



PRESIDENZA DEL CONSIGLIO DEI MINISTRI

**INTRODUCTION**

- D. Cooper, J. Curlin** United Nations - UNEP
- D. Coulomb** International Institute of Refrigeration - I.I.R
- P. Owen, K. Arno** European Commission
- V. Rizzo** Ministry of Environment
- R. Shende** TERRE Policy Centre

**Third Session**

**OPEN DISCUSSION ON ENERGY AND ENVIRONMENTAL ISSUES, NEW FLUIDS, NEW COMPONENTS AND NEW PLANTS IN REFRIGERATION AND AIR CONDITIONING:  
REVIEW EUROPEAN REGULATION ON F-GASES**

**CHAIRMEN (open discussion):**

- D. Cooper, J. Curlin** United Nations - UNEP
- D. Coulomb** International Institute of Refrigeration I.I.R
- A. Cavallini** International Institute of Refrigeration I.I.R
- P. Owen, K. Arno** European Commission.
- W. Chakroun** ASHRAE
- G. Fox** AREA
- M. Masoero** Politecnico of Torino
- H. Halozan** - Graz University of Technology, Austria

Discussion on energy issues in relation to the air conditioning, refrigeration components and plants optimization. Heat pumps and geothermal plants.

Discussion on energy saving and maintenance. Review of the European regulation on F-gases.

**Speakers (open discussion):** **D. Cooper, J. Curlin** United Nations, UNEP - **D. Coulomb** International Institute of Refrigeration - **P. Owen, K. Arno** European Commission - **V. Rizzo** Ministry of Environment - **R. Shende** TERRE Policy Centre - **W. Chakroun** ASHRAE - **D. Calabrese** AHRI - **G. Fox** AREA - **A. Voigt** EPEE - **P. Antoine** A.F.F. - **D. Clodic** Ecole des Mines - **A. Messineo, G. Panno** University of Palermo - **R. Camporese** ITC CNR of Padova - **J. Mate** Greenpeace - **N. Achaichia, G. Matteo** Honeywell - **L. Rollino** consultant - **M. Collantin** consultant

Discussion with the participants in the conference

Buffet 1,00 pm

Conference organizer and secretariat  
CENTRO STUDI GALILEO - ATF - EEC  
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[www.EUenergycentre.org](http://www.EUenergycentre.org)

**F-GAS REGULATION REVIEW, EUROPEAN AND INTERNATIONAL LAWS, CERTIFICATIONS AND TRAININGS**

**CHAIRMEN**

- D. Cooper, J. Curlin** United Nations - UNEP
- P. Owen, K. Arno** European Commission
- D. Coulomb** International Institute of Refrigeration I.I.R.
- M. Masoero** Politecnico of Torino - **G. Fox** AREA
- V. Rizzo** Ministero dell'Ambiente
- A. Voigt** E.P.E.E - **D. Calabrese, S.Yurek** AHRI

F-Gas Regulation Review: Inspections, Logbook, handling refrigerants, minimum requirements for technicians and companies, trainings. New fluids: detection of refrigerant leaks; fluids recovery, recycling and destruction. European certification and training, welding, brazing. Issues concerning production and installation.

**Speakers:** **P. Owen, K. Arno** European Commission - **A. Peru** Ministry of Environment - **G. Fox** AREA - **A. Voigt** EPEE - **D. Calabrese** AHRI – **C. Norcia** Bureau Veritas - **V. Aiello** IMQ - **P. Fantoni, A. Sacchi** ATF

**Fifth Session**

**MOBILE AIR CONDITIONING AND REFRIGERATED TRUCKS**

**CHAIRMEN**

- M. Masoero** Politecnico of Torino
- D. Coulomb** International Institute of Refrigeration - I.I.R
- C. Malvicino** Centro Ricerche FIAT
- G. Cavalier** Cemafruid
- R. Shende** TERRE Policy Centre

The European Directive on mobile air-conditioning systems (MACs) and Regulation on refrigerated trucks. New technology in the cold chain. Phase down of R134a, new refrigerants, how can we meet the requirements. Directive 2006/40/CE. Reg. 307/08/CE. Competence. Training.

