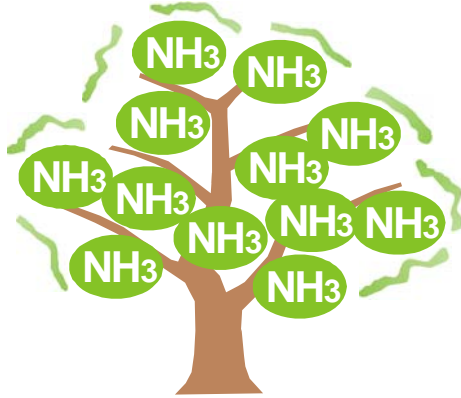




INVITATION

INTERNATIONAL CONFERENCE

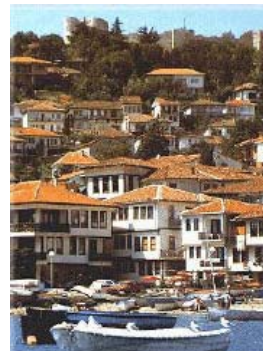


Prof. Gustav Lorentzen in Ohrid in 1960

Ammonia Refrigeration Technology

IIR Commissions: B2 with B1, D1

May 7-9, 2009, Ohrid, Republic of Macedonia



Organized by
Faculty of Mechanical Engineering, University "Sv. Kiril and Metodij" - Skopje
www.mf.edu.mk

Programme Sponsors: **eurammon**, and **iiair** (International Institute of Ammonia Refrigeration)

ABOUT THE CONFERENCE

Today there are still confusion and uncertainties in the refrigeration and air-conditioning industry related to working fluids in many applications, mostly due to ozone depletion and global warming and the regulations governing these issues. In addition, there are many groups with varying interests.

What will happen beyond 2012 when compliance with the Kyoto Protocol will end? The climate conference in Bali (2007) paved the way to new negotiations, stronger efforts and declarations concerning measures against climate change. Technology transfer enabling climate friendly technologies to be introduced is required, especially in developing countries.

Acceleration of HCFC phase-out by new documents (2007) within the framework of the Montreal Protocol depends on the replacement technologies offered on the market and also depends on the scientific community.

On the other hand, the global trend towards using natural refrigerants is intensifying. There are very positive signals in some parts in Europe and Australia where expanding use of ammonia, carbon dioxide and hydrocarbons in various applications is occurring. We will eliminate all uncertainties in the future regarding both Protocols and environmental regulations applying to natural refrigerants.

Ammonia is the oldest working fluid compared with all other refrigerants applied today. It is a unique refrigerant that has been used continuously since the 19th century.

Encouraged by the increasing success of the previous conferences in 2005 and 2007, we look forward to the 3rd Conference on Ammonia Refrigeration Technology. See you in the beautiful city of Ohrid and Ohrid Lake!

MAIN TOPICS

Design of modern ammonia systems and technological innovation

Current and future use of natural refrigerants; the Kyoto Protocol
Low charge NH₃ technology, factory-made units, systems at a new level of quality improvement
Plate type heat exchangers; Direct expansion of ammonia systems
Expansion in applications with lower size capacity; Testing of components
Compatibility of ammonia and metals; Ammonia and (miscible) oils for small DX systems

Energy efficiency of ammonia refrigeration

Comparison: ammonia and fluorocarbon-based systems
Ammonia - indirect cooling compared with direct evaporation of HCFCs and HFCs
NH₃/CO₂ and other cascade systems

Applications of ammonia refrigeration

Cold stores, Agro-food industries, Supermarkets, Air-conditioning systems, Heat Pumps

Absorption machines

Ammonia systems in developing countries

Renewal and improvements, technical assistance

Technical and safety standards

Regulations on the construction and operation of ammonia refrigerating systems

Guidelines, instructions and training materials

Education and training for: best practices, operating procedures, handling of ammonia and safe operation

Public awareness of the image and benefits of natural refrigerants

Crucial and sustainable contributions to a better environment; Barriers to market penetration

KEYNOTE SPEAKERS



Anders Lindborg, Sweden
Ammonia Partnership AB
Honorary member of IIR
Commission D1
"Ammonia refrigeration risk assessment, probability and frequency"



Predrag Hrnjak, USA
University of Illinois
Secretary of IIR Commission E2
IIR Board of Directors
"Charge minimization in small systems – opportunity for expanding use of ammonia as refrigerant"



Andy Pearson, UK
Star Refrigeration
Member of IIR Commission E1
IIR Board of Directors
"Making the case for heat pumps with Ammonia and Carbon Dioxide"



Nelson Mugabi, Japan,
MYCOM,
Mayekawa Mfg Co.,Ltd.
"Semi-hermetic and hermetic ammonia compressor packages"



Gert Koster, Netherlands
Grasso International B.V.
GEA Group
Member of IIR Commission B2
"Modernization of ammonia refrigerating systems in view of reliability, safety, energy consumption and environmental issues "



Special guest:

Lambert Kuijpers, Netherlands,
Technical University Eindhoven,
Co-chair UNEP TEAP; IPCC AR4
"2010-2020: a new decade of changes in refrigeration and air conditioning"

