



2nd IEA CCC workshop on advanced ultra-supercritical coal-fired power plants

Centro Sviluppo Materiali S.p.A.
Rome, Italy, 14–15 October 2014



Tuesday, 14 October 2014

07:50 **Buses depart Holiday Inn Hotel for CSM**

08:30 – 09:00 **Registration** (conference room, CSM)

09:00 – 10:30 **Welcome and Session 1: International overview**

Chair: Andrew Minchener, General Manager IEA CCC

Welcome and introductions Andrew Minchener and Cesare Murgia, CEO CSM

Status of advanced ultrasupercritical pulverised coal technology (Dec 2013) Mr Kyle Nicol – IEA Clean Coal Centre [United Kingdom]

Advantages of A-USC in pulverized coal units
Mr Howard Hendrix – EPRI [United States]

Technology innovation of the most efficient and greenest coal-fired power plant Mr Weizhong Feng – Shanghai Waigaoqiao No 3 Power Generation Co LTD [China]

10:30 - 11:00 **Coffee break** (conference room bar)

11:00 - 12:30 **Session 2: International overview**

Chair: Egidio Zanin, CSM

Future steam power plants with highest steam parameters Dipl-Ing Frank Kluger – Alstom Boiler Deutschland GmbH [Germany]

Progress of China 700°C USC development program
Dr Ye Tao – Electric Power Planning & Engineering Institute [China]

The progress of development for A-USC boiler
Keiji Kubushiro – IHI Corporation [Japan]

12:30 - 14:00 **Lunch** (conference room bar)

14:00 - 15:15

Session 3: Boilers

Chair: Alberto Pettinau, Sotacarbo

An elevated T-G unit technology for the next generation of power plant Mr Weizhong Feng – Shanghai Waigaoqiao No 3 Power Generation Co LTD [China]

Research on material selection of 700°C USC boiler heating surface Mr Zhihao Tian – Shanghai Boiler Works, Ltd [China]

Design parameters of main steam piping for 700°C A-USC unit Professor Yongjian Ye – East China Electric Power Design Institute [China]

15:15 – 15:40

Coffee break (conference room bar)

15:40 – 17:00

Session 4: Piping and turbines

Chair: Yongjian Ye, East China Electric Power Design Institute

Research progress of 700°C HUSC power plant
Prof Hong Yang - Shanghai Turbine Works Co Ltd [China]

Siemens' evolution of large USC steam turbines
Dr Rainer Quinkertz – Siemens AG [Germany]

Investigations on the Ni-based superalloy used for 700? A-USC steam turbine rotor Dr Wei Min Wang – Science & Technology Administration Dept of Central Research Academy of DEC [China]

17:00

Buses return to Holiday Inn Hotel

18:00 - 23:30

Buses depart Hotel for walking tour of Rome and Workshop Dinner at 'The View' restaurant

Wednesday, 15 October 2014

08:10

Buses depart Holiday Inn Hotel for CSM

09:00 – 10:30

Session 5: Nickel alloys

Chair: Keiji Kubushiro, IHI Corp

Macplus project, early results Dr Egidio Zanin – CSM [Italy]

Development of Nickel Superalloy INCONEL alloy 740H for A-USC Boilers Dr Stephen McCoy – Special Metals / PCC Energy Group [United Kingdom]

Production of thick-walled components made from optimized material Alloy 617 B for highly efficient power plants at operating temperatures of 700°C - HWT II

Dr-Ing Karola Klenke – BGH Edelstahl Siegen GmbH [Germany]

Corrosion phenomena on nickel base alloys for advanced ultra super critical technologies Silvia Olivotto [Italy]

10:30 – 11:00

Coffee break (conference room bar)

11:00 – 12:30

Session 6: Steels and CCS

Chair: Frank Kluger, Alstom Boiler Deutschland GmbH

Multiaxial creep testing and modelling on P91 steel

Dr Tommaso Coppola – Centro Sviluppo Materiali [Italy]

Martensitic and austenitic steels for application in A-USC thermal power plants Mr Vladimir Skorobogatykh – PJSC RPA CNIITMASH [Russian Federation]

Economic performance of a carbon capture and storage demonstration-scale project in Sardinia Dr Alberto Pettinau – Sotacarbo S.p.A. [Italy]

Concluding remarks Andrew Minchener, General Manager IEA CCC

12:30 – 14:00

Lunch (conference room bar)

14:00 – 16:00

Visit to CSM facilities

16:00

Buses leave for Fiumicino Airport and Holiday Inn Rome Eur Parco Dei Medici Hotel