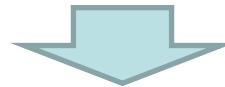




COMPANY STRUCTURE

ADDTECH



100%



100%

VIMEX
measurably better

- Part of Addtech AB (turnover 570 MEUR)
- Main office in Horten / Tønsberg, Norway
- 80 Employees worldwide

VIMEX
measurably better



OFFICES



Tønsberg, Norway – Main Office



Karlstad, Sweden – Sales, Service & Production



Denmark – Sales & Service Office



Trinidad – Sales & Service Office



Turkey – Sales & Service Office



Finland – Sales & Service Office



Horten, Norway – Maritime Products





ONE STOP FOR ALL YOUR MEASUREMENT NEEDS

ViMEX
measurably better

na
norsk analyse a-s

BUNKER CONTROL



FUEL CONSUMPTION CONTROL



EMMISION CONTROL



ViMEX
measurably better



VIMEX FUEL - LUBE & EMISSION MONITORING



Fuel Bunker Control

Eliminate the risk of paying more for less



Fuel Cut 14000

Get control of your fuel consumption onboard your vessel - save money and the environment



Cylinder Oil Management

Monitor your cylinder oil consumption and improve your cost performance



ShipCEMS

Continuous emission monitoring



VIMEX
measurably better



Bunker & Consumption Control

WHY INVEST IN FUEL MONITORING?

- Approx 60-70% of total operating cost is related to fuel
- Old Measuring technology
- Better control for charter and owner
- Dispute cases
- Control unit for other analysis related to optimized ship-performance
- Log functions for better control and supervision
- Full control of your fuel consumption at any time
- Reduction of fuel consumption
- Saving the environment
- Reduction of emmission TAX



If you can't measure it you can't manage it!



Savings

Example on fuel cost savings:

Fuel consumption / day:	50 T
Estimated sailing days / year:	300
Fuel oil price, (S.Pore week 4/2014 IFO 380-CST):	USD 605 / T



USD 611 / T x 50 T / day =	USD 33 550,-
USD 24 200 x 300 d / year =	USD 9 165 000,-

1% measurement improvement / saving = USD 91 650 / year





FUEL BUNKERING

Today's measuring methods



Today's measuring methods is based on trust by use of manually and volumetric readings.





FUEL BUNKERING

VIMEX Solution



Electronically flow meters with high accuracy
And custody transfer approved



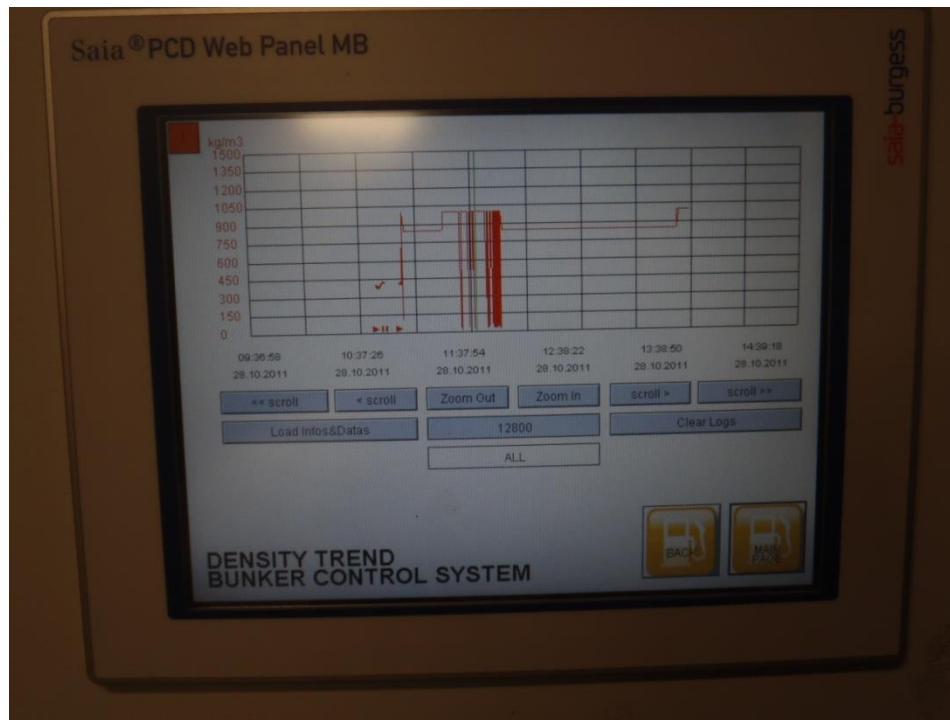
Software for full visual control
and printout of bunker receipt



