



Curriculum Vitae

Matthew T. Hayduk,
MECHANICAL ENGINEER MANAGER
76 Robinson Avenue, Glen Cove, New York 11542-2945

QUALIFICATIONS:

- ◆ Proven practical and analytical Mechanical Engineering design and analysis capability.
- ◆ Licensed Mechanical Engineer, University of the State of New York.
- ◆ Strong Practical Engineering Problem Solving skills
- ◆ Strong Communication skills.
- ◆ Employment History and Success.

ACHIEVEMENTS:

- ◆ Founded, Managed and Supported Mechanical Engineering Design Consulting Company.
- ◆ Introduced and Implemented Parametric 3D design software within four companies.
- ◆ Rapid corporate advancement, obtaining promotion to Senior designer years ahead of general expectation.
- ◆ Reduced Sikorsky Model S76 helicopter transmission gear noise. Improving customer satisfaction and increased sales.
- ◆ Designed and Managed the analysis and manufacture of the first Resin Transfer Molded, (RTM) helicopter main transmission housing for a flight aircraft.
- ◆ Evaluation and Interpretation of finite element analysis results, directing analyst towards optimized design solutions.
- ◆ Responsible for detailed design reviews to senior management. Delivering timely presentations to prepare critical contract negotiations on an advanced system design.
- ◆ Managed and prepared analytical substantiation and publication of mechanical component repair instructions, achieving company goal to re-introduce idle inventory into active service.
- ◆ Inventor of Patents: See Patent List Below.

EDUCATION:

- ◆ Bachelor of Science in Mechanical Engineering, University of Massachusetts, 1982.
- ◆ Licensed Professional Engineer, State of New York, 2000 (non-active).

EXPERIENCE:

- ◆ 40 years of Mechanical Design, Analysis and Solution Experience.
- ◆ 32 years of Intensive Solid Modeling, Design and Analysis.
- ◆ Structural Finite Element Analysis (FEA). Failure and Design verification.
- ◆ Computer literate. Fluent user of Unix and Windows Operating Systems.
- ◆ Broad Exposure to a variety of Engineering Design, Analytical, Testing and Manufacturing Environments.
- ◆ CAD Experience: Proficient User of Solid Works, Creo and ALGOR Finite Element Analysis. Past Experience with many other popular Solid and Surface design and FEA software.
- ◆ Experience MS Office and Mathcad

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76 ROBINSON AVENUE GLEN COVE NEW YORK 516-759-4161 Cell: 516-652-0988
www.adeptengineering.com



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January 1995 to Present: **ADEPT, Inc.;**

- ♦ **President/Owner: Mechanical Engineering, manager, designer and analyst. (Engineering Consulting)**
Mechanical Engineering Consulting Company, Complete Machine and Product designs conceptualized and developed. Successful designs developed for the many Industries, including but not limited to: Military, Recreational Consumer Products, Industrial Automation, Heavy Lift and Excavation, Communications and Electronics...Technical investigation, analysis, testing and the application of laws and principles of Engineering and physics to various incident situations.

January 1994 to January 1995: **Bayside Precision Gearheads, Port Washington, New York**

Engineering Department Manager, (Engineering Automation)

- ♦ Evaluated leading 3D Engineering Design Software and associated computer hardware. Purchased, installed, implemented and supported Pro/Engineer parametric design software on Digital Alpha PC's. Installed, networked, debugged and administered Windows NT operating system. *Managed, trained and supported Engineering department* personnel in Pro/Engineer 3D modeling, design philosophy and file management. Developed automated component design program utilizing Pro/Program. *Instituted concurrent design program*, demonstrating Pro/Engineers' capabilities for supporting component design through manufacturing. Provided design, failure analysis and production support for the manufacture of servo and NEMA stepper motor power transmissions for the motion control industry.

January 1983 to January 1994: **Sikorsky Aircraft, Stratford, Connecticut**

Transmissions Systems Design, Analysis and Development (Helicopter Gearbox ME)

May 1991 to January 1994:

- ♦ **Senior Mechanical Designer** of resin transfer molded (RTM) *graphite polybismalimide composite transmission housing*. Developed transmission system design layout technique, utilizing Pro/Engineer. Supervised finite element analysis of transmission housing assembly for Commanche helicopter, optimizing components for weight, stiffness and manufacture. Member of Product Development Team. Group leader of Stereolithography (SLA) model development. Devised and led IGES data translation/transfer procedure.

