

John Dries – Professional Biography

John Dries is an engineering professional with a passion for new product development. Expert in the technology, tools and management techniques required to create first class designs quickly and consistently. He specializes in helping appliance manufactures develop winning products and solve the unique and difficult engineering problems that come with these complex machines.



Prior to starting Dries Engineering Mr. Dries worked to improve the performance, efficiency and profitability of appliances as a Product Development and Senior R&D Engineer for General Electric and Electrolux and managing Engineering departments for Wavetek (now JDSU) and Shelby Industries as Mechanical Engineering Manager and Vice President of Engineering.

SAMPLE PROFESSIONAL ACHIEVEMENTS

- Transformed an Engineering department that had not produced a new design in nine years into one that introduced five new products a year.
- Solved serious reliability problems affecting a flagship hand held test and measurement product by redesigning moisture and EMC shielding systems.
- Helped to lead an engineering effort to design and put into production a revolutionary new appliance design.
- Designed and helped to build hydraulic, motor and acoustical test facilities which were vital in supporting the company's product development needs.
- Designed a completely new, low-cost dishwasher motor/pump system which required one-fourth the shaft power and generated 10 dB less noise than the previous design.
- Rescued a major new product development project which had completely stalled due to numerous and serious technical problems.
- Designed a unique, patent pending safety syringe system which prevents the accidental spread of dangerous, drug-resistant blood born pathogens.
 - Personally conducting all phases of the patent prosecution.
- Identified, disclosed and helped to apply for eight patents in eight months for a client in critical need of assessing and gaining patent protection for their new product platform.

EDUCATION

Graduate with high honors of the University of Louisville's Speed Scientific School.

- Master of Mechanical Engineering 1991.
(Pi Tau Sigma – Mechanical Engineering Honor Society)

PATENTS

- Fluid Coupling Assembly for a Dishwasher (20080142056, Pending)
- Syringe With Latching Safety Mechanism (20070073224, Pending)
- Dishwasher Rack Adjustment Mechanism (20060237042, Pending)
- Improved Trailer Jack (D476461)
- Directed Pump Inlet (US05630437)

- Impeller With Balancing Vanes (US05566696)
- Dishwasher With Food Particle Macerator (US05628334)
- Filter Screen With Back-flush (US05579790)
- Water Delivery Tube With Reservoir (European Patent: 96402793.2-2303)
- Power Increase of PTC Heater (European Patent: 96111705.8-2302)
- Filter Standpipe (US05700329)
- Dishwasher Cycle (US05849101)
- Shunt Drain System (European Patent: 98117020.2)

PUBLICATIONS

“Understanding, Analyzing, and Reducing Appliance Noise,” *Appliance Magazine*, May 2009, pp. 18-24.

“Improving Dishwasher Efficiency,” *Appliance Magazine*, June 2008, pp. 22-28.

“Interpreting Patent Claims.” *DriesEngineering.com*. Web. February 2010

“Recognizing Patentability and Avoiding Infringement.” *DriesEngineering.com*. Web. October 2009.

“Understanding and Expressing Loudness.” *DriesEngineering.com*. Web. August 2009.

Classical and Canonical Modal Analysis of Generally Damped Systems (Master’s Thesis, University of Louisville, 1991).

INTERVIEWS

Cohen, A. (2009, May 21). The Dish on Dishwashers. *The New York Times*, p. D2

L. Bonnema, “Sound Dishwasher Design.” *Appliance Magazine*, October 2008, pp. 30-33.

“6 Moneymaking Tips”. Readers Digest, July 2009

PROFESSIONAL AFFILIATIONS

Acoustical Society of America

BRIEF CAREER SUMMARY

Dries Engineering
Louisville, Kentucky
President.

2004 to Present

Sample Services:

- Assist clients in developing new products, from subsystems to completely new product platforms.
- Provide expert help to clients solving fundamental engineering problems in appliance design such as; fluid mechanics, heat transfer, structural dynamics, psychrometrics, materials and noise control.

