



Marine renewable energy engineering services

Registered Offices in Maine and New Hampshire

Robert S. Cinq-Mars

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800-928-0435

Rob@FreeFlowEnergy.com

PROFESSIONAL SUMMARY

A rare convergence of skills which are particularly relevant to the field of hydrokinetics (wave, tidal and stream energy conversion); including: academic and applied electrical engineering; electro-mechanical design; instrumentation, and manufacturing, combined with experience as a former licensed master, commercial fisherman and certified diver. A strong understanding of hydrokinetic technologies as well as the potential impacts of their implementation.

EXPERIENCE

- Free Flow Energy, Inc. *President* – Participated in development of regulatory framework for hydrokinetics; hydrokinetic site survey's in the Bay of Fundy, Power and Energy Analysis of NOAA ADCP data of Piscataqua River; Support for Standards Development for US Materials Management Service.
- Marine and Automotive Instrument Design & Manufacturing, *Electrical Design Engineer*
Design, prototype, test and manufacture analog and digital instrument clusters and gauges used on boats, cars and recreational vehicles. (T.G. Faria Corporation, CT)
- Electric Motor Design and Manufacture, *Electrical Design Engineer*
Design and manufacture of stepping, brushless DC and AC motors and linear actuators (EAD Motors, NH)
- Power Distribution and Controls Design, *Electrical Engineer*
Design of electric power switchgear, load centers, conduit, wireway and overcurrent protection systems. (Heidelberg, NH)
- Analytical Instrumentation Design, Fabrication, Operation and Analysis, Analytical Instrumentation Engineer
Design, Maintenance, Operation, and fabrication of instrumentation in support of University research including: renewable energy power systems, fuel cell test fixture; earthquake simulation, and marine aquaculture. (UNH, NH)
- Submarine Warfare Analysis, *Analyst*
Technical work in ocean environment (Contract to Naval Underwater Systems Center, RI) Security level: Secret



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- Commercial Fisherman; Lobster (RI), Halibut and Salmon (AK)
Offshore lobster fishing out of Snug Harbor / Point Judith RI; Salmon Purse Seining Kachemak Bay, AK; Salmon Gill Netting Kenai River, AK; Halibut Long Lining, Gulf of Alaska / Kodiak Island, AK.
- Licensed Master / Certified Diver
Operate vessels coastal New England, Alaska and Gulf of Mexico.

SYSTEMS PROFICIENCY

Hardware - Extensive familiarity with sensors, data acquisition and analysis systems, motors, drives, controls, power systems, programmable logic controllers, microprocessors, electrical hardware, electrical and electro-mechanical design, fabrication, test and manufacturing.

Software - Matlab, AutoCAD, Inventor 3D, LabVIEW, WINADCP, WINHADCP and WINRIVER, ladder logic and microcontroller programming.

EDUCATION

B.S., Electrical Engineering, University of Rhode Island, Kingston, RI
Eta Kappa Nu Electrical Engineering Honor Society

PUBLICATIONS

“Assess the Design / Inspection Criteria / Standards for Wave and/or Current Energy Generating Devices” Contract Number M08PC20033, MMS Project Number 628, March 31, 2009; Alawa, Cinq-Mars, Feeney, Irish, and Edson

“Power and Energy Analysis of Piscataqua River”, 2005, Cinq-Mars

“Current Analysis Study Half Moon Cove, Eastport, Maine” Irish, Cinq-Mars, Feeney, Laberge, Edson