**Speakers:** **M. Masoero** Politecnico Torino - **D. Coulomb** IIR - **G. Cavalier** Cemafruid - **C. Malvicino** Centro Ricerche FIAT - **G. Martorana** Politecnico Torino - **N. Achaichia** Honeywell - **A. Sacchi** ATF - Politecnico Torino

**General discussion**

with the participants in the conference

- D. Cooper, J. Curlin** United Nations - UNEP
- S. Roaf** - Heriot-Watt University
- R. Shende** - TERRE Policy Centre

**UNITED NATIONS ENVIRONMENT PROGRAMME  
INTERNATIONAL INSTITUTE REFRIGERATION  
ASSOCIAZIONE TECNICI DEL FREDDO  
CENTRO STUDI GALILEO  
EUROPEAN ENERGY CENTRE**

ENVIRONMENT, ENERGY, TRAINING, ASSESSMENT, CERTIFICATION, LEGISLATION, STANDARDS, SAFETY



**THE LATEST TECHNOLOGY IN AIR CONDITIONING AND REFRIGERATION INDUSTRY WITH PARTICULAR REFERENCE TO ENERGY ISSUES**  
*new refrigerants and plants, new European regulations mobile air conditioning and refrigerated trucks*

7<sup>th</sup> - 8<sup>th</sup> June 2013

With the participation of scientists and experts from  
United Nations Environment Programme (UNEP)  
International Institute of Refrigeration (IIR)  
European Commission - Ministry of Environment  
AFF - AICVF - AREA - AHRI - ASHRAE - CAR  
CNF - École des Mines - EPEE - IFFI - NATE - RSES  
Politecnico of Milano, Torino  
Universities of Ancona, Genova, Padova,  
Palermo, Perugia, Roma, Sannio, Graz (Austria)



Politecnico di Milano  
Piazza Leonardo Da Vinci, 32 - Milano (Italy)

## GENERAL CHAIRMEN

**DEAN COOPER** United Nations Energy Branch - UNEP

**JIM CURLIN** - United Nations OzonAction- UNEP

**PHILIP OWEN** Head, **KASCHL ARNO**  
European Commission, Action Clima

**VALERIA RIZZO, ANTONELLA ANGELOSANTE,  
SAMANTHA SAPIENZA**

Ministero dell'Ambiente e della Tutela del Territorio e del Mare

**DIDIER COULOMB** Director

**ALBERTO CAVALLINI** Honorary President  
International Institute of Refrigeration (I.I.R.)

**ENNIO MACCHI - GIOVANNI LOZZA - C. M. JOPPOLO**  
Politecnico di Milano

**RAJENDRA SHENDE** President TERRE Policy Centre

**SUSAN ROAF** Director

Low Carbon Cities Initiative, Heriot-Watt University

**PATRICK ANTOINE** President

Association Française du Froid (A.F.F.)

**MICHEL BARTH** Honorary President

Association Française du Froid (A.F.F.)

**President** Compagnie des Experts du Froid

**STEPHEN YUREK** President

Air-conditioning, Heating and Refrigeration Institute (AHRI)

**ANDREA VOIGT** Director

European Partnership for Energy and the Environment (E.P.E.E.)

**GRAEME FOX** President

Air conditioning and Refrigeration European Association (AREA)

**W. CHAKROUN** Director

American Society Heating Refrigeration and Air conditioning  
Engineers (ASHRAE)

**ANDY PEARSON** President Institute of Refrigeration (IOR)

**GERALD CAVALIER** Director CEMAFROID

**P. W. EGOLF** President

Working Party on Magnetic Cooling - I.I.R.

**ALFREDO SACCHI** President

Associazione dei Tecnici del Freddo (ATF)

**LAMBERT KUIJPERS**

Technology an Economic Assessment Panel (TEAP)

**DENIS CLODIC** Deputy Director

Ecole des Mines

**HERMANN HALOZAN**

Graz University of Technology, Austria

**MARCO MASOERO** Politecnico di Torino

**ANDREA DE LIETO VOLLARO - FRANCO GUGLIERMETTI**

University La Sapienza of Roma

**FRANCESCO ASDRUBALI** - University of Perugia

**SERGIO BOBBO - ROBERTO CAMPORESE**

I.T.C. CNR Padova

**GIUSEPPE PANNO** - University of Palermo

**LUCA TAGLIAFICO** - University of Genova

9,00 am - Friday 7<sup>th</sup> June 2013

## GENERAL INTRODUCTION

**New regulations on F-gases and new refrigerants.  
New plants with reference to energy and  
environmental optimization. World situation.**

