

Curriculum Vitae

Mads Grahl-Madsen



Nationality: Norwegian

Born: 28 July 1956

Language: Norwegian (Native)
English (Fluent)
German (Basic)

Miekinia 57

32-065 Krzeszowice

Poland

e-mail: mads@grahl-madsen.eu

Phone: +48 66 205 2066

www.creative-engineering.eu

Profile

Graduated from The Norwegian University of Science and Technology in 1982 with a specialization in hydro power, hydraulic turbines and pumps. Thirty years of multidiscipline experience from Academia, R&D and Industry within Hydro Power and the Oil and Gas sector. Co-initiator of Fluid Power Net, an internet based forum for professionals within Fluid Power. Performed multiple designs of Hydraulic turbines, centrifugal and multiphase pumps multiphase measuring equipment and fluid power systems. International industrial experience from general management, governance, technology development and R&D, design, manufacture, installation and commissioning of electro/mechanical equipment for small and large hydropower plants. Operational experience from Hydro Power Plants, Management, maintenance and training of personnel

- Design of Francis turbines
- Design of Axial flow propeller turbines
- Design of Centrifugal pumps
- Design of contra rotating axial flow compressor
- Supervising test of Control Systems for variable speed operation of hydraulic turbines
- Installation of Turbines, Generators and Governors
- Management, operation and maintenance of Hydro Power Plants
- Model tests of Francis turbines
- Field test of Francis turbines
- Model tests of Propeller turbines
- Field tests of Propeller turbines
- Acceptance test of Centrifugal pumps
- Commissioning of reversible pump turbines
- Commissioning of Propeller turbines and generators
- Field tests of Pelton turbines

Hold a large number of international publications within Fluid Power, System Engineering and Hydro Power, author and editor of several books and compendiums within Fluid Power, Pump and Turbine design and Control Theory. Lectured at several industrial courses within Fluid Power and Control Systems, both in Norway, Denmark, Poland and Australia.

Working Experience

Chief Engineer	77 Construction USA	2017-
<ul style="list-style-type: none">• Operation, maintenance and management of Kajaki Hydro Power Plant• Selection, installation and commissioning of electro/mechanical equipment for Kajaki phase II		
Senior Mechanical Engineer Deputy Chief of Party	Tetra Tech Inc (Afghanistan)	2016-2017
<ul style="list-style-type: none">• Installation of Electro/Mechanical equipment, turbine, governor, generator• Operation, Maintenance and Management of Kajaki Hydro Power Plant• Training of Operators• Owners Engineer		

Owner	Innovation Mads Grahl-Madsen (Poland)	2014-2015
--------------	---------------------------------------	-----------

- Consulting for developers of Small Hydro Power Plants

President & CEO	CEDI Sp.zo.o (Poland)	2006-2015
----------------------------	-----------------------	-----------

- Management
 - General Management
 - Budgeting
 - Human Relations
 - Preparation of documents for the board
- Technical
 - Supervising a group of Mechanical, Electrical and Civil engineers
 - Supervising design of axial turbine with integrated generator
 - Supervising design of control system for hydraulic turbine
 - Supervising manufacturing of turbine, generator and control system
 - Supervising installation of turbine, generator and control system
 - Supervising development of conceptual designs for a number of SHPP
 - Supervising Model test of turbine
 - Supervising Field tests of turbine and generator
 - Issuing documents to FERC

Consultant	Unitech Offshore AS (Norway)	2014-2014
-------------------	------------------------------	-----------

- Project Management
- Design of test facility for Marine permanent magnet drives
 - CAD drawings using Solidworks
 - Component and System Analysis
 - Selection of components

President & CEO	Turbinova Sp.zo.o (Poland)	2009-2013
----------------------------	----------------------------	-----------

- Management
 - General Management
 - Preparing documents for the board
 - Budgeting
 - Establish financing
 - Project Management

CEO	Turbinova AS (Norway)	2007-2009
------------	-----------------------	-----------

- Management
 - General Management
 - Establish Financing
 - Preparing documents for the board
 - Budgeting
 - Development of strategic plans

President & CEO	PanHydro Sp.zo.o (Poland)	2007-2010
----------------------------	---------------------------	-----------

- Management
 - General Management
 - Establishing Company
 - Preparing documents for the board
 - Budgeting
 - Establish financing
 - Preparing documents for the board
 - Preparing of contracts for utilization of water rights