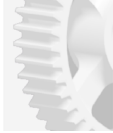
July 1989 to May 1991:

- ♦ **Manager and Senior Mechanical Designer** of Independent Research and Design project. Managed and developed the concurrent design, testing and analytical techniques aimed at reducing the S76 Helicopter main transmission noise. Combined finite element analysis, infrared thermal imaging, acoustic testing and classical analysis to predict and verify transmission system deflections with their related gear noise affects. Accomplished Upper Management's noise reduction goal of 6dB. Holder of related *U.S. Patent entitled "Helicopter Noise Reduction Through Gearing Modification"*. Rotorcraft Transmission Composite Housing. *Supervised finite element analysis* and manufacture of Split Torque test transmission, demonstrating capability of RTM Composites for Helicopter transmission housings.

March 1988 to July 1989:

- ♦ **Mechanical Design and Product Support Engineer** for transmission overhaul and repair facility. Prepared detailed repair and overhaul instructions for all Sikorsky Helicopter Transmission Components. *Responsible for receiving FAA and/or U.S. Government approval* for all repairs.

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March 1987 to March 1988:

- ♦ **Mechanical Design, Producability and Manufacture Support** for Sikorsky S61 transmission 'Service Life Extension Program' (SLEP) and Presidential Helicopter program. *Responsible for transmission redesign and component acceptance and rejection criteria.*

January 1984 to March 1987:

- ♦ **Mechanical Designer and Analyst** NASA and DARPA's Rotor Systems Research Aircraft, (RSRA) retrofit transmission. *Responsible for detailed design of gears, shafts bearings and transmission housings.* All designs produced on CADAM 2D graphics system. Prepared Fortran analytical program for optimizing aircraft vibration absorber design. *Produced 23000 rpm spiral bevel gear design* utilizing Gleason Bevel Gear Dimensioning software. Transmission System for X-Wing vertical take off and lift air vehicle. *Responsible for prototype design and weekly design reviews* with upper management.

January 1983 to January 1984:

- ♦ **Production support Engineer** for Sikorsky Legacy Helicopter Transmissions.

PATENTS:

United States:

- ♦ US 9382696, US 8967184, US 8365759: Locking Fire Hydrant
- ♦ US 8544689: Hand Held Dispenser
- ♦ US 7490737: Dispensing System and Chemical Flow Heating means for use therein.
- ♦ US 7386969: Exterior Configuration of Foam-in-Bag Dispenser Assembly
- ♦ US 7222753: Dispensing System with Mixing Module Mount and Method Using same.
- ♦ US 8875950, US 7552847: Dispenser Mixing Module and Method of Assembling and Using same.
- ♦ US 7182221: Dispensing System and Method of Manufacturing and using same with a tip management.
- ♦ US 7159260, US 7156260: Mixing Module Drive Mechanism and Dispensing System.
- ♦ US 7182221: Dispensing System and Method of Manufacture and Using Same with a Dispenser Tip Management.
- ♦ US D513058: Dispenser
- ♦ US D417878: Housing for Induction Heating Apparatus
- ♦ US 6672238: Towrope Retriever for Watercraft.
- ♦ US 6505573: Towrope Retriever for Watercraft.
- ♦ US D417878: Housing for Induction Heat treating Apparatus.
- ♦ US D400115: Combined Transmitter and Receiver for a Vehicle Parking Indicator System.
- ♦ US 6474664: Stroller Stand
- ♦ US D400115: Vehicle Parking Sensor and Indicator
- ♦ US 5271288: Helicopter Noise Reduction through Gearing Modification

Europe Patents:

- ♦ EP1624997: Dispenser Mixing Module and Method of Assembling and Using Same.
- ♦ EP1644169: Dispensing System with Mixing Module Mount, Drive and Tip Treatment.
- ♦ EP1722951: Hand Held Dispenser.
- ♦ EP0629269; WO 93/18320: Helicopter Noise Reduction Through Gearing Modification.
- ♦ EP1625003: Foam in Bag Dispensing System Assembly with Film Feed and Bag Formation System.
- ♦ AU 2002316669: Tow rope Retriever for Watercraft.