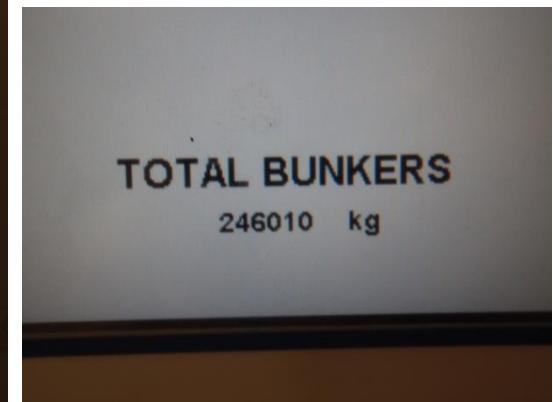


Fuel Bunker Control

DISPLAY MONITORING



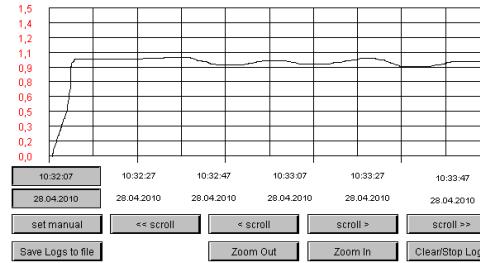
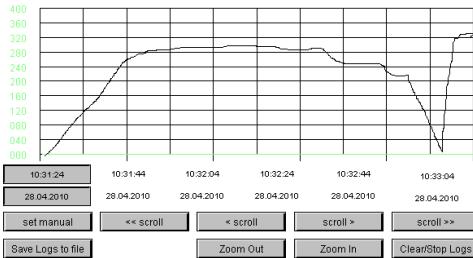
Picture show unstable density and flow with high content of air/gas



Total bunkered quantity in kg



Fuel Bunker Control



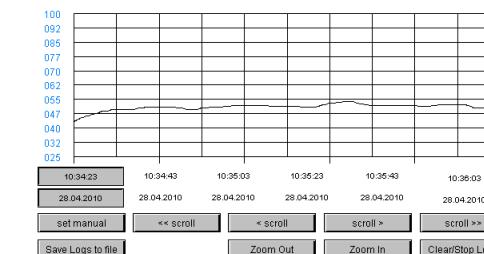
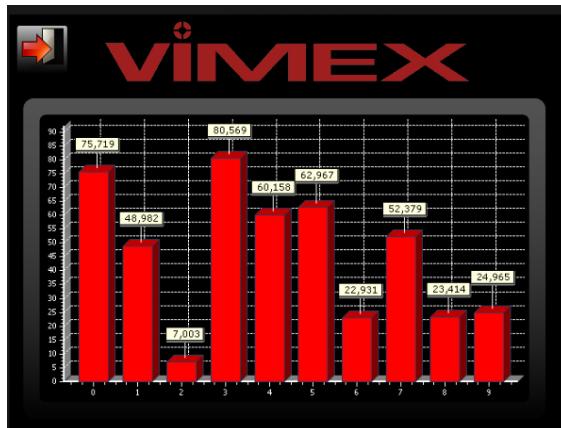
VIMEX BUNKER CONTROL RECEIPT

Start time	3.27.12 1:51 PM
End time	3.27.12 1:53 PM
Total bunker	50
Temp. min	0
Temp. max	15
Temp. average	6
Density min	0,00
Density max	62,00
Density average	26,00

kg °C °C kg/dm3 kg/dm3 kg/dm3

3.27.12 1:53 PM
Sign ship authority

3.27.12 1:53 PM
Sign bunker authority



TEMPERATURE TREND
DIESEL BUNKER CONTROL SYSTEM



Vimex AS
Phone +47 33 03 08 50
E-Mail vimex@vimex.no

Vimex Bunker Control
PLC version 1.00
HMI version 1.00

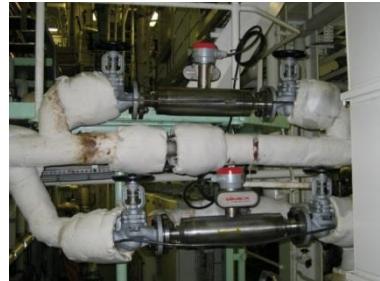
Copyright © 2010-2012 Vimex AS, All Rights Reserved