- Identify, develop and write excellent invention disclosures for aspects of client's designs that show promise for being patented, while helping prevent infringement.
- Provide clients with the agility and know-how to respond quickly to competitive threats without having to hire and train new engineering staff.

Recent Accomplishments:

- Rescued a new dishwasher design project which had completely stalled due to fundamental problems with the system hydraulics. Dries Engineering designed and tested a new system in a matter of weeks which completely solved the fundamental problems while increasing hydraulic efficiency, reliability and wash performance. (Patent pending)
- Designed a unique new safety syringe which prevents the accidental spread of blood born pathogens and allows the shield to be successively latched and unlatched with is required for certain complex procedures. Nothing else on the market can do this and no other syringe system is this safe. (Patent pending)
- Identified, disclosed and helped to apply for eight patents in eight months for a client which was in critical need of assessing and gaining patent protection for their new designs. Prior to working with Dries Engineering the client had achieved no patent applications in over a year of effort.
- Significantly improved a new dishwasher design's wash performance, while simultaneously reducing water consumption and noise by redesigning the wash pump and sump solving a serious noise and pressure problem which was also causing the filtration system to malfunction. The improvements caused no increase in product cost and were implement in a matter of weeks.
- Fulfilled a client's need for a compact, strong, highly versatile and intuitive dishwasher rack adjustment mechanism by designing a system utilizes the spaces between the rack wires instead of the outside or inside of the rack. Because of this the client could use one of the largest racks on the market and have almost none of the space in the rack consumed by the adjustment mechanism. This mechanism is ergonomic, intuitive and allows the consumer to adjust both sides independently. (Patent pending)

Shelby Industries

Shelbyville, Kentucky

V.P. Engineering.

2001 - 2004

Engineering Manager.

1999 - 2001

- Transformed an Engineering department that had not produced a new design in nine years to one that introduced five new products a year.
- Designed and put into production an award winning line of trailer swivel jacks. (Patented)
- Implemented strategic product panning process to help identify, organize and prioritize new product design projects.
- Implemented a quality control system which provides immediate feedback and corrective actions when quality problems are first detected.

Wavetek (Now JDSU)

Indianapolis, IN

Mechanical Engineering Manager.

1997 - 1999

- Solved several serious field reliability problems affecting some of the company's flagship products by redesigning the moisture and EMC shielding systems. The new designs could be retrofitted to existing products and had a minimal cost impact.
- Improved the quality of all products by helping to implement a production part approval process, the first of its kind for Wavetek.
- Streamlined the engineering drawing release system by implementing modern and uniform drafting standards.
- Increased the speed of the product development process by overhauling the drawing release system, making the latest drawing revisions available electronically to manufacturing, purchasing, quality and selected vendors.

Frigidaire Company (Electrolux)

Kinston, NC

Senior R&D Engineer.

1994 - 1997

Development Engineer.

1992 - 1994

- Helped to lead the engineering effort to design and put into production a totally new dishwasher which would require a fraction of power and water of previous designs, generate significantly less noise all while holding very aggressive cost targets.
- Designed a completely new, low-cost pump system which required one-fourth the shaft power and generated 10 dB(A) less noise the previous design.
- Allowed aggressive cost targets for the new product to be met by designing and a new low-cost circulation pump motor.
- Designed and built hydraulic and motor test facilities and integrated them with an automated data acquisition system.
- Further reduced product noise by utilizing modal analysis to understand and quantify the vibrational modes of the dishwasher structure and the "tune" the structure to avoid the known frequencies generated by the pump and motor.
- Helped to implement acoustical testing facilities including a reverberant room capable of performing precise sound power measurements.

General Electric

Louisville, Kentucky

Product Design Engineer.

1986 - 1990

- Saved the company \$75,000 per year by designing a cost reduced drain system for coin operated clothes washers.
- Saved \$100,000 per year by redesigning the door trim on all Hotpoint brand production greatly reducing material cost and scrap.
- Streamlined production and reduced product cost by adapting a "high-end" filtration system to work with a lower cost and previously unfiltered

dishwasher platform, significantly reducing the cost of producing a fully featured product.

CONTACT INFORMATION

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