



Charles Ogborn, B.S.

Solution Engineering Agricultural/Mechanical Engineer

Charles Ogborn provides consulting as a highly skilled professional engineer with over 16 years of experience in industrial testing, failure root cause analysis, engineering consulting, and insurance investigations. With over 30 years of experience in the agricultural industry, he serves as lead investigator for farm and food production related issues. Mr. Ogborn also provides mechanical engineering support for the Solution Engineering Laboratory and oversight for client testing in Agricultural/Mechanical Engineering projects.

He consults on all aspects of Agricultural and Mechanical Engineering including equipment failures, facilities, processes, fire cause and origin, storage and farm related accidents.

Areas of Expertise

- Failure analysis of agricultural equipment
- Project Planning & Execution
- Design & Develop testing protocols and equipment
- Test Validation & Documentation
- Risk Assessment & Management
- Process & Performance Improvement
- Strong analytical and organizational skills
- Agricultural Building Failure Evaluation
- Creative Problem Solving
- Product & Performance Validation
- Quality Assurance Testing
- Root Cause Analysis
- Strategic & Tactical Planning
- Pro/Engineer
- LabVIEW
- AutoCAD
- Vishay Data Acquisition System
- Microsoft Office 365
- KinRig Connect Software
- National Interments DIAdem
- QuickBooks Online

Education

- B.S. Mechanical Engineering, Olivet Nazarene University, Bourbonnais, Illinois (2003)
- Associate Degree, Machine Trades, Vincennes University, Vincennes, Indiana (2000)

Career History

THYSSEN KRUPP PRESTA – Terre Haute/Fisher, IN

Test Engineer: Specializes in the design of tests aimed to checking product functionality and performing quality assurance. Meticulous and thorough does not give up until products are perfected.

Accountable for organizing the setup of new test machines for the test lab. Develop new software programs for new products so testing can be performed.

- Constructs test plans to insure design structural and longevity standards are flawless.
- Operate with a team of software developers to establish and advance test automation methods and techniques; strategize, develop, implement, conduct test and troubleshoot issues.
- Generate development processes and make suggestions to design engineers in order to assist in product improvement.
- Determine when flaws are found to work with engineering team to resolve all problems and act as a change point person for the organization.
- Ensure continuous development, improvement and update of test programs from early development until the end of production life cycle.
- Instruct our test lab technicians on how to run test benches, create work instructions, and hold trainings.
- Oversee numerous projects simultaneously within budgetary and time sensitive restrictions.
- Report daily test lab activities and organize testing request that come into the lab.

SOLUTION ENGINEERING GROUP – Montgomery, IL

Agricultural and Mechanical Engineering: Conducts engineering investigations with an emphasis in mechanical and agricultural disciplines. Solely responsible for business development of agricultural services.

- Lead Engineer in the Agricultural Engineering practice.
- Conduct agricultural technology performance validation.
- Provide third party consulting for Agricultural and Mechanical Engineering based insurance claims.
- Expert in Commercial Storage, Drying and Material handling.
- Mechanical testing and analytical analysis.
- Laser scanning accident scene documentation.
- OSHA and FDA regulation evaluation compliance.

PROFESSIONAL ANALYSIS AND CONSULTING – Naperville, IL

Mechanical / Agricultural Consultant: Specializes in performing engineering investigations in mechanical and agricultural industries. Projects have involved accident investigation and reconstruction, fire cause and origin, product test validation, product liability, and design analysis.

- Solely responsible for business development of agricultural services.
- Perform precision agricultural technology performance validation.
- Provide third party consulting for Agricultural insurance claims.
- Develop specification for recurring product design and oversee standards compliance with finished products
- Commercial Storage, Drying and Material handling special investigations.
- Mechanical testing and analytical analysis.
- Laser scanning accident scene documentation.

- OSHA and FDA regulation evaluation compliance.

SOFTWARE SOLUTIONS INTEGRATED – Shelbyville, IL

Business Analyst – Agvance Agronomy. Influential member of the