



Name: **Throstur Gudmundsson PhD**

Profession: **Mechanical and Materials Engineer**

Nationality: Icelandic

Education: Ph.D. Materials Engineering & Materials Design, University of Nottingham.
ML in Law, Reykjavik University, 2018
MSc Mechanical Engineering, University of Colorado at Boulder
BSc Mechanical Engineering, University of Iceland

Languages: Icelandic – Native language
English – Fluent
Danish – Read and speak
Norwegian – Read and speak
German – Read and speak
French – Read and speak

PROFESSIONAL EXPERIENCE:	2018	The Annual Willem C. Vis International Commercial Arbitration Moot – Reykjavik University team member
	2017 –	Reykjavik University, Adjunct Professor, School of Science and Engineering
	2016 -	Galghamar ehf, founder and CEO
	2016 - 2017	Reykjavik University, Assistant Professor, School of Science and Engineering
	2011 - 2016	HRV Engineering Business Unit Aluminium– Director
	2008 - 2011	Associate of Verkis (former VST Consulting Engineers Ltd)
	2007 Q3 - 2016	HRV Engineering, Center of Excellence - Director
	2007 Q3 - 2008 Q3	HRV Engineering Business Unit Aluminium– Director
	2008Q1-Q2	HRV Engineering, Acting Business Unit Director – Project support
	2003-	IPMA Level B (International Project Management Association). Certified project manager IPMA Level B.
	2003 - 2011	Associate of VST Ltd
	2003 -	Member of the Association of Consulting Engineers in Iceland
	2000	Joined VST Consulting Engineers Ltd.
	1996-1999	Alusuisse Technology & Management, Technology Center Chippis, Switzerland. Project manager process development in casthouse technology.
	1993-1996	Ph.D. research work Industrial and laboratory scale experimental work. Optical and SEM microscopy, numerical simulation.
	1992	University of Iceland. Applied research in solid state dynamical analysis and related measurement techniques.
	1990-1992	University of Colorado. Research and teaching assistant.
	1989-1990	Almenna Consulting Engineers. Mechanical design of various types, including HVAC and numerical modelling.



Year	Project description
Management	
2016 -	Landsvirkjun, project management consultation focusing on improvements in project management structure and procedures for large powerplant construction projects. Process flow mapping of project management processes, development of WBS system, cost estimation methods, HSE awareness and Lessons Learned workshops.
2016 -	Galghamar ehf, Privately owned consulting firm focusing on project management, project preparation, tendering, dispute resolution and process flow mapping.
2011 - 2016	HRV Engineering, Business Unit Director– Aluminium. Responsible for HRV Green- and Brown field projects:
2007 - 2016	HRV Engineering, Director – Center of Excellence. Responsible for the HRV project management system, personnel training and development of employee expertise in aluminium processes and project management. Process consulting to company projects and clients.
2007 - 2008	HRV Engineering, Business Unit Director– Aluminium. Responsible for HRV Green- and Brown field projects: <ul style="list-style-type: none">• Century Helgúvík – 180 ktpy Green field smelter project, Feasibility, FEED, Execution.• Rio Tinto IDP – 40 ktpy Brown field smelter project, Feasibility study (FEL2/FEL3).• Rusal Kubal – 80 ktpy Brown field smelter project, Söderberg to Pre-bake conversion.
2008	HRV Engineering, Acting Business Unit Director – Project support. Responsible for manning of all HRV project activities.
2007 - 2016	Member of HRV Engineering board of directors.
Aluminum	
2015 – 2016	Hydro Projects. Project manager Engineering, Procurement and Construction management of a new Anode rodding shop and upgrade of bath plant Karmoy Norway.
2014	Hydro Projects. Project manager feasibility study of Anode Rodding shop upgrade, HAL 4e project at Karmoy Norway.
2013	Hydro Projects. Project manager for a design of a new fluoride detection system at Qatalum in Qatar
2010 - 2011	RTA Isal Production Upgrade project. Area Business Manager carbon, casthouse, infrastructure and site utilities, responsible for scope, schedule and cost.
2009 - 2010	Norðurál Helgúvík project. Project manager (Area manager) for process areas Carbon and Casting, responsible for area scope, budget and schedule.
2008	Norðurál, aluminium smelter at Grundartangi, aluminium process specialist for capacity creep project, FEL1.
2008	Fjarðaál, Alcoa aluminium smelter at Reyðarfjörður, aluminum process specialist for a FEL2 feasibility study for Potlining facility.

