

PT:s, heaven or hell for the laboratories?

Laboratories view on PT/EQA

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Costs!!!

The most important issue for the laboratories



My background

- Mechanics and especially solid mechanics
- Arranged inter-comparisons (not PT:s)
- Former EUROLAB Secretary
- Member of the PLG (permanent liaison group between EA, EUROLAB, EURACHEM and EURAMET)
- Member of EEE-PT
- Quality manager SP
- Not much PT, more inter-laboratory comparison



The presentation

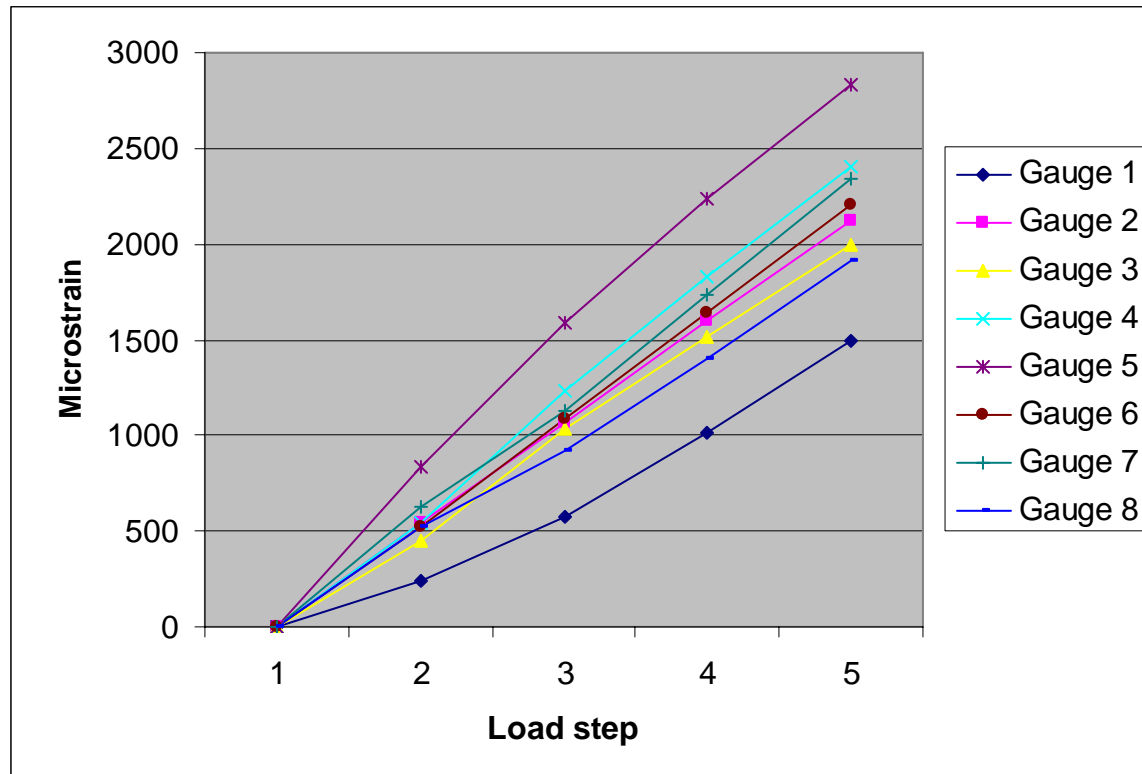
Not only PT:s but inter-laboratory comparisons

- Do we need inter-comparisons at all?
- Questionnaire
- What do laboratories want from PT:s?
 - Payoff
 - Pragmatic handling of the results of PT:s
 - Equal treatment
 - Lower **costs**
 - Reasonable requirements concerning e.g. frequency
 - Learning
 - Reporting
 - More intercomparison in some areas
 - Accreditation of PT providers
- Conclusion