International Scientific/Technical Committee

President: Anders Lindborg (Honorary member of IIR Commission D1), Sweden
Jocelyn Bonjour (Secretary of IIR Commission B1), France
Risto Ciconkov (Member of IIR Commissions B2 and E2), Macedonia
Ray Clarke (Former President of AIRAH), Australia
Eric Granryd (Former President of the General Conference of the IIR), Sweden
Herman Halozan (Former President of IIR Commission E2), Austria
Predrag Hrnjak (Secretary of IIR Commission E2; IIR Board of Directors), USA
Kuniaki Kawamura (Vice-president of JSRAE, Member of IIR Comm. E2), Japan
Brian Marriott (IIR Board of Directors), USA

Natalia Mednikova, VNIHI, Russia
 Bjorn Palm (Vice-President of IIR Commission B1), Sweden
 Joachim Paul (President of IIR Executive and Management Committees), Denmark
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 Fabio Polonara (Vice-President of IIR Commission B1), Italy
 Sietze van der Sluis (President of IIR Section D), Netherlands
 Thomas Spanich (eurammon executive board), Germany
 David Tanner (President of IIR Science and Technology Council), Australia
 Branislav Todorovic (Member of IIR Commission E2), Serbia

Organizing Committee

President: Risto Ciconkov, (Skopje University), Member of IIR Commission B2 and E2
 Didier Coulomb, Director of the IIR
 Karin Jahn, (Eurammon Management)
 Dragan Bitrakovski (Skopje University)
 Samoil Ciconkov (Skopje University)
 Ljubomir Hadzi Pecov (LTH company), Member of IIR Commission D1
 Milan Šarevski (Skopje University), Member of IIR Commission B2

IIR Conference Manager: Mrs. Susan Phalippou

INFORMATION FOR AUTHORS

The papers are to be written in English, submitted electronically and must be compatible with Microsoft Word. At least one author of each paper must attend the conference to present the paper.

Submit the paper in electronic form
 - by e-mail to: ristoci@ukim.edu.mk , or info@energija.com.mk

Timetable

Deadline for submission of abstracts	September 30, 2008
Notification of acceptance	October 31, 2008
Deadline for submission of full paper	January 15, 2009 extended
Notification of acceptance	February 15, 2009 extended

Instructions for manuscript preparation and all information are available on the conference web site

www.mf.edu.mk

Accepted papers presented at the conference will be available as registered separate papers during the conference.
 All papers will be published on CD-ROM in the final proceedings.

REGISTRATION AND FEES

Full conference fee includes: participation at the conference, supply of the separate printed papers, final proceedings during the conference, coffee breaks, conference dinner and sightseeing in the old town of Ohrid (or another tour).

Registration fee

Full registration	
by March 25, 2009	350 EUR
after March 25, 2009	400 EUR
Accompanying persons	120 EUR

ACCOMMODATION

Accommodation is not included in the conference fee. Accommodation is available at the conference facility, in a four-star hotel and in three-star hotel. More information are available on the following website www.ohrid.com.mk.

Venue:

Metropol Lake Resort
 Hotel Metropol ****
www.metropol-ohrid.com
sales@metropol-ohrid.com

Metropol Lake Resort is sited in the most beautiful part of the east coast of the Lake Ohrid, with the lake view from one side, and mountain view from the other side. The resort consists of three hotels on the same location: "Metropol", "Bellevue" and "Tourist".

Room rates, EUR (per person)

Hotel	Occupancy	BB	HB
METROPOL****	1/1	59	65
	1/2	45	50
BELLEVUE****	1/1	53	59
	1/2	40	45
TOURIST***	1/1	39	44
	1/2	29	34



OTHER INFORMATION

Ohrid: www.spiritofohrid.com.mk, www.ohrid.com, www.ohrid-vizija.com.mk
Macedonia: www.exploringmacedonia.com
Flights: www.airports.com.mk
Visa information: www.mfa.gov.mk
(Visa is not necessary for most of the countries.)

OHRID

Ohrid is a city-museum with numerous archaeological treasures, with a number of early Christian basilicas, a great number of churches, luxurious mosaics, valuable archaeological sites and an antique theatre, which confirm that Ohrid was a cultural centre of the ancient era.

Lake Ohrid, the blue Macedonian pearl, is one of the oldest and best-preserved lakes in the world. It lies at an altitude of 695 m, has an area of 358 km² and maximum depth of 289 m. The crystal-clear lake water and the unpolluted environment afford a breath of untouched nature.

Ohrid and Lake Ohrid have been named a world cultural and natural heritage listed city under the protection of UNESCO since 1980.

Over the centuries, an enormous and colourful heritage of beautiful architecture, crafts and traditions has evolved. Combined with its scenic lake and mountainscape, interesting town and village architecture, local hospitality, climate and delicious fresh food, a visit to the Ohrid area will be deeply rewarding.



Skopje
Mother Teresa was born in 1910 in Skopje. In 1979, she was awarded the Nobel Peace Prize for her humanitarian work.



Memorial House of Mother Teresa in Skopje

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