TYROSAFE
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Dissemination activities of the TYROSAFE project

During the last six months the TYROSAFE project has organized a series of workshops and dissemination activities. An interesting working session was held on February 18th, 2009, in Hamburg at the Tyre Technology Expo 2009 with presentations by TYROSAFE experts and guests. The second and the third TYROSAFE Workshops were held in Brussels at the FEHRL office on March 24th and on May 13th regarding European policies concerning skid resistance, rolling resistance and noise emission and how the latter are influenced by road surface properties. An additional dissemination activity was the Aula INECO 2009, held in Barcelona. In the present issue of the newsletter these events will be presented shortly.

Tyre Technology Expo 2009

In the framework of the Tyre Technology Expo 2009, held in Hamburg on February 18, a special session dedicated to the TYROSAFE project was organized. After a short introduction by the coordinator of the TYROSAFE project Manfred Haider (AIT/arsenal), Roland Spielhofer (AIT/arsenal) reported on the European policies concerning road surface characteristics.

The TYROSAFE team decided to also invite external experts to share their knowledge with the broad audience of this event. Mr. van Blokland from the company M+P presented a relevant experience on rolling resistance of two passenger car tyres on 40 different road surfaces. Mr. Jerzy Ejsmont from the Technical University Gdanks presented some interesting results of measurements on rolling resistance. Joachim Neubauer from Michelin presented an overview on the tyre contribution to tyre-pavement interaction. Other presentations were given by the TYROSAFE experts: Erik Vos (DVS), Fabienne Anfosso (LCPC) and Martin Green (TRL) reported on previous skid resistance harmonisation attempts, low noise road surfaces in Europe and relation between surface texture and tyre tread depth in relation to skid resistance.

After a short summary of the presentations the project coordinator opened the discussion with the audience. All the presentations have been uploaded on the TYROSAFE website under the public link: http://tyrosafe.fehrl.org/?m=49&id_directory=1328

Aula INECO 2009

The Aula INECO 2009 event, held on April 20th at the Technical University of Barcelona, was another relevant chance to present the TYROSAFE project. The TYROSAFE project officer Mr. Ángel Rodríguez Llerena from the Euopean

Commission had invited the TYROSAFE coordinator to present the project at this occasion. The objective of the event was to present projects funded in FP7 on the topic of road transport. After a general presentation of Mr. Ángel Rodríguez Llerena on the scope and structure of FP7, Mr. Manfred Haider (AIT/arsenal) explained the structure of the project, showed the most relevant findings of the first project months and reported on the project status.

All the presentations are present under the following link on the TYROSAFE website: http://tyrosafe.fehrl.org/?m=49&id_directory=1345

Second TYROSAFE workshop

The second TYROSAFE workshop took place at the FEHRL office in Brussels on 24th and 25th March 2009. This workshop was organised by WP1, which is dealing with European policies concerning skid resistance, rolling resistance and noise on roads. Policies for road characteristics such as skid resistance, rolling resistance and noise emissions are handled differently throughout Europe. The workshop was a good possibility to obtain first-hand information from experts in the fields of policies and standardization. The aim was to formulate recommendations for harmonisation of current national policies.

About 30 participants from road administrations and road research centres from different European countries attended the workshop. After the presentations by Roland Spielhofer (AIT/arsenal) and Fabienne Anfosso (LCPC) some general questions were used for starting the discussions:

- What are the main benefits of harmonised EU policies concerning skid resistance, rolling resistance and noise?
- Which steps must be taken to achieve harmonisation of policies?
- Which obstacles can be expected on the path to harmonisation?

The most relevant results of the workshop are summarized in the following paragraphs.

A harmonised policy on skid resistance should definitely contain a definition of the measurement methods. This includes a harmonised measurement system, i.e. a reference device or a standardised device. Further, the measurement procedures like frequency of measurements, number of runs or calibration actions should be included in a policy. If routine road monitoring is applied, it shall be defined how, when and where the measurements are taken.

Another important issue for a harmonised policy are the actions which are taken after skid resistance measurements have been performed. The results might be used to define friction levels of certain road sections. In this case, these levels have to be defined for each road class. Another key component is the definition of measures to be taken if skid resistance must be improved. Preliminary measures like speed limits and warning signs as well as friction improvement measures like reconstruction should be defined in a harmonised policy.

A possible obstacle to harmonisation could be the lack of acceptance of a harmonised policy. All benefits, but also possible obstacles and drawbacks should be clearly shown. Throughout Europe, both the environmental conditions and hence road friction differ from country to country. The friction situation in Northern countries cannot be compared to Southern countries. It is not possible to adopt a common policy without considering those differences possible variations. If a harmonised policy should include the definition of a single standardised skid resistance measurement device, several obstacles will occur on the path to that harmonisation. This topic will be discussed in deliverable D09 in detail. Also aspects concerning liability were discussed.