-
- Due Diligence of other companies
 - Technical
 - Supervising a group of Civil Engineers, Electrical Engineers and hydrologists
 - Identification of sites suitable for developing SHPP
 - Supervising the development of conceptual designs for a number of SHHP
 - Supervising field measurements of flow and head

Procurator	FMC Technologies Polska Sp.zo.o (Poland)	2006
-------------------	------------------------------------------	------

- Management
 - Establishing company
 - Recruiting staff
- Technical
 - Training staff in subsea control system and intervention

Technical Director	InLoop Sp.zo.o (Poland)	2005-2010
---------------------------	-------------------------	-----------

- Management
 - Recruiting Staff
 - Project Management
- Technical
 - Supervising a group of Java Coders and Engineers

CEO/Project Director	SINTEF Polska Sp.zo.o (Poland)	2005-2006
-----------------------------	--------------------------------	-----------

- Management
 - General Management
 - Recruiting Staff
 - Preparing documents for the board
 - Project Management
 - Customer relations
 - Budgeting
- Technical
 - Initiating R&D projects within the whole spectre of scientific areas represented by SINTEF in Norway
 - Technical communication with customers

Director	Department of Mechanical and Marine Engineering, Bergen University College (Norway)	2003-2005
-----------------	----------------------------------------------------------------------------------------	-----------

- Management
 - Recruitment of Staff
 - Budgeting
 - Manage course schedules
 - Initiate R&D projects
 - Project Management
 - Participation in Faculty committees
 - Initiate new directions of study
-

Associate Professor	Department of Mechanical and Marine Engineering, Bergen University College (Norway)	2001-2005
----------------------------	----------------------------------------------------------------------------------------	-----------

- Lecturing
 - Material Science
 - Manufacturing Systems
 - Fluid Power
 - Control Theory
- Supervision
 - Supervision of BSc. Students and BSc. Thesis
 - Supervision of MSc. Students and MSc. Thesis
 - Supervision of Ph.D. students
- Technical
 - Design of Axial hydraulic turbine
 - Model test of vertical Axial hydraulic turbine in open pit
 - Design of water hydraulic system for ROV

Associate Professor	Norwegian University of Science and Technology, Department of Mechanical Engineering (Norway)	1993-2001
----------------------------	--------------------------------------------------------------------------------------------------	-----------

- Management
 - Management of Fluid Power Group
 - Project Management
- Lecturing
 - Basic Hydraulics
 - Hydraulic systems and simulation
 - Pneumatics
 - Fluid Transients
- Supervision
 - Supervision of M.Sc. students and MSc. Thesis
 - Supervision of Ph.D. students
- Technical
 - Laboratory Engineer for Waterpower laboratory
 - Model test of Pumps and Turbines
 - R&D in Fluid Power laboratory
 - Design of several Francis turbines for a manufacturer in Bergen

Associate	Faculty of Mechanical Engineering, Monash University (Australia)	1998-2002
------------------	---------------------------------------------------------------------	-----------

- Lecturing
 - Hydraulics
 - Pneumatics
 - Control Systems

General Manager	Petresco AS (Norway)	1992-1993
------------------------	----------------------	-----------

- Management
 - General Management
 - Human Relations
 - Budgeting
 - Reporting to the Board of Directors

General/Technical Manager	Quintus Technology AS (Norway)	1990-1993
<ul style="list-style-type: none"> • Management <ul style="list-style-type: none"> ○ General Management ○ Human Relations ○ Budgeting ○ Reporting to the Board of Directors • Technical <ul style="list-style-type: none"> ○ Design and Manufacture of a multiphase measuring device for oil recovery 		
Research Manager	SINTEF Division of Turbomachinery (Norway)	1990
<ul style="list-style-type: none"> • Management <ul style="list-style-type: none"> ○ Project Management • Lecturing <ul style="list-style-type: none"> ○ Pump Design ○ Fluid Mechanics of Turbomachinery • Technical <ul style="list-style-type: none"> ○ Activities within Fluid Power and Environmental technology 		
Chief Engineer	Framo Engineering AS (Norway)	1987-1990
<ul style="list-style-type: none"> • Management <ul style="list-style-type: none"> ○ Project Management • Technical <ul style="list-style-type: none"> ○ Design and testing of centrifugal pumps for the Marine Industry ○ Design of Multiphase pumps and wet compressors ○ Design of reciprocating pump with internal permanent magnet drive ○ Analysis and testing of firefighting systems, onshore and offshore ○ Design review of firefighting systems ○ Concept development of multiphase meter based upon a radioactive source ○ Technical support to CAD sales team 		
Research Manager	SINTEF Division of Turbomachinery (Norway)	1984-1987
<ul style="list-style-type: none"> • Management <ul style="list-style-type: none"> ○ Project Management ○ Budgeting ○ Financing ○ Part of the Division Management Team • Technical <ul style="list-style-type: none"> ○ Computerised analysis of pumps, hydraulic turbines and fans ○ Supervision of development of a computer code for analysis of pumps, hydraulic turbines and fans ○ Commissioning of reversible Pump Turbine ○ Model test of reversible Pump Turbine ○ Participation in Field testing of Pelton turbines ○ Analysis and problem solving for Canadian Francis turbine with inlet Cavitation ○ Analysis of instabilities in Pump Turbines 		