Curriculum Vitae



- 2004 - 2007 Norðurál, aluminium smelter at Grundartangi. Various Project Management responsibilities of an expansion of the smelter from 90 to 260 ktpy production (phases III – IV), primary focus Area Management for Casthouse.
- 2004 - 2005 HRV Engineering manager; Grundartangi phase III expansion.
- 2004 - 2007 Member of HRV and Owner core team for Project Management; Norðurál Grundartangi phases III-V expansion.
- Active participant in weekly coordination meetings between Owner and the project management team.
 - Active participant in project meetings with the project Steering Committee.
- 2004 - 2007 Area Manager Casthouse and Laboratory; Norðurál Grundartangi phase III-V expansion:
- Layout design and need analysis for the casthouse expansion.
 - Selection and contract management for two 60t holding/casting furnaces.
 - Selection and contract management for two 28 tph ingot casting machines.
 - Planning of production procedures.
 - Supervision of design and installation of equipment.
 - Supervision of Laboratory design and construction
- 2004 - 2005 Feasibility analysis manager for value added casthouse project:
- Layout design and need analysis for equipment:
 - One vertical DC casting machine for billet casting.
 - Tooling for DC casting of aluminum billets.
 - One continuous electrically heated homogenising furnace with automatic ultrasonic quality testing, automatic saw and strapping machines.
- 2004 - 2007 HRV lead process specialist; Grundartangi phase III-V expansions:
- Design criteria coordination of seawater cooling system for HV equipment.
 - Bath plant process design consultant.
 - Rodding shop process design consultant.
- 2006 Short term Area Management for Rodding shop and Bath plant.
- 2003 - 2004 Fjarðaál, Alcoa aluminium smelter at Reyðarfjörður, design office Montreal Canada.
- Discipline Engineer Mechanical Engineering: Responsible for compliance of Mechanical design towards Icelandic standards and codes.
 - Project Engineer Pot Tending Assemblies and service cranes: Preparation of tender documents for PTA's, Tapping cranes, Crane runway lifting beams, Anode Jacking frames and General-purpose cranes.
- 2001 - 2002 Fjarðaál, Alcoa aluminium smelter at Reyðarfjörður
- Environmental assessment, review of production processes.
- 1996 - 1999 Alusuisse Technology and Management:
- International research and consulting engineering on continuous casting of aluminium with main focus on metal quality and microstructure.



- Planning and management of research and consulting projects.
- Aluminium metal treatment and casting processes monitoring and optimisation in various aluminium casthouses in Iceland, Germany, Switzerland and Check Republic.
- Monitoring aluminium metal quality during metal preparation and casting, utilising specialised equipment for metal quality monitoring (LiMCA, PoDFA, AlScan) of liquid aluminium.
- Commissioning of new DC casting machine.
- Casting process specialist input into improvements of a DC casting automation program from Alusuisse Technology and Management.
- Instructor in international courses on aluminium cast houses processes.
- Supervision of engineering students (BSc to PhD).

1993 - 1996 PhD studies at University of Nottingham.

- Industrial and theoretical evaluation of production processes in aluminum casting
- PhD thesis on “Agglomeration of TiB₂ particles in liquid Aluminium”
- Project management.
- Industrial scale experiments on liquid aluminum processes during DC casting.
- Optical and SEM microscopy analysis.
- Numerical simulation.
- Theoretical analysis and writing of a PhD thesis.

Power

2016 - Landsvirkjun

- Consulting related to project management processes and HSE of powerplant construction projects

2002 - 2003 Kárahnjúkar Hydroelectric Project:

- Conceptual design of two 3,4 m diameter steel lined pressure shafts (worlds highest vertical steel lined pressure shafts) and two pressure shafts distributors.
- Pressure shafts Area Engineer: Project management and preparation of tender documents for KAR-36 Steel linings.