Fuel Consumption Monitoring

Low cost investment for optimized control of your fuel consumption

WHAT YOU NEED



Reliable Flow Meters

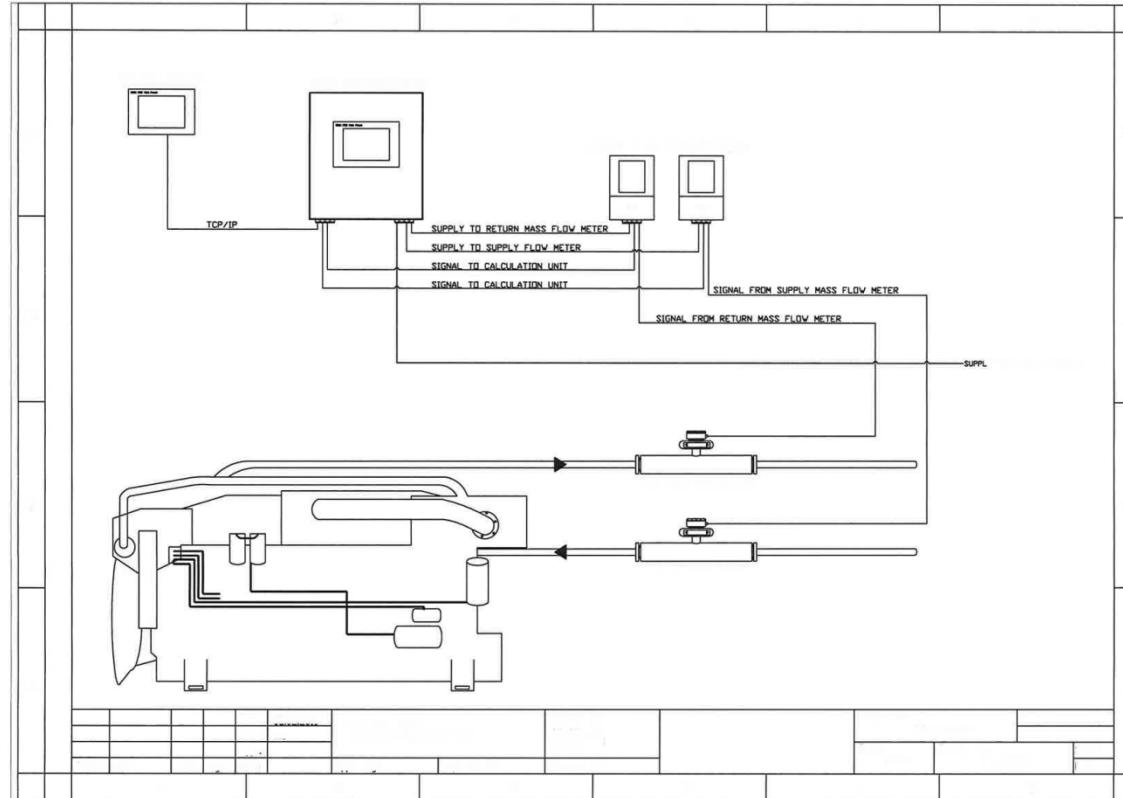


Software for visual effect



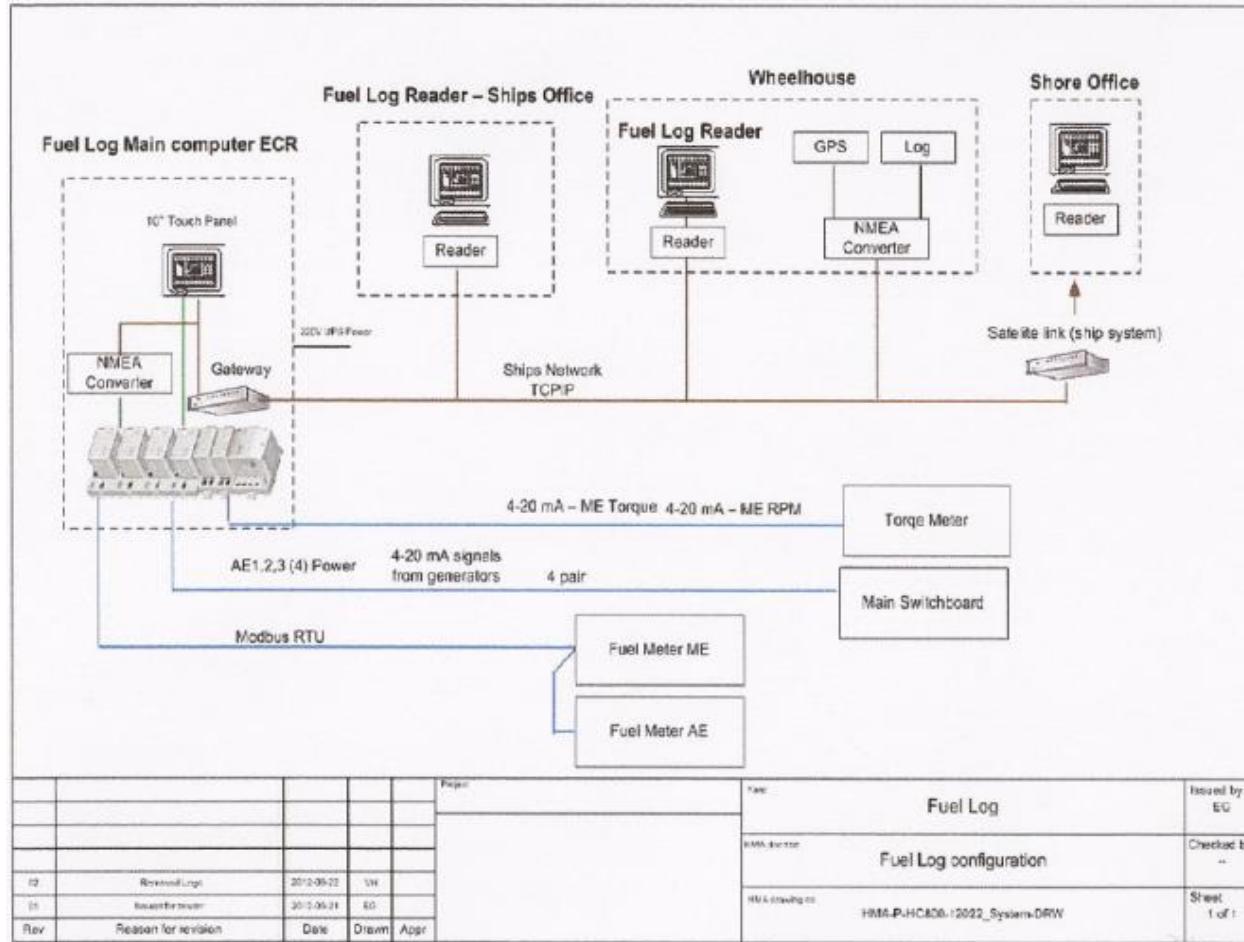


System Configuration





System Configuration





HOW TO SUCCEED?

MAIN KEY ELEMENTS:

- Define your needs – Do not choose a complicated system if not needed
- Involve as early as possible vessels officers
- Establish a project team
- Frequently follow-up of project
- Use of reliable instruments – low maintenance – easy understanding





ShipCEMS



VIMEX
measurably better



SOx reduction steps

Annex VI regulations specifies limits in sulfur content of fuel oil as a measure to control SOx emissions and, indirectly, also PM emissions. Special fuel quality provisions exist for SOx Emission Control Areas. The sulfur limits and implementation dates are listed in below table.

