



Project Newsletter No. 4

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Headlines

- Project Workshop “DEVCAT 2013” successfully held in Stuttgart, 29th of May
- Major results of the project presented at the event
- Hosted by EnBW, including a guided visit of the power plant Altbach / Deizisau
- In total 9 presentations, held by the DEVCAT consortium and guest speakers



EnBW Power Plant Altbach / Deizisau

THE WORKSHOP “DEVCAT 2013”

- The application of SCR-DeNO_x-catalysts is considered as state of the art for efficient NO_x-reduction at power plants. Various studies showed, that the installed SCR-catalysts also enhance the oxidation of elemental mercury (Hg⁰) in the flue gas and thus the mercury retention in wet flue gas desulphurisation or by dry adsorption processes. A major aspect investigated is the interaction of the parallel reactions of NO_x-reduction, Hg⁰-oxidation and SO₂/SO₃-conversion. The minimisation of investment and operating costs, deactivation by bio-fuels or co-combustion and the innovative regeneration of deactivated catalysts are of special interest.
- The workshop covered a wide range of SCR-related aspects. The DEVCAT consortium presented major results gained within the project. Combined with the contribution of the external specialist Mercedes Diaz Somoano from the National Institute of Coal in Spain, a strong basis for discussion for all participants of the workshop was created.

Workshop Programme DEVCAT 2013

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| 09:00 | Registration |
| 10:00 | Welcome S. Eberle - EnBW Kraftwerke AG, Germany |
| 10:15 | DEVCAT project overview B. Heidel - IFK University of Stuttgart, Germany |
| 10:30 | Progress in catalyst development from a manufacturers perspective A. Hartung - IBIDEN Porzellanfabrik Frauenthal GmbH, Austria |
| 10:55 | Advanced catalyst performance under full scale conditions D. Porbatzki - E.ON New Build & Technology GmbH, Germany |
| 11:20 | Coffee Break |
| 11:30 | High performance 3D-CFD modelling of boiler and SCR reactor B. Risio, RECOM Services GmbH, Germany |
| 11:55 | Investigations of SCR-catalysts in ENELs slip-stream reactor M. Di Blasi - ENEL Ingegneria e Ricerca spa, Italy |
| 12:20 | Lunch |
| 14:00 | Study of Hg⁰-oxidation at newly developed SCR-DeNO_x catalysts in lab- and small-scale reactors T. Schwämmle - IFK University of Stuttgart, Germany |
| 14:25 | Advanced regeneration of heavily deactivated SCR-catalysts M. Hilber, EnBW Kraftwerke AG, Germany |
| 14:50 | Coffee Break |
| 15:00 | The challenge of existing air pollutant control devices for mercury removal M. D. Somoano, Instituto Nacional del Carbón, Spain |
| 16:00 | Visit of EnBW power plant facilities |
| 17:00 | Get-together |

Short abstract of guest presentation

The challenge of existing air pollutant control devices for mercury removal

M. D. Somoano, Instituto Nacional del Carbón, Spain

The problem of mercury emission and capture in the coal combustion process as well as the role that pollution control systems designed for other contaminants (ESP, SCR and FGD) may play in this capture are subject of study around the world. However there are no technologies that can be applied universally at all coal combustion power plants because of differing plant configurations and coal types. Multipollutant control devices are desirable, especially in the current time when CO₂ technologies have to be integrated too. The experience of INCAR-CSIC and the results of several projects on mercury control in which INCAR has been involved will be discussed. The impact on by-products, such as fly ash or gypsum, which often have an economic value, will also be taken into consideration.

