy of +/- 2% or better.

Electrical appliance testing is less challenging (no gas flow, temperature, pressure, calorific value to measure) and it should be possible to report with a similar or better accuracy.

3.2. Tolerances for NO_x

According to all test laboratory experts and inter-comparison tests carried out by accredited laboratories within LAB^{TQ}, a NO_x tolerance of 10% is not realistic - especially for the low level of emissions considered. We think a much higher value (e.g. 30-40%) could be more appropriate. In our view, further study should be considered under the future mandate to be given to CEN.

3.3. Document regulation 2010/30/EC, Annex IV, Technical documentation, Table 1 and following

Note: the number of digits in boxes "value" indicates the required precision of reporting



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The definitions should be clarified; accuracy should reflect the actual state of the art:

- 1) precision is not the adequate terminology, does it mean “accuracy”?
- 2) if yes, if there is one digit, does this mean the accuracy shall be 0,1%? This area could usefully be clarified further.

CONCLUSION

The proposed approach to third party testing and market surveillance seems to be the weak part of the ambitious measures contained within the reference documents to reduce energy consumption and CO₂ emissions.

Some parts of the industry have been working hard to achieve high level efficiency within their markets and this has been possible through the combined efforts of the industry participants in developing the technology to produce appropriate appliances, and of the testing organisations in developing new and accurate methods to assess the performances of the new technologies.

We believe that the implementing measures should reinforce the requirement for third party testing and adapt the market surveillance requirements to reflect the actual state of the art.

LAB^{TQ} would like to formally offer assistance and help for possible future discussion on testing and measurement aspects of the implementing measures.

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