Research Assistant	Norwegian University of Science and Technology, Waterpower Laboratory (Norway)	1982-1984
---------------------------	-----------------------------------------------------------------------------------	-----------

- Lecturing
 - Pump Design
 - Fluid Dynamics of Turbomachinery
- Supervision
 - Supervision of MS.C. students
- Technical
 - Model test of Turbines
 - Model tests of Pumps
 - Creating a computer code for the analysis of sprinkler systems

Qualifications

MS.C. Mechanical Engineering

Norwegian University of Science and Technology
Faculty of Mechanical Engineering

Trondheim, Norway

Specialisation: Hydropower and Turbomachinery

Thesis: computerised design of a Francis Turbine

BS.C. Mechanical Engineering

NKI's Tekniske Skole

Oslo, Norway

Thesis: Design of Centrifugal Pump

Additional Courses

<u>Course</u>	<u>Institution</u>	<u>Country</u>	<u>Year</u>
Corrosion	NKS	Norway	1979
Systematic Maintenance and Control of Hydropower turbines and equipment	Kvaerner Brug AS	Norway	1981
Fluid Power	Norwegian University of Science and Technology	Norway	1982
Pump Design	National Engineering Laboratory	UK	1983
Introduction to Computational Fluid Dynamics	Von Karman Institute for Fluid Dynamics	Belgium	1983
Numerical Solution of partial differential equations	Norwegian University of Science and Technology	Norway	1983
Viscous Fluid Flow	Norwegian University of Science and Technology	Norway	1983
Computational Fluid Dynamics	Von Karman Institute for Fluid Dynamics	Belgium	1984
Advanced Fluid dynamics	Norwegian University of Science and Technology	Norway	1984
Turbomachinery	Norwegian University of Science and Technology	Norway	1984
Project Management	SINTEF	Norway	1985
Finite Element Methods in Fluid Dynamics	Norwegian University of Science and Technology	Norway	1985
Experimental and Computational Turbomachinery Technology	Chalmers Technical University	Sweden	1985

Numerical Techniques for viscous flow calculations in Turbomachinery Blading's	Von Karman Institute for Fluid Dynamics	Belgium	1986
Experimental Techniques and Data Acquisition for Turbomachinery Evaluation	Imperial College/Concept ETI	UK	1986
Flow in Centrifugal Compressors	Von Karman Institute for Fluid Dynamics	Belgium	1987
Pro/Engineer	Ferranti Infographics	UK	1989
Total Cleanliness Control in Hydraulic Systems	University of Bath	UK	1994

Professional Activities

1995-2000 [Store Norske Leksikon](#) Bidragsyter, signatur

Professional/Scientific Associations

1990-1994 Hydraulisk Forum. <http://www.tev.ntnu.no/hydrauliskforum/> Co-founder and Member of the board of directors

1994-2002 Hydraulisk Forum <http://www.tev.ntnu.no/hydrauliskforum/> President

1998 - 2001 Fluid Power Net International <http://fluid.power.net/> National Convenor and Co-founder

2004-2007 Mekatronisk Selskab <http://www.mekatronisk-selskab.dk/> Board member

Conferences and Workshops

1987 The First Scandinavian Conference on viscous and turbulent flow in hydraulic machinery Initiator

1998 1st **Wave** meeting at Danfoss Nordborg, Denmark Initiator

1998 Developments in Fluid Power Control of Machinery and Manipulators - International Scientific Forum Krakow Poland Member of Scientific Committee

1999 International Workshop on Computer Software on for Design, Analysis and Control of Fluid Power Systems February 1999, Trondheim, Norway Chairman and Organiser

2000 - 2003 International Editorial Board of the International Journal of Fluid Power Member