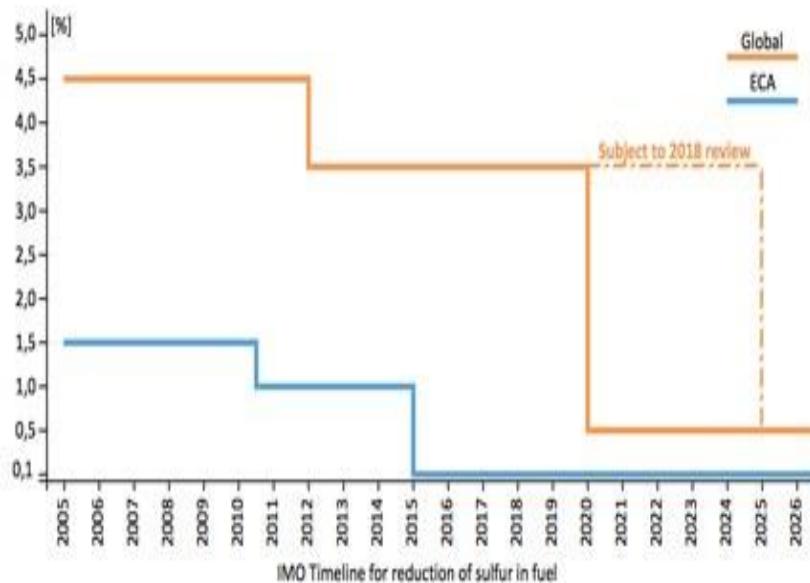
MARPOL Annex VI Fuel Sulfur Limits

Date	Sulfur Limit in Fuel (% m/m)	
	SOx ECA	Global
2000	1.5%	4.5%
2010.07	1.0%	
2012		3.5%
2015	0.1%	
2020 ^a		0.5%

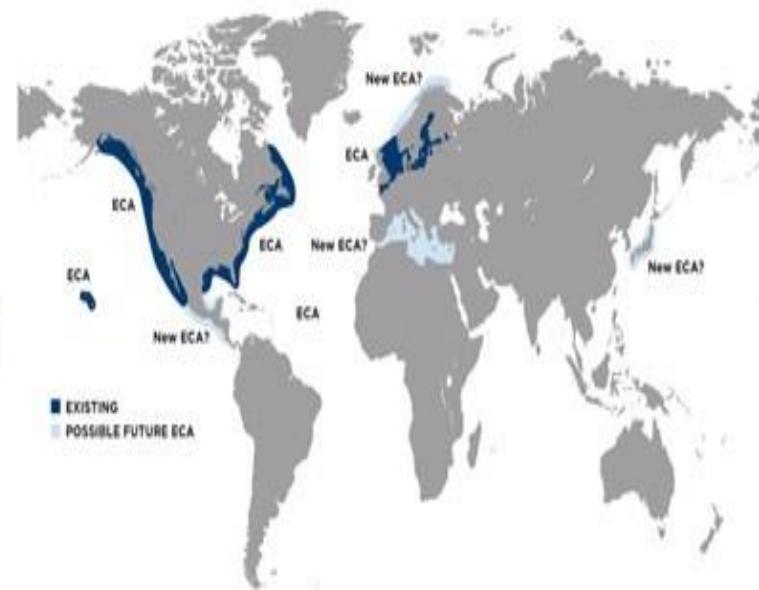
a – alternative date is 2025, to be decided by a review in 2018



ShipCEMS



Existing and possible new ECAs



norsk analyse a-s



System description:

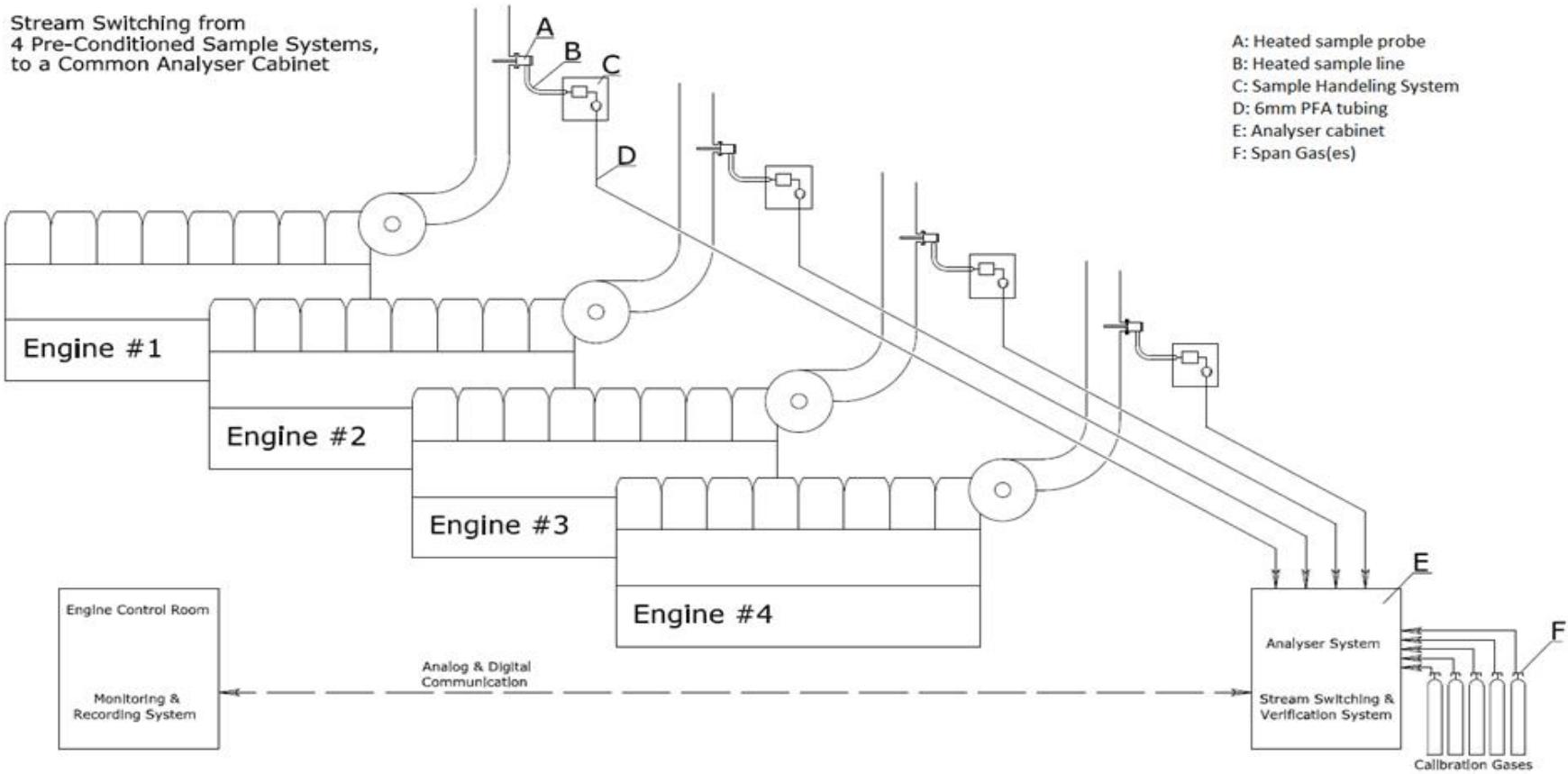
- Continuous monitoring of SO₂/CO₂ with optional NO_x measurement channel in same analyser
- IMO Type Approval by Lloyds acc to IMO - MEPC 184(59)
- System consists of:
 - ✓ Sample probe
 - ✓ Sample Handling System
 - ✓ Analyser cabinet w/Ultramat 6
 - ✓ Multiple options available





BLOCK DIAGRAM, 4 engines

Stream Switching from
4 Pre-Conditioned Sample Systems,
to a Common Analyser Cabinet





SIEMENS





Features and benefits:

- Rugged design for real maritime operations
- Type approved system
- Economical solution, low cost of ownership
- Low maintenance and long service intervals,
- Automatic calibration, continuous operation
- Focus on details, materials, fittings, etc
- Excellent vibration damping



IMG_0385.MOV



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the LR Type Approval System.

This certificate is issued to:

PRODUCER	Norsk Analyse AS Virgenesvei 10 N-3157 Barkåker Norway
PLACE OF PRODUCTION	Svensk Miljö och Processanalys AB Nyängsgatan 5 S-66434 Grums Sweden
DESCRIPTION	Exhaust Gas Monitoring System measuring CO2 and SO2 contents based on dry basis NDIR principle.
TYPE	ShipCEMS
APPLICATION	Marine, Offshore and Industrial applications in environmental categories ENV1, ENV2, defined in LR Test Specification No.1: 2002 where the Test Specification is applicable for the service.
STANDARDS	IEC60945 IEC60529
MEASURING RANGE	SO2: 0-50 ppm/ 0-1000 ppm Full Scale CO2: 0-1 %/ 0-10 % Full Scale
Certificate No.	13/7009
Issue Date	14 November 2013
Expiry Date	13 November 2018
Sheet	1 of 2

Lloyd's Register EMEA
Strandvejen 104A, DK-2900 Hellerup

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Poul Erik Hansen
Copenhagen Tech Support Office



ShipCEMS – MAIN CUSTOMERS

- Alfa Laval
- Clean Marine
- Green Tech Marine
- Wärtsilä



Vibrasjoner.MOV