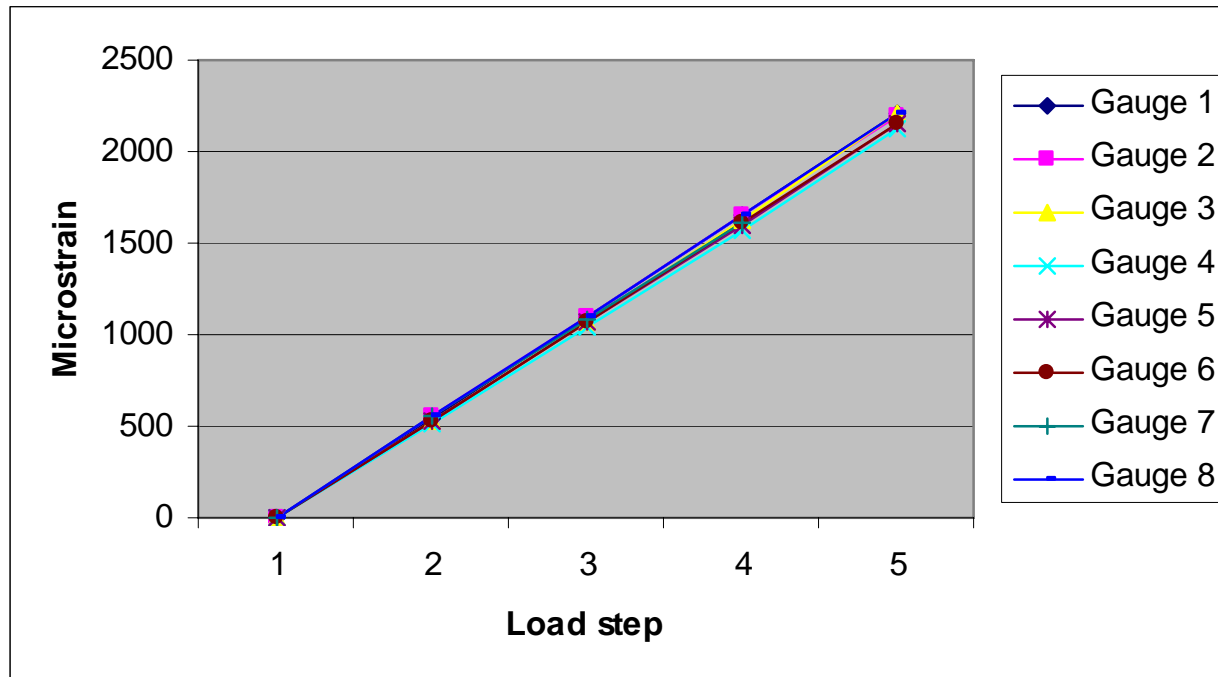
I will also make some “political” statements!



Do we need inter-laboratory comparisons?



Yes!!!!



Yes! We need inter-comparisons (also PT:s) and it is (or should be) a valuable tool in QA activities!



Questionnaire

- Purpose to find out the opinion about PT:s among laboratories, especially EUROLAB members
- To give an overview of the situation
- Distributed among EUROLAB members but also through other channels
- About 10 questions, mainly about the laboratories view
- The technical fields and sets of products from EPTIS
- About 80 answers
- Different geographical spreading
- Did not reached the core of PT users



Questionnaire cont. testing fields and products

- About 25 %, analytical chemistry
- About 10 %, materials evaluation,
- About 10 %, mechanics
- About 10 %, NDT
- Only one answer from medical analysis laboratory and only 3 from microbiology laboratories
- About 20 % other

Sets of products

- Food and drink
- Civil engineering, construction
- Measuring instruments
- Metals
- Other

Questionnaire cont. accreditation

- 82 % of the responding laboratories are accredited!



Questionnaire cont. participation

- More than 85% of the respondents are regularly participating in inter-laboratory comparisons
- 59% participated 1-4 times per year
- 21 % participated 5-10 times per year
- 13 % participated 11-40 times per year
- 8 % participated more than 40 times per year



Questionnaire cont. participation, mandatory

- 75 % of the participation was mandatory

Requested by:

- 74 % of the mandatory participations were requested by accreditation bodies
- 16 % were requested by authorities
- 7 % were requested by customers
- 4 % were requested by others



Questionnaire cont. disadvantages

- 48 % considered **costs** as a disadvantages
- 32 % considered PT-participation as time consuming
- 11 % gave other examples of disadvantages

Questionnaire cont. advantages

- 60 % "It is a tool in our quality assurance activities"
- 16 % "It is a part of the accreditation body's assessment"
- 9% "Training and education of staff"!!



Questionnaire cont. comments

- There are almost no PT:s in our technical field!!
- There are to few PT:s in our country
- To long time to get the report!



