

CURRICULUM VITAE

Donald Mah, P.Eng.
R& D Manager
Helly Hansen Canada Limited, Dartmouth NS, Canada

PROFESSIONAL EXPERIENCE

- 2006-Present **R & D Manger**
- Helly Hansen Canada Limited, Dartmouth NS, Canada.
 - Oversees execution and direction of research and development.
- 2005-2006 **Director, Research & Development**
- Protexion Products Inc., Guelph ON, Canada.
 - Oversees execution and direction of research and development. Manages staff of 8 project Engineers, Designers, CAD Technologists, Prototype Technicians, and contract consultants.
- 2003-2004 **Manager, Configuration & Quality**
- Mustang Survival Corp., Richmond BC, Canada.
 - Oversaw execution of product configuration management and quality registration to ISO9001:2000. Managed 10 staff of project Engineers, CAD Technologists, and Technicians, and Prototype Technicians.
- 2000-2003 **Manager, Product Development**
- Mustang Survival Corp., Richmond BC, Canada.
 - Oversaw execution of product development for Government, Commercial, and Recreational products. Managed 11 staff of project Engineers, CAD Technologists, Prototype Managers, Pattern Technicians, and Prototype Technicians.
- 1993-2000 **Group Leader Engineering**
- Mustang Survival Corp., Richmond BC, Canada.
 - Responsible for leading project teams, overall engineering and design, testing, planning, and program cost on programs such as Tactile Situation Awareness System (TSAS), Advanced Life Preserver (ALP) to replace F LPU-9/P, CSU-23/P F22 Anti-G Trousers, CSU-22/P ATAGS, Integrated Canadian Air Force Sustained Tolerance Increased G (STING) upper garments, NASA ELPUs for shuttle astronauts, and F-22 Lower/Upper G-garments and Air-Cooling Vest
- 1990-1993 **Project Engineer**
- Mustang Survival Corp., Richmond BC, Canada.
 - Developed a chemical protective/cold water immersion flight suit for F22 program, alternative Anti-G concepts for Defence Industry Research and a full coverage Anti-G/jerkin with integrated air-cooling for Naval Air Warfare Centre (NAWC).
- 1989 **System Engineer**
- DMT Systronics, Toronto ON, Canada.
 - Developed algorithm-switching controller for ROMACs (RObotic Muscle ACTuators) and implemented these algorithms on an antagonistic ROMAC arm (shoulder and elbow).

EDUCATION

- 1985-1990 **UNIVERSITY OF BRITISH COLUMBIA**, Vancouver BC, Canada
- B.A.Sc., Engineering Physics, Mechanical Engineering Option

PROFESSIONAL AFFILIATIONS & ACTIVITIES

- Professional Engineer, Association of Professional Engineers and Geoscientists of the Province of British Columbia.

RESEARCH and DEVELOPMENT

PERSONNEL

Brian Farnworth ~ *Senior Research Scientist*

With over 25 years of R&D experience in a variety of government and industrial research institutions, Brian Farnworth specializes in applying science to the development of protective clothing and equipment. After obtaining degrees in physics from Simon Fraser and McMaster Universities, Brian worked for the R&D branch of the Department of National Defence to understand the basic physics of how heat and moisture are transported through textiles and garments. He applied that understanding to improve garments, tents, and sleeping systems for Arctic operations and survival.

Moving to industry, Brian, as Director and later Vice President of Mustang Survival Research, developed the company's R&D capability to serve the needs of a wide variety of government clients and customers in the industrial and recreational markets. He then worked in the field of ballistics at Pacific Safety Products before moving to w.L. Gore and Associates where he focussed on the basic mechanisms of moisture transport in films and fabrics. There, he also led an effort to apply new technologies, such as variable insulation, cooling and heating, to the long standing problems in protecting humans from the elements such as cold water immersion, chemical-biological agents and ballistics.

Throughout his career, Brian has used a variety of scientific tools including mathematical modeling, hot plate testing, thermal manikins, human subject experiments and field tests to understand the function of garments and their interaction with the body.

As Senior Research Scientist at Helly Hansen Canada Ltd., Brian analyses problems related to protection, survival and comfort in protective and survival garments, devises solutions to those problems and implements those solutions ensuring better performance and greater comfort in products for the end user.



ENGINEERED SOLUTIONS

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RESEARCH and DEVELOPMENT

PERSONNEL

Larry Spears,...., *Manager, Flotation Products*

With 25 years of training and project management experience, Larry Spears has an accomplished career in the field of marine survival. Larry's career as a trainer began with an 8 year tenure at Survival Systems Ltd., a world leader in safety education and training in marine survival and cold water immersion. Moving overseas for two years, Larry was then deployed to the Netherlands by Survival Systems International to establish a new helicopter egress and survival at sea training center for the Netherlands offshore oil industry.

Upon returning to Canada, he spent 6 years with the CORD Group as a project manager focused on the assessment and development of marine safety equipment and associated operational procedures. As Project Manager, Larry's work also focused on thermal instrument manikin testing used to measure heat loss and insulation in immersion suits and other protective apparel. Before coming to Helly Hansen Canada Ltd (HHCL) he completed a 2 year posting as a RIB instructor with the Canadian Coast Guard. Larry's years as a trainer and project manager have cultivated an intimate knowledge of helicopters, clients and the environmental risks and hazards that operators experience.

Larry joined HHCL as Manager, Flotation Products in 2002. By applying his expertise, he brings life support capabilities to HHCL and our products. Since joining our team he has championed the development of Helly Hansen's line of personal flotation device's (PFD's), life jackets and anti-exposure suits. Helly's new E452 helicopter passenger immersion suit was 3 years in development under Larry's direction.

Larry has been HHCL's representative to Transport Canada and CGSB committees for life jackets, immersion suits and PFD's. In addition his day to day interface with Cord Group, Survival Systems, ULC, Airworthiness, Department of National Defence, helicopter operators and Coast Guard enable him to be central within the regulatory standards world, scientific and user communities.

Larry is HHCL's in-house expert who bridges the vital gap between design, regulatory bodies, manufacturing and the end user.



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