2001 The Seventh Scandinavian International Conference on Fluid Power, SICFP'01 <http://www.flumes.ikp.liu.se/sicfp01/call2.html> Member of Conference Comitee

2002 Workshop on Tilstandskontroll i hydrauliske systemer – Nyskaping og innovasjon http://www.hib.no/avd_ai/siste_nytt/seminar_hydraulisk.asp Chairman and Organiser

2003 MOM TAW 2003 (Technology Awareness Workshop) <http://www.bennex.no/taw/> Member of the program committee

2003 Workshop: Hydraulics Simulation – From Witchcraft to engineering tool. <http://www.hib.no/avd%5Fai/siste%5Fnytt/2003/01/simulering.asp> Chairman and Organiser

2003	Workshop on Kartlegging av plankton og miner http://www.hib.no/avd%5Fai/siste%5Fnytt/2003/03/plankton%5Fminer.asp	<u>Chairman and co-organiser</u>
2003	Workshop: Concurrent Engineering : En raskere vei til markedet. http://www.hib.no/avd_ai/siste_nytt/2003/09/concurrent.asp	<u>Chairman and Organiser</u>
2004	4th Bergen International Workshop on Advances in Technology: Water Hydraulics – The Natural Choice	<u>Chairman and Organiser</u>
2003 -2004	UTC (Under Water Technology Conference) http://www.possibility.no/site/pdf/utc04.pdf	<u>Member of the Program Committee</u>
2004	7th International Science Conference "Computer Aided Engineering" http://www.ikem.pwr.wroc.pl/cae.html	<u>Member of Scientific Committee</u>
2006	8th International Science Conference "Computer Aided Engineering" http://www.ikem.pwr.wroc.pl/cae.html	<u>Member of Scientific Committee</u>
2008	9th International Science Conference "Computer Aided Engineering" http://www.ikem.pwr.wroc.pl/cae.html	<u>Member of Scientific Committee</u>

Publications

International publications

Sobczyk, T.W. Wengel, Tomasz Grahl-Madsen, Mads Styrylski, Marcin	Integrated turbine with PM generator for small hydro-power plants , in Czasopismo Techniczne z. 17. Elektrotechnika z. 1-E. 2010.
Mads Grahl-Madsen	Does Small Hydropower Need to be a Scaled Version of Large Hydropower? SHAPES - SHP Research&Development Actors Network Meeting, The Szewalski Institute of Fluid-Flow Machinery, Gdansk, September 10-11th, 2009
Mads Grahl-Madsen	A Century of Turbine Research Without Innovation SHAPES - SHP Research&Development Actors Network Meeting, The Szewalski Institute of Fluid-Flow Machinery, Gdansk, September 10-11th, 2009
Marcin Styrylski Jarosław Tomalik Mads Grahl-Madsen	Computer Aided Engineering as a Useful Tool in Hydraulic Turbine Design The 9th International Scientific Conference COMPUTER AIDED ENGINEERING, 58-580 Szklarska Poreba, Poland 2008
Sebastian Hummel Mads Grahl-Madsen	Computer Aided Engineering in Subsea Systems The 9th International Scientific Conference COMPUTER AIDED ENGINEERING, 58-580 Szklarska Poreba, Poland 2008
Leif Stokke Mads Grahl-Madsen	Universal Engineering. A Vision or a Reality That Removes the Boundaries Between Engineering Disciplines The 9th International Scientific Conference COMPUTER AIDED ENGINEERING, 58-580 Szklarska Poreba, Poland 2008