There are different types of laboratories

- Size
- Activities
- Independence
- Technological
- Geographical
- Etc.

This is also reflected in the participation in PT:s.



Testing fields

- Electrotechnics/Electronics
 - 13 schemes
 - 7 providers
- Analytical chemistry
 - 613 schemes
 - 180 providers
- Mechanics
 - 52 schemes
 - 15 providers



Sets of products

- Water
 - 194 schemes
 - 60 providers
- Civil engineering
 - 37 schemes
 - 12 providers
- Furniture
 - 5 Schemes
 - 4 Providers

SP participated in about 70 inter-laboratory comparisons, our chemistry department participated in 60 of them!



There are big differences between laboratories, concerning participation in PT:s!

The situation is not balanced and that should be considered when setting up requirements!



Many laboratories are not familiar with the concept of PT:s.



Therefore there are different views on PT:s/Inter-laboratory comparisons as well as different knowledge about and use of PT:s/Inter-laboratory comparisons within the laboratory community. This is important to remember when documents, especially EA documents applicable to all laboratories, are developed

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Payoff

- Good and regular performance in PT:s must lead to some sort of payoff
- The first option is less surveillance
- This is most important in "new" areas
- AB (EA) should develop this idea



Costs!!!!



Pragmatic handling of the results of PT:s

- A "bad" performance in PT should not "the end"
- AB:s should look more to the actions taken than the actual results



Equal treatment

- It is however important that all laboratories are treated equal
- Bad performance in PT:s should be treated the same way
- AB:s should have policy for this issue
- There should be a level playing field
- Requirements should be reasonable equal

We must however remember that there are big differences between laboratories and this should be reflected in the requirements for participation in PT:s.



Lower costs

- Laboratories are pressed economically
- The requirements from AB:s for mandatory participation in PT:s should reflect this!
- Also the PT provider should be aware of the "pressed" laboratories.
- The level of and the frequency of participation in PT:s as well as the sub-disciplines are important issues in this discussion. There are more to consider in this issue than technical areas and accreditation cycles!

Reasonable requirements e.g. frequency

In addition to that the requirements should be reasonable concerning:

- Mandatory participation
- The level of and frequency of participation
- The sub-disciplines

A too rigid definition of this will lead to problems!



Learning

- The learning component of PT is important for laboratories
- It is a well known fact that after a few PT:s the results are converging and all participants are performing better
- It is important to understand this and also allow such learning processes
- But, for learning inter-comparisons may be better than PT:s



Reporting

- All laboratories want to have the report yesterday
- Fast reporting from the provider is preferred!
- We are aware that we also are sinners when it comes to reporting in time! Sorry!



More intercomparison in some areas

In many areas there PT:s are “lacking” e.g.

- Fatigue testing
- Geotechnical areas
- EMC
- Fire testing

It may be necessary to start in “new” areas with inter-comparisons just to spread the concept.!

New areas are in many cases expensive, e.g. fire testing, car crash testing etc. and there are also a another background in several of this technical areas, e.g. physical measurements



Accreditation of PT providers

- No longer a big issue.
- It is here to stay
- My guess: all PT providers will be accredited within 10 years
- Accreditation may lead to increased confidence
- We have to remember that there have been functioning PT:s for a long time without accreditation of the providers
- Accreditation of PT providers will cost, and the laboratories and their customers have to pay for that extra cost!



It is important to spread the use of inter-comparisons in general and PT:s in particular to other technical fields. But to avoid that the laboratories in these new technical fields consider PT:s as additional requirements which only will cause costs the introduction into new technical fields must be done in a pragmatic way, e.g.

The requirements for participation must be reasonable, e.g. to introduce requirements for mandatory participation in technical areas where there are very few PT:s is not a good idea!



Costs!!!!



Conclusions

Laboratories views on PT

- A well functioning tool in the quality assurance work
- There is a need for more PT:s in some areas!
- A level playing field
- The issues of frequency and level of participation and the sub-disciplines are not yet solved
- We want pay-off!
- Participation in PT:s costs and is time consuming!
- It is important to spread the concept of PT:s to new fields but this must be done in a pragmatic way!

Conclusions cont.

PT:s are both heaven and hell for the laboratories



Costs!!!!!!

