

ROBERT C HOFFMAN JR, PE, CEFI

5136 BECHT ROAD

COLOMA, MI 49038

RC.HOFFMAN.CPS@GMAIL.COM

Professional Summary

A mechanical engineer with over (34) years of experience in the consumer goods industry. This experience included roles in product engineering, design/development, and product approval. Product safety and product field investigations were the primary focus of the latter half of my career. Areas of expertise include product development of major appliances from concept through to production which encompasses the following areas of focus: failure mode and effects analysis, reliability testing, product performance testing, product safety testing including force failure evaluations, and codes approval. As a safety tech team lead, one of my responsibilities included the creation and release of product safety test specifications for the following hazards: fire, electrical shock, contact burns, and suffocation.

Education, Licensing, and Certifications

Year	Degree/License/Certification	Certifying Organization
1984	degree BSME - high honors	Michigan Technological University Houghton, MI 49931
1996	certification product safety tools	Whirlpool Corp Benton Harbor, MI 49022
1997	certification experimental statistics & SPC	Six Sigma Associates, Inc. Boulder, CO 80303
2007	certification UL 94, UL 746 a, b, c, d	Underwriters Laboratory (UL) Northbrook, IL 60062
2011	certification forced failure testing	Whirlpool Corp Benton Harbor, MI 49022
2012	certification design for safety	Whirlpool Corp Benton Harbor, MI 49022
2020	certification fire & explosion investigator (CFEI)	National Association of Fire Investigators (NAFI) Bradenton, FL 34209

Memberships and Affiliations

Year	Organization
05/1996 - present	Fraternal Order of Police (FOP) Madison Heights, MI 48071
02/2014 – 01/2018	Association of Home Appliance Manufacturers (AHAM) Washington, DC 20036
05/2018 - present	National Association of Fire Investigators (NAFI) Bradenton, FL 34209
03/2020 - present	Standards Technical Panel Member – STD 2157 & STD 0181 Underwriter's Laboratory (UL) Northbrook, IL 60062-2096
11/2023 - present	Society of Product Safety Professionals St. Louis, MO 63108

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Employment History

Experience: Creative Product Solutions LLC
04/2018 - present
(4 years)

Engineering Consultant, 03/2018 - present

- Expert witness services and support for product litigation cases.
- Appliance fire investigations.
- Teach seminars for professional engineers to obtain their continuing education credits required for PE license renewal.
- Provide engineering consulting services to various manufacturers in the areas of design, testing, failure analysis, root cause analysis, test plans, data analytics, and product field investigations.

Experience: Whirlpool Corporation
03/1991 - 03/2018
(27 years)

Final role before retirement: Principal Engineer, 10/2010 - 03/2018

Drum Sub-System Design/Development Engineer, 11/2016 - 03/2018

- Laundry Safety Technical Team (STT) lead
- Scope/select design concepts using both theoretical calculations and empirical evaluations with statistics
- Fully design/detail and release into production selected concepts
- Responsible for all sub-system performance
- Mentor new engineers in design methodology, testing, and product safety.

Laundry Product Approval Engineer, 10/2005 - 10/2016

- Laundry Safety Technical Team (STT) lead
- Originator of new product safety tests and procedures
- Lead PA engineer for new, unique, & difficult (NUD) projects
- Designed, tested, and approved changes so all dryer platforms met UL 2158 drum containment requirements
- Test, evaluate, and grant approval to begin production of a project
- Utilize root cause analysis to provide design guidance
- Execute various analysis techniques to assure conformance to product performance success criteria
- Document detailed test procedures/results in lab reports and issue product approval documentation.

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- Supported the Product Safety and Legal departments on safety related field claims including field return teardowns, off site field assessments, conduct specialized testing with data analysis documentation for lawsuit defense.

Dryer Platform Structures Sub-System Leader, 06/1998 - 09/2005

- Scope/select design concepts using both theoretical calculations and empirical evaluations with statistics
- Fully design/detail and release into production selected concepts
- Responsible for all sub-system performance, Department of Energy (DOE) energy conformance, and all product safety performance.
- Close integration/communication with test labs, procurement, suppliers, manufacturing, and assembly

Dryer TCP/TCQ Structures Sub-System Engineer, 03/1991 - 05/1998

- Designed and implemented a major redesign of the clothes dryer product line with a tooling investment of \$11,000,000
- Designed and implemented changes for all dryer models to meet 1994 Department of Energy (DOE) energy performance standards

Experience
09/1984 -
02/1991
(7 years)

General Motors Corporation
Saginaw Division
Saginaw, MI 48605

- Various Engineering Positions:
 - Successfully implemented the Saturn steering column
 - Successfully implemented significant cost & quality projects