

RICH DEWALD

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SUMMARY

A resourceful and highly analytical process engineer, with extensive experience in rubber processing technology, program and project management, metal treatment and adhesives, coating application, design management, plasma treatment, and tool development. Excels at compounding PTFE for wear resistance as well as utilizing plasma etching processes for bonding to PTFE. A proven track record of motivating team members to uncover technical obstacles and implement new controls to improve core processes. A savvy and goal-oriented producer, who flourishes in identifying and resolving inefficiencies and enhancing long-term output.

EXPERIENCE

TENNECO (f/k/a FEDERAL-MOGUL), Plymouth, Michigan
Technical Specialist, Process R&D, 2019-2020

Facilitated and provided essential project management and support for development of new manufacturing processes for new product technologies. Developed tooling for implementation of compression mold technology for engine crankshaft seal requiring tight dimensional tolerances (included design standard development and cost analysis work). Designed tooling and launched project for two-compound compression molding of engine crankshaft seals.

- Launched development project and created prototypes for inkjet printing of OD coating for bore sealant on crankshaft seals.
- Utilized CAD and FEA modeling technology in development of tooling designs.

Manager, Materials Process Design, 2005-2019

Supervised process design team specializing in chemical and materials processes for sealing systems division, supporting ten manufacturing locations on three continents (\$1,000,000,000 in sales). Developed prototype process for flashless molding of engine crankshaft seals, using injection-transfer molding technology. Led team launching new manufacturing process, including valve-gated injection molding for new engine seal program and transmission bonded piston program. Created and developed process for coating exhaust gaskets with reclaim of overspray of coating.

- Developed process for treating PTFE to improve adhesion of rubber to material, potentially saving company \$400,000 per year.
- Led and guided team in developing effective new process for mixing compounds and molding elastomeric magnets for use in several encoder applications.

ADDITIONAL EXPERIENCE

Materials Engineer, 1999-2005. Designed compounds for heavy-duty gasket applications and PTFE engine and compressor seal applications. Assigned to plant in Kunsziget, Hungary for two months in summer of 2004. Trained personnel in rubber compound testing techniques, implemented testing processes, and improved manufacturing procedures for elastomer molding processes and seal inspection. Developed new PTFE compound for supercharger applications to improve wear resistance by 25%. Partnered with supplier to develop process for improving fuel vapor resistance of elastomeric gaskets by 30%, with only minimal increase in part costs. Developed process to manufacture own free-flowing PTFE compounds, forcing current supplier to provide \$500,000 in annual savings.

Senior Process Engineer, 1997-1999. Led process engineering team responsible for elastomer mixing and metal treatment processes in manufacturing location. Implemented new powder conveying system for elastomer mixing operation to reduce employee inhalation exposure to carbon black and silica powders. Worked with manufacturing shop personnel to implement 5S in operation of primary powder handling system. Developed new mixing procedure for injection molding compound that improved consistency of injection process. Managed team implementing new mixing control system and specified new mixer drive to allow for improved throughput time in mixing operation. Worked with hourly personnel in team to reduce scrap in mixing department.

Process Engineer, 1990-1997. Developed and refined chemical and materials processes in production environment. Analyzed elastomer and chemical test data to monitor incoming and in-process materials.

ALLISON ABRASIVES, Lancaster, Kentucky, **Development Engineer**, 1988-1990. Created and developed cut-off wheel formulations for use in metallurgical and glass cutting operations.

BELCAN TECHNICAL SERVICES, Cincinnati, Ohio, **Technician**, 1988. Performed polymer property analysis for printer parts at IBM (now known as Lexmark) in Lexington, Kentucky.

IBM, Lexington, Kentucky, **Co-op Engineer**, 1985-1986. Developed process for application of dielectric coating material to insulate conductive ink layers in computer keyboards.

Co-op Engineer, Endicott, New York, 1984. Evaluated treatment processes for electroless copper plating.

EDUCATION

UNIVERSITY OF CINCINNATI, Cincinnati, Ohio, **B.S., Chemical Engineering**, 1987

AFFILIATION

American Chemical Society, Rubber Division

COMPUTER SKILLS

CAD, Abaqus, Microsoft Office Suite, MS Access, Ladder Logic, Moldflow