- Leif Stokke
Mads Grahl-Madsen
- The Importance Of Innovation and Technology Transfer in an Increasingly More Competitive Fluid Power Market ,**
5TH FPNI-PHD, KRAKOW 2008 (Key note Speech)
- Sarna P
Grahl-Madsen M.
Sobczyk A
- Failure Modes, Effects and Criticality Analysis of Control and Hydraulic Systems of an AS 332 Super Puma Helicopter,**
Międzynarodowej Konferencji Naukowo - Technicznej
NAPĘDY I STEROWANIA HYDRAULICZNE I
PNEUMATYCZNE '2005, na temat "Problemy i tendencje rozwojowe w pierwszej dekadzie XXI wieku, Wrocław, 17-19.05.2005, p. 332-344
- Haugen, G.K.
Conrad, F
Grahl-Madsen, M
- Innovative New Rov Technology Utilising Water Hydraulics**
Proceedings of the 6th JFPS International Symposium on Fluid Power. 2005: TSUKUBA, Japan
- Grahl-Madsen, M
- Industrial Challenges in Fluid Power,**
in Fluid Power A technology for the Future - 5th Bergen International Workshop on Advances in Technology. 2004
- Haugen, G.K.
Grahl-Madsen, M
- Water Hydraulic Position Unit for Underwater Application,**
Fluid Power A technology for the Future - 5th Bergen International Workshop on Advances in Technology. 2004.
- Manuelpillai Soosaipillai
Mons Erik Monstad
Mads Grahl-Madsen.
- Total Quality Management in HE Institutions – Not only teach it, but live up to it.**
8th Baltic Region Seminar on Engineering Education 2004
UICEE Kaunas, Lithuania, 2-4 September 2004
- Svein Ole Opdahl
Mons Erik Monstad
Mads Grahl-Madsen.
- The Freshman Engineer – Problem Based Learning as implemented at Bergen University College**
8th Baltic Region Seminar on Engineering Education 2004
UICEE Kaunas, Lithuania, 2-4 September
- Fuglestad, Arnt Lennard
Mads Grahl-Madsen
- Computational Fluid Dynamics applied on an Autonomous Underwater vehicle.**
The 23rd international conference on Offshore Mechanics and Arctic Engineering. Vancouver, Canada 20-25 June 2004
- Haugen, Gry Karin
Grahl-Madsen, Mads
- Dynamic analysis of a towed underwater vehicle system, model validation.**
The 23rd international conference on Offshore Mechanics and Arctic Engineering. Vancouver, Canada 20-25 June 2004
- Grahl-Madsen, Mads
Sobczyk, Andrzej
- F.M.E.C.A of Engineering Systems the Scientific Approach.**
SYATEMS - Journal of Transdisciplinary Systems Science, Vol. 9 Special Issue I, 2004, p.22-36
- Stokke, Leif
Grahl-Madsen, Mads
- The importance of Supply Chain Management in a Concurrent Engineering Environment.**
Journal of Transdisciplinary Systems Science. Volume 9: p. 92-99.
- Fuglestad, Arnt Lennard
Grahl-Madsen, Mads
- CAD/CFD Interaction in Sub Sea Vehicle Design.**
The 7th International Science Conference. Computer Aided Engineering, Polanica Zdroj, Poland. 16-19 June 2004
- Haugen, Gry Karin
Grahl-Madsen, Mads
- Computer Aided Engineering of Marine Towing Cables.**
The 7th International Science Conference. Computer Aided

- Engineering, Polanica Zdroj, Poland. 16-19 June 2004
- Haugen, Gry Karin
Grahl-Madsen, Mads
- Dynamic analysis of a towed underwater vehicle system.**
The 14th International Offshore and Polar Engineering Conference in Toulon, France, May 23-28, 2004
- Grahl-Madsen, Mads
- Characteristics of Compensator Equipment for Offshore Drilling Operations.**
18 th International Conference on Hydraulics and Pneumatics. Praha September 2003
- Gjerstad ,Vidar
Lauvås, Trond
Grahl-Madsen, Mads
- F.M.E.C.A of an Offshore Man-Riding Winch.**
Bath Workshop on Power Transmission & Motion Control - PTMC 2003, University of Bath 10-12 September 2003
- Grahl-Madsen, Mads
- An automated approach to the analysis of particulate contamination in multi-branch hydraulic circuits.**
The Eighth Scandinavian International Conference on Fluid Power, Tampere Technical University May 7-9, 2003, Tampere, Finland
- Finn Conrad
Luca G. Zarotti
Torben Sorensen
Mads Grahl-Madsen.
- Simulation in Fluid Power System as a tool for a virtual prototyping in a concurrent engineering environment.**
in Stecki, Jacek S. and Garbacik, Andrzej, Design and Steady-state Analysis of Hydraulic Control Systems, Fluid Power Net Publications, ISBN 83-86219-94-7, Cracow, Poland 2002
- Mads Grahl-Madsen
Janusz Pobedza
Andrzej Sobczyk.
- Modelling of new concept seat valve for pneumatic position control systems.**
in Stecki, Jacek S. and Garbacik, Andrzej, Design and Steady-state Analysis of Hydraulic Control Systems, Fluid Power Net Publications, ISBN 83-86219-94-7, Cracow, Poland 2002
- Grahl-Madsen, Mads
- The availability of simulation techniques for system design.**
Drives and Controls and Power Electronics: Session 7 Fluid Power, Excel Exhibition Centre, London 15 March 2001
- Grahl-Madsen, Mads
- Offshore Hydraulics,**
in developments in fluid power control of machinery and manipulators. Edited by Jacek Stecki and Andrzej Garbachik. Cracow 2000. ISBN 83-86219-71-8
- Mads Grahl-Madsen
Jacek Stecki
- Distribution of particulate contamination in multi-branch hydraulic systems.**
The Sixth Scandinavian International Conference on Fluid Power, SICFP'99, May 26-28, 1999, Tampere, Finland
- Edward Lisowski
Mads Grahl-Madsen
Jacek Stecki
- Concurrent Design of Hydraulic Systems.**
Zakopane 1999
- Edward Lisowski
Mads Grahl-Madsen
Jacek Stecki
- Future Design Methodology for Fluid Power Systems.**
Drives and Control'99. Telford (UK), Mars 1999.
- Peter Chapple
Mads Grahl-Madsen,
Thomas Lie
- Numerical analysis of flow in a hydraulic spool valve by means of the Reynolds averaged Navier-Stokes equations.**
International Workshop on Computer Software on for Design, Analysis and Control of Fluid Power Systems February 1999,Trondheim, Norway