2000 - 2001 Kárahnjúkar Hydroelectric Project:

- Conceptual design of two 3,4 m diameter steel lined pressure shafts (worlds highest vertical steel lined pressure shafts) and two pressure shafts distributors.
- Discipline engineer Mechanical Engineering: Various design activities

Teaching

2017 - Adjunct Professor, School of Science and Engineering, Reykjavik University

2016 - 2017 Assistant Professor, School of Science and Engineering, Reykjavik University

- Solidification Processes
- Chemical Thermodynamics and Phase Diagrams



- 2011 - Reykjavik University, MPM (Master of Project Management),
- PMBok and standards in Project Management
- 2006 - 2010 University of Iceland, MPM (Master of Project Management),
- PMBok and standards in Project Management
- 2001 - 2002, 2009 and 2010
- University of Iceland, Mechanical and industrial engineering department:
- Energy Intensive Production Processes, organising and teaching an Undergraduate and Graduate course on power intensive processes utilized and prominent for the Icelandic industrial sector.
- 2007 - HRV Engineering, internal training
- 2007 - Periodic supervision/tutoring of MSc student project works

Other

- 1989 - 1990 Almenna Consulting Engineers:
- Various design projects for Reykjavik City hall.
 - Numerical model for heating system of Gardabaer outdoor swimming pool and modification of the system design.

Associations

Verkfræðingafélag Íslands (VFÍ). - Association of Chartered Engineers in Iceland
Félag ráðgjafaverkfræðinga (FRV) - The Icelandic Association of Consulting engineers
Verkefnastjórnunarfélag Íslands (VSF) - Project Management Association of Iceland
American Welding Society (AWS)
The Minerals, Metals & Materials Society, (TMS)
Project Management Institute (PMI)

HSE training

Attended HSE courses

- 2010 RTA IPU project new staff HSE training
Heavy lifting
- 2011 HSE interactions
Job Safety & Environment Analysis – Risk assessments
HSE Leadership workshop
Pre-work risk assessments – Take 5
Working in international teams
- 2012 RTA IPU HSE re-training
Heavy lifting
Working at height
- HSE training courses (as trainer – multiple courses)
- 2010 Casthouse safety



Potroom safety
2011 Casthouse safety
Potroom safety
2012 Casthouse safety
Potroom safety

Publications

- G. Gardarsson, T. Gudmundsson, M.Th. Jónsson & H Pálsson, Light Metals 2017, Modelling and analysis of a Horizontal Direct Chill casting process, pp 955-966.
- Þ Guðmundson, Þekkingin beisluð – Nýsköpunarbók, Júní 2014, Íslensk álvinnsla – forsendur og gróðurhúsaáhrif, pp. 271 – 290.
- T Gudmundsson; PhD thesis, University of Nottingham August 1996, Agglomeration of TiB₂ particles in liquid Aluminium.
- Jonathan AD Wattis, D Graham McCartney & Throstur Gudmundsson; Journal of Engineering Mathematics, 49 . pp.113-131; Coagulation equations with mass loss
- E.J. Asbjörnsson, T.I.Sigfusson, D.G.McCartney, T. Gudmundsson and D Bristow; Light Metals 1999, Studies on the dissolution of Al-Ti-C master alloys using LiMCA II.
- T. Gudmundsson, G. Saevarsdóttir, T.I. Sigfusson and D.G.McCartney; Light Metal 1997, Chlorination of TiB₂ Grain Refined Aluminium Melts, pp 851-855.
- G. Saevarsdóttir, T.I. Sigfusson and T. Gudmundsson; TMS 1996, Gas Interactions in Nonferrous Metals Processing, The Chlorine Aluminium Interface.
- T. Gudmundsson, T.I.Sigfusson, D.G.McCartney, P.Fisher, E. Wuilloud; ICAA-5, Grenoble 1996: Numerical Simulation of Particle Collision in Molten Aluminium, pp 159-164.
- T. Guðmundsson, T. I. Sigfússon, D.G. McCartney, E. Wuilloid and P. Fisher; Light Metals 1995, Trace Element Distribution in Al-Ti-B Master Alloys, pp 851-854.
- T. Guðmundsson, T. I. Sigfússon, D.G. McCartney, E. Wuilloid and P. Fisher; Light Metals 1995, Efficiency of Holding Time in a Casting Furnace, pp. 855-858.