**D. Cooper, J. Curlin** United Nations - UNEP

**D. Coulomb** International Institute of Refrigeration

## First Session

### NEW REFRIGERANTS AND PERSPECTIVES

#### CHAIRMEN

**D. Cooper, J. Curlin** - United Nations - UNEP

**D. Coulomb** - International Institute of Refrigeration

**A. Cavallini** - Università di Padova - I.I.R.

**P. Antoine, M. Barth**

Association Française du Froid

**S. Yurek** - AHRI

**D. Clodic** - Ecole des Mines

**L. Kuijpers** - TEAP

**A. Voigt** - EPEE

**A. Pearson** - IOR

**New LOW GWP refrigerants, developments,  
perspectives and forecasts on new refrigerants. New  
synthetic and natural refrigerants, pure and mixtures  
HFC, HFO-1234yf/ze, HFO mixtures, CO<sub>2</sub>, ammonia,  
hydrocarbons; secondary refrigerants; lubricants for  
synthetic and natural refrigerants; Nano-Fluids, Ice  
slurry.**

**Speakers: A. Cavallini** I.I.R. - **D. Coulomb** I.I.R. -  
**W. Chakroun** ASHRAE - **D. Clodic** Ecole des Mines -  
**P. Neksa** Sintef Energy Research - **A. Pearson** IOR -  
**E. Campagna** Rivoira - **N. Achaichia, G. Matteo**  
**Honeywell** - **C. Zilio, Del Col** Università di Padova - **S.  
Bobbo** CNR Padova

#### Discussion

with the participants in the conference

**Buffet 1,00 pm**

**Timetable 9.00 - 13.00 / 14.00 - 18.30**

## Second Session

### NEW COMPONENTS AND EQUIPMENT IN RELATION TO NEW REFRIGERANTS, ENERGY SAVING AND ENVIRONMENTAL ISSUES RESULTS AND UPDATES IN NEW SYSTEMS

#### CHAIRMEN

**E. Macchi, G. Lozza, C. M. Joppolo**

Politecnico di Milano

**P. W. Egolf** - Working Party on Magnetic Cooling - I.I.R.

**H. Halozan** - Graz University of Technology, Austria

**F. Asdrubali** - Università di Perugia

**T. Phoenix, W. Chakroun** - ASHRAE

**C. Aprea** - Napoli University

**Energy issues in relation to the air conditioning and  
refrigeration components and plants optimization:  
energy saving. The magnetic cooling. The solar  
refrigeration and cooling with absorption plants.  
Renewable energy in air conditioning and refrigeration  
fields, heat pumps. Secondary refrigerant plants,  
ammonia, CO<sub>2</sub>, absorption, hydrocarbon plants, Ice  
Slurry, CO<sub>2</sub> hydrate slurry. New technology compressors  
and systems, new technology energy optimization, new  
components for household, commercial and  
industrial refrigeration. New technology in air  
conditioning, refrigeration, process and design.**

**Speakers: E. Macchi** - Politecnico di Milano - **P. W. Egolf**  
Working Party on Magnetic Cooling - I.I.R. - **O. Sari** -  
University of Western Switzerland - **M. Barth** A.F.F. -  
**H. Halozan** Graz University of Technology, Austria -  
**A. Presciutti** Università di Perugia - **S. Filippini** LU-VE  
Group - **H. Renz, P. Trevisan** Bitzer - **G. Pisano** Off. Mario  
Dorin - **L. Novak, P. Valero, Zgliczynski** Embraco -  
**G. L. Angelantoni, M. Zenobi** Angelantoni Industrie -  
**J. Boone** Mayekawa - **A. Di Cecca, F. Benassis**  
ClimaSpace - **T. Funder-Kristensen** Danfoss - **P. Lee Kang**  
Aspen - **M. Collantin** consultant

#### Discussion

with the participants in the conference

**Conference organizer and secretariat**

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