- Grahl-Madsen, Mads
Chapple, Peter
- Distribution of Contaminants in Hydraulic Circuits.**
In Developments in Fluid Power Control of Fluid Machinery and Manipulators. Edited by Jacek Stecki and Andrzej Garbacik, Cracow Poland 1998. ISBN 83-86219-65-3
- Grahl-Madsen, Mads
Chapple, Peter
- NTNU Fluidteknikk Makes the Fluid Power Net into more than a web page.**
In Developments in Fluid Power Control of Fluid Machinery and Manipulators. Edited by Jacek Stecki and Andrzej Garbacik, Cracow Poland 1998. ISBN 83-86219-65-3
- Grahl-Madsen, Mads
Chapple, Peter
- The Development of Fluid Power in Norway – Examples from Marine, Offshore and On-shore Activities.**
In Developments in Fluid Power Control of Fluid Machinery and Manipulators. Edited by Jacek Stecki and Andrzej Garbacik, Cracow Poland 1998. ISBN 83-86219-65-3
- Grahl-Madsen, Mads
- Contamination Control - A Coherent Method for Design and Condition Monitoring.**
Comadem'98, Tasmania December 1998
- Grahl-Madsen, Mads
- Tension Riser Systems.**
Drives and Control'98. Telford (UK), Mars 1998.
- P J Chapple
M Grahl-Madsen
- Secondary Control and its Application,**
Drives & Control'98 Telford (UK), Mars 1998
- Grahl-Madsen, Mads
- A Novel Approach to the analysis of fluid power systems.**
III Konferencja Naukowa Komputerowe wspomaganie Prac Inzynierskich.Kudowa Zdroj,96 Poland 1996
- Grahl-Madsen, Mads
- Computerised Analysis of a Pneumatic Actuator.**
SIM'S 96, Trondheim Norway.
- Grahl-Madsen, Mads
Brodin, Erik
- Analysis of the steady state flow and pressure distribution within complex hydraulic circuits with multiple branches.**
8th. Bath International Fluid Power Workshop. 20/21/22 September 1995
- National Publications**
- Grahl-Madsen, Mads
- Industrial Challenges in Fluid Power.**
In Grahl-Madsen, Mads (ed): Fluid Power – A technology for the future. Skriftserien nr. 4/2004 ISBN 82-7709-073-0
- Grahl-Madsen, Mads
- Water Hydraulic Research at the Department of Mechanical and Marine Engineering**
in Grahl-Madsen, Mads (ed): Water Hydraulics – The Natural Choice. Skriftserien nr. 2/2004. ISBN 82-7709-071-4, May 2004
- Grahl-Madsen, Mads
- Concurrent Engineering – Den optimale designmetode?**
In Grahl-Madsen, Mads (ed) : Concurrent Engineering : en raskere vei til markedet. Skriftserien nr. 9/2003. ISBN 82-7709-066-8 (h.)
- Grahl-Madsen, Mads
- F.M.E.C.A – et aktivt element i lønnsomt vedlikehold.**
In Vedlikehold - Utgift eller investering. Høgskolen i Bergen