All the presentations of the second workshop are present under the link: http://tyrosafe.fehrl.org/?m=49&id_directory=1394

Third TYROSAFE workshop

The third TYROSAFE workshop took place at the BRRC office in Brussels on 13th May 2009. This workshop was organised by WP3, which is dealing with describing the different parameters of road surfaces and tyres, which are relevant for skid resistance, rolling resistance and noise, identifying interdependencies and making recommendations for the optimisation of road surfaces and tyres.

The aim of the workshop was to discuss the optimisation of road surfaces and tyres with road researchers, universities, tyre industry and road administrations. Following questions represented the starting point for discussion:

- Which parameters influence the road surface properties concerning skid resistance, rolling resistance and noise emissions?
- What kind of target conflicts could arise by optimising road surfaces and tyres?
- What about the durability of the optimised road surfaces?

The workshop was divided into three thematic sessions: after an introductory presentation performed by the TYROSAFE coordinator Manfred Haider (AIT/arsenal) giving a general overview of the whole project, Karen Scharnigg (BASt) explained the scope of the workshop and introduced the three sessions.

After each session about 45 minutes were dedicated to questions and open discussions in order to get feedback and new inputs from the experts present in the audience. About 40 participants from road administrations, road research centres, universities, consulting companies and tyre industry from different European countries attended the workshop.

The first session was concerned with parameters influencing skid resistance and was lead by Peter Roe (TRL). The main topics of the discussion were the following:

- Further potential parameters influencing skid resistance, beside those mentioned during the introductory session

of skid resistance, could be porosity (faster drainage of water from surface) and elasticity (no research until today).

o Further research into microtexture concerning the influence on skid resistance (e.g. implementation of new parameters).

o Prediction of skid resistance in the laboratory should be improved regarding to used aggregates, traffic volume (traffic load), etc.

o Tyres are currently not tested on real surfaces, but using drums with artificial surfaces or polished surfaces with low skid resistance

The second session dealt with the parameters influencing rolling resistance and was moderated by Gernot Schwalbe (BASt).

o To optimize the rolling resistance the tyre damping should be reduced.

o For different tyres (passenger car and heavy goods vehicle tyres) there are different purposes for optimizing (PC: wet-grip, handling; HGV: mileage).

o Tyre pressure has more impact on the rolling resistance of PC tyres than on that of HGV tyres.

o There is a good correlation between texture depth and rolling resistance although some surfaces are outliers.

o Good correlation is present between rolling resistance and noise emission for dense surfaces.

o A lot of knowledge gaps concerning the correlation of the different properties are present at this time.

In the last session Marco Conter (AIT/arsenal) presented the parameters influencing noise emission of road surfaces and the following discussion was led by Manfred Haider (AIT/arsenal). Some of the most relevant topics discussed on this topic are listed below:

o During the life time changes of noise emission are smaller in dense surfaces than in porous surfaces.

o Statistical Pass-By measurements:- At high speeds the wetness of the surface has to be taken into account; at low speeds (40-70 km/h) the wetness of the surface has only little impact.

o The following properties of the road surface were considered to have impact on noise emission: texture, porosity, thickness of the top layer (at high void contents), elasticity.

The discussion after each session was very interesting and animated thanks to the large number of experts present at the workshop. A lot of relevant comments and feedback have been collected for each of the three topics; they will be considered in the further activities of TYROSAFE.

All the presentations of the third workshop are present under the following link: http://tyrosafe.fehrl.org/?m=49&id_directory=1395

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TYROSAFE video competition

One of the most interesting activities of the TYROSAFE project is the organisation of a video competition on tyre-road safety in coordination with TRA2010 and YEAR2010.

The aim of the "TyroSafe Video Competition" is to create a short video that conveys the importance and raises awareness about the interactions among tyres, roads and safety. The video will be used to raise awareness and promote the TYROSAFE project at different exhibitions, seminars and project events. A panel of respected judges from the road research industry will decide on a winner. The competition will run from 19 June 2009 to June 2010. The deadline for entry is 26 February 2010.

In coordination with: TRA YEAR2010 Sponsored by:

Further information can be found under the following link:
http://tyrosafe.fehrl.org/index.php?m=61

TYROSAFE deliverables

All the submitted deliverables of the TYROSAFE project can be found under the public link:
http://tyrosafe.fehrl.org/?m=49&id_directory=977

TYROSAFE news

Please visit or website and see the last updated news under the following link:
http://tyrosafe.fehrl.org/index.php?m=38

More to come

The lively and interesting discussions provided important input and feedback to the TYROSAFE project activities. The results of the analysis will be the basis for other workshops during the second part of 2009 and beginning of 2010. Check for announcements at http://tyrosafe.fehrl.org.

The TYROSAFE partners would like to thank all workshop participants for their support and valuable input to the project.

The next issue of the TYROSAFE newsletter will be published in the second half of 2009.