

FOCUS Event

Particle Filter Quality under Real World Conditions

20th ETH-Conference on Combustion
Generated Nanoparticles
June 16th 2016

The NPC stimulates the Real World?



Regulation of Diesel Exhaust with respect to particles in Switzerland and EU

- Swiss Occupational Safety Agency (SUVA) in January 2000:
 - Due to the overall assessment Suva explains the use of PFS for all underground construction work as mandatory
- Swiss Federal office of environment (FOEN) in September 2002 and 2008
 - The Guideline «Air Pollution Control at Construction Sites» explains the use of PFS for construction sites as BAT
 - The Swiss ordinance of air pollution control requires emission standards which could only met by PFS
- EU for light duty vehicles 2009
- EU for heavy duty vehicles 2013

Filter Homologation and control in the field: Concepts and instrumentation?

- In 1996 started the NanoMet instrument development program ETH / Matter / TTM, financed by BUWAL Technology Fund to 50%. And 1999 Dr. M.Kasper exhibited it at the Hanover Fair and received a Swiss price.
- In 1997 the first BUWAL / Suva Filterlist came out with certified filters, all of which were measured in Biel at the institution of Prof. Czerwinski.
- In 2008 Swiss ordinance of air pollution control requires emission standard for PN = 1×10^{12} 1/kWh

Program of the Focus Event Section 1

Section I: Experience of authorities and manufacturers

Ayala Alberto	CARB	<i>Evaluation of DPF in HDV Applications</i>
Hohl Yves	LIEBHERR	<i>DPF Quality in Off-Road Engines</i>
Rienks Rafael	HJS	<i>Quality Control During Filter Manufacturing</i>

COFFEE BREAK

14.40 – 15.10

Program of the Focus Event Section II

Section II: Experience of fleet owners and Lessons for Inspection and Maintenance

Eberwein Burkhard	BVG Berlin	<i>Bus Fleet of Berlin with DPF since 2001</i>
Reinoso Aliosha	GEASUR Chile	<i>Bus Fleet of Santiago with DPF since 2008 – Experience with Respect to Maintenance; Study of the Chilean Ministry of Environment</i>
Frölich Albert Gloor Beat	UGZ AWEL	<i>DPF-Quality in Swiss Construction Sites</i>
Lutz Thomas	ETHZ, Switzerland	<i>DPF Inspection & Maintenance, Methodology and Practice</i>

Heeb Norbert	EMPA	<i>Particle-NOx Trade-off: Two Decades of Diesel Converter Technology Have not Settled Both Issues</i>
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Concluding Remarks: Burtscher Heinz

End of the 20th ETH-NPC

16.50