12.11.2002

- Grahl-Madsen, Mads **Linear Graph Theory applied to the Analysis of Fluid Power Systems**
in Hydraulics Simulation – From Witchcraft to engineering tool. Redaktør: Mads Grahl-Madsen. Skriftserien nr. 2/2003. ISBN 82-7709-056-0
- Grahl-Madsen, Mads **Modelling, Simulation and Analysis of Hydraulic systems..**
In Hydraulics Simulation – From Witchcraft to engineering tool. Redaktør: Mads Grahl-Madsen. Skriftserien nr. 2/2003. ISBN 82-7709
- Grahl-Madsen, Mads **Contamination Control – What can be calculated?**
In Tilstandskontroll i hydrauliske systemer – Nyskapning og innovasjon. Redaktør: Mads Grahl-Madsen. Skriftserien rapport nr. 5/2002. ISBN 82-7709-047-1
- Grahl-Madsen, Mads **Forurensninger i hydrauliske og smørende systemer – bokstavig talt en utfordring.**
In Tilstandskontroll i hydrauliske systemer – Nyskapning og innovasjon. Høgskolen i Bergen 3 september 2002
- Grahl-Madsen, Mads **Simulation in Practice**
HP Symposium 99- Oslo 11-12 November 1999
- Grahl-Madsen, Mads **Analysis of pneumatic valves.**
HP-Symposium - 95. Oslo 25-26 October 1995
- Grahl-Madsen, Mads **Electrostatic cleaning of hydraulic fluids.**
HP-Symposium - 95. Oslo 25-26 October 1995.
- Brodin, Erik
Grahl-Madsen, Mads **Calculation of steady state flow and pressure distribution in hydraulic circuits.**
HP-Symposium - 95. Oslo 25-26 October 1995.
- Books**
- Grahl-Madsen, Mads (ed) **Fluid Power – A technology for the future.** Skriftserien nr. 4/2004 ISBN 82-7709-073-0
- Grahl-Madsen, Mads (ed) **Water Hydraulics – The Natural Choice.** Skriftserien nr. 2/2004. ISBN 82-7709-071-4, May 2004
- Grahl-Madsen, Mads (ed) **Concurrent Engineering: en raskere vei til markedet.** Skriftserien. Nr. 9/2003 ISBN 82-7709-066-8 (h.) October 2003
- Grahl-Madsen, Mads (ed) **Hydraulics Simulation – From Witchcraft to engineering tool.** Skriftserien nr. 2/2003. ISBN 82-7709-056-0
- Grahl-Madsen, Mads (ed) **Tilstandskontroll i hydrauliske systemer – Nyskapning og innovasjon..** Skriftserien rapport nr. 5/2002. ISBN 82-7709-047-1

University, Poland. 10th January 2003.

- Grahl-Madsen, Mads **Contamination Control – European Experience,**
Invited lecture at Monash University, Melbourne Australia.
1999
- Grahl-Madsen, Mads **Block Diagram Modelling of Hydraulic and Mechanical Systems.**
Monash University, Melbourne Australia, 27-28 November
1997
- Grahl-Madsen, Mads **Velocity Control- Open and Closed Loop Control.**
Monash University, Melbourne Australia, 26 November
1997
- Grahl-Madsen, Mads **Block Diagram modelling of hydraulic and Mechanical Systems.**
Invited lecture at Monash University, Melbourne Australia.
26 November 1997
- Grahl-Madsen, Mads **Velocity Control – Open & Closed loop Control.**
Invited lecture at Monash University, Melbourne Australia.
26 November 1997
- Grahl-Madsen, Mads **Pneumatics and medical technology.**
Invited lecture at the HP-Symposium Oslo, 25 October
1995.
- Grahl-Madsen, Mads **Fluid Power - State of the art in Norway.**
(in Norwegian). Lecture at the Norwegian Fluid Power
Association. Oslo Wednesday 11 October 1995
- Grahl-Madsen, Mads **Air Quality.**
(in Norwegian). Lecture at a seminar on food technology at
SINTEF/NTH, Trondheim 24 November 1994.
- Grahl-Madsen, Mads **Fluid Power high-tech with a past.**
(in Norwegian). Lecture at Norges Tekniske Høgskole.
Trondheim 7 October 1994.
- Grahl-Madsen, Mads **The work of Professor Sundby in relation to the international technology of hydraulic machinery.**
(in Norwegian). Lecture at "Norges Tekniske
Vitenskapsakademi" Thursday 18 October 1984
- Grahl-Madsen, Mads **The work of Sundby and Christie in relation to modern calculation methods for Turbomachinery.**
(in Norwegian). Lecture at Hotel Ambassadør October
1984.
- Grahl-Madsen, Mads **The Fluid Dynamics of Hydraulic Turbines.**
(in Norwegian). Lecture at the Hydro Power Laboratory. 15
November 1983

Educational publications

Non-Restricted Research Reports

Finn Conrad
Jan Velinor
Mads Grahl-Madsen

Pilot Implementation – Norwegian Cluster, Deliverable D5.2 report WP 4 of ESPRIT-project 27179 SWING – Simulation in fluid power system as a tool for a virtual prototyping in concurrent engineering environment. DemoCenter, Modena, Italy, June 2000.

