



INVITATION

CIMAC Circle Norway 2013

Innovative integration of machinery in systems for increased energy efficiency

The demand for more energy efficient ships and systems has been increasingly growing in the past years from economic and environmental concerns. Focus is now stronger than ever on innovative technology for better utilization of energy and thereby also reducing emissions; either the technology is applied on merchant ships, offshore vessels or vessels for other purposes/processes.

Much of the challenges are connected to integration of systems and the combined efficiency of the systems relative the operational demand, where the engines are the contributor of mechanical and electrical energy into the systems. Hence, new innovative technologies are dependent to the holistic set-up of components with their characteristic either the systems are complex or not, and the operations they will be applicable to. This CIMAC Circle set focus on some of the innovative technologies for better efficiency of the holistic systems and the engines.

**Lillestrøm, Thon Arena Hotel
Hordaland meeting room
Thursday June 6, 13:00-16:30**



CIMAC Circle Norway 2013

On behalf of CIMAC we cordially invite you to the CIMAC CIRCLE Norway 2013 on Thursday, 6 June 2013, 13:00, at NorShipping, Lillestrøm, Norway - Hordaland meeting room, Thon Arena Hotel (adjoining the exhibition centre)

Free Admission after Registration at CIMAC NMA Norway

- 13:00 Registration
- 13:30 Welcome and introduction
Erling Johannessen, President at CIMAC NMA Norge
- 13:40 Theoretical basis regarding energy efficiency in complex propulsion systems
Per Magne Einang, MARINTEK
- 14:00 Utilization of the variable power principle
Øystein Skår, Pon-Power / Caterpillar - Ketil Aagesen, Siemens - Egil Arne Skare, Østensjø Rederi
- 14:30 Utilization of hybrid shaft generators
Erlend Vaktskjold, Bergen Engines - John Roger Nesje, Rolls-Royce - Tore Heidegård, Torghatten Nord
- 15:00 Utilization of energy storage / batteries in systems
Ingve Sørfonn, Wärtsilä - Kjell Sandaker, Eidesvik
- 15:30 DC-power generation with variable engine speed and DC-grid
Christian Kamm, MAN Diesel & Turbo - Ismir Fazlagic, ABB - Tore Myklebusthaug, Myklebusthaug Offshore
- 16:00 Questions and debate: Experiences, challenges and possibilities with respect to integration of energy efficient technologies in energy-/propulsion systems
Facilitated by Per Magne Einang

Erling Johannessen
Erling Johannessen
President CIMAC NMA Norway

Brage Mo
Brage Mo
Secretary CIMAC NMA Norway

Pre-Registration

Please fill in and send to the CIMAC NMA Norway Secretariat by May 30, 2013

I would like to participate in the CIMAC CIRCLE Norway on June 6, 2013, at Lillestrøm

Family name:

First name:

Job title:

Company:

Department:

Street:

Postal code & City:

Country:

Phone No.: Fax No.:

E-mail:

Registration to be sent to:

Fax: +47 73 59 57 78
E-mail: Ase.Ervik@marintek.sintef.no

Please also visit webpage: www.cimac.com

CIMAC NMA Norway Secretariat

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