

Workshop Report

IEA Bioenergy: Task 33: 06 2019

Gas cleaning, experiences, new developments, analytics and diagnostics

KIT Campus North, June 6th

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Edited by: ...

INTRODUCTION

Gasification is a technology widely applied for the production of heat and power or syngas for chemical synthesis. Two trends can be observed, the first that the feedstock base is broadening to more difficult feedstocks and the second that the end use of the gas is also requiring more advanced gas cleaning techniques. These developments can only be made possible with advanced analytics and diagnostics. This workshop is organized to bring together the various companies and research organisation active in the field of gas cleaning and gas analysis.

CONFIRMED SPEAKERS

HANS LEIBOLD – KIT

BEREND VREUGDENHIL – ECN.TNO

TIM BENSTEAD – Rath Filtration

SERGE BIOLLAZ – Paul Scherrer Institut

YORK NEUBAUER – TCKON Engineering Services

ALEXANDER FATEEV – DTU

MAX SCHMID – Uni Stuttgart

KLAS ENGVALL/EFTHYMIOS KANTARELIS – KTH Royal Institute of Technology

PATRICK NAU – DLR

FLORIAN SCHMIDT - Umeå University

GOAL

The goal of the workshop is to share new knowledge and ideas about improvements for gas cleaning and the new developments in gas analytics. The organising committee suggest reading the thorough report on gas analysis guidelines from IEA Bioenergy Task 33 when joining the workshop

<http://task33.ieabioenergy.com/content/Task%2033%20Projects>

The workshop will be complemented with a nice after-work-dinner and interesting discussions.

IEA Bioenergy, Task 33: Thermal Gasification of Biomass and Waste

Workshop “Gas cleaning, experiences, new developments, analytics and diagnostics”

Thursday, June 6th :

Meeting location: KIT Campus North, Eggenstein-Leopoldshafen, ITC– Geb. 430

Bus transport: Departure at Hotel ACHAT 08:30 am

09:00 – 09:15 Welcome (Berend Vreugdenhil/Thomas Kolb)

Topic: Gas cleaning, experiences, new developments

09:15 – 09:45 Hot gas cleaning – Experiences and improvements at the bioliq pilot plant
HANS LEIBOLD, KIT

09:45 – 10:15 MILENA gasification as platform towards heat & power and sustainable fuels & chemicals

BEREND VREUGDENHIL, ECN part of TNO

10:15 – 10:45 Latest Developments in Ceramic Filter-based Hot Gas Filtration.
TIM BENSTEAD, Rath Filtration

10:45 – 11:15 *Coffee and tea break*

Topic: analytics and diagnostics

11:15 – 11:45 Gas Analysis Working Group (GAW): Status and perspective 2019
SERGE BIOLLAZ, Paul Scherrer Institut

11:45 – 12:15 Continuous On-line Tar Monitoring and Tar Analysis with UV-Fluorescence
YORK NEUBAUER, TCKON Engineering Services

12:15 – 12:45 Online UV/IR measurement of tars and other gas compounds
ALEXANDER FATEEV, DTU

12:45 – 14:15 *Lunch*

14:15 – 14:45 Tar and impurity measurement and monitoring for biogenic residue gasification
MAX SCHMID, University Stuttgart

14:45 – 15:15 Effects of gas phase S/K on tar reforming using Ni catalysts downstream a biomass gasifier

KLAS ENGVALL or **EFTHYMIOS KANTARELIS**, KTH Royal Institute of Technology:

15:15 – 15:45 *Coffee and tea break*

15:45 – 16:15 Tunable diode laser absorption spectroscopy (TDLAS) for gas analysis in gasifiers
PATRICK NAU, DLR

16:15 – 16:45 TDLAS-based in situ measurements of potassium in entrained flow gasifiers
FLORIAN SCHMIDT, Umeå University

17:00 – 19:00 Site visit bioliq

19:30 Dinner

Site Visit

Friday, June 7th

Meeting location: BASF, Ludwigshafen

Bus transport: Departure at Hotel ACHAT **08:00 am**

08:30 – 10:00 Bus transfer from KIT to Ludwigshafen

10:00 – 13:00 Site visit and Lunch

13:00- 16:30 Bus transfer from Ludwigshafen to Karlsruhe Main Station via Mannheim Main Station (direct train to Frankfurt)

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