Finn Conrad
Jacek Stecki
Jan Velinor
Mads Grahl-Madsen

Implementation Planning – Norwegian Cluster. Final Deliverable D4.2 report WP 3 of ESPRIT-project 27179 SWING – Simulation in fluid power system as a tool for a virtual prototyping in concurrent engineering environment., DemoCenter, Modena, Italy, June 2000.

Conrad, Finn
Torben Sørensen
Mads Grahl- Madsen

“Analysis of Available Software Solutions”, Final Deliverable D3 report WP 2 of ESPRIT-project 27179 SWING – Simulation in fluid power system as a tool for a virtual prototyping in concurrent engineering environment. DemoCenter, Modena, Italy. January 1999

Grahl-Madsen, Mads

Simplified calculation of the deformation of Turbine Covers.
SINTEF Rapport 67-7-RA-1001. Trondheim 1986

Grahl-Madsen, Mads

The fundamental theory of model scale laws. SINTEF Rapport RA1000. Trondheim 1986

Grahl-Madsen, Mads

The Fluid Dynamic and Mathematical basis for the analysis of Impeller flows.
SINTEF Rapport nr. STF67 A85003. Trondheim 1985

Grahl-Madsen, Mads

The Fluid Dynamic and Mathematical basis for the computer program MARSHA.
SINTEF-Rapport nr. STF67 A85004. Trondheim 1985

Grahl-Madsen, Mads

The influence of Curvature and Coriolis forces on the turbulent flow through Pumps and Turbines.
SINTEF Rapport STF67 A85009. Trondheim 1985

Grahl-Madsen, Mads

Classical Fluid Dynamics applied to the flow through Pumps and Turbines.
SINTEF Rapport nr. STF67 A85002. Trondheim 1985

Grahl-Madsen, Mads

Norwegian theory of Turbomachinery in relation to Classical Turbomachinery Analysis. NTH – 1984

Grahl-Madsen, Mads

Testing of JET-PUMP SRG 103 N.
NTH - 1983

Grahl-Madsen, Mads

HYDRA – A computer program for the steady state analysis of hydraulic circuits.
NTH - 1983

Grahl-Madsen, Mads

The Finite Element Method for The Design of Francis Turbine Runners.
NTH - 1983

A number of Confidential Research Reports for Norwegian and International Companies covering Design, Simulation, Analysis and Operation of Fluid Power Systems and Components (hydraulics and pneumatics), Centrifugal Pumps and Hydraulic Turbines. The list of companies includes Statkraft (Norway), Norsk Hydro (Norway), Kværner Energy (Norway), Framo Engineering (Norway), Hydralift (Norway), OCS (Italy), Elinova (Norway), Danfoss (Denmark), PSL (Norway), Regulator (Norway)

Technical Notes

- | | |
|--------------------|--------------------------------------------------------------------------------------------|
| Grahl-Madsen, Mads | Systematic solution of hydraulic networks. Trondheim 1985. |
| Grahl-Madsen, Mads | Systematic Analysis of Hydraulic Circuits. NTH - 1983 |
| Grahl-Madsen, Mads | Manufacturing System Theory – Technical Applications.
NTH – 1983 |
| Grahl-Madsen, Mads | Manufacturing System Theory – Hydraulic Circuits.
NTH – 1982 |
| Grahl-Madsen, Mads | Manufacturing System Theory – Thermal Conduction Problems.
NTH – 1981 |
| Grahl-Madsen, Mads | Manufacturing System Theory – Non-Linear Systems.
NTH - 1981 |
| Grahl-Madsen, Mads | Manufacturing System Theory - Roth's diagram for Orthogonal networks.
NTH - 1981 |

Patents

- | | |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Ardø, Bjørn Arild
Grahl-Madsen, Mads
Grimnes, Knut
Martens, Otto Mæjlender | Multi-phase separator with integrated Turbine.
U.S. Patent. nr. 1583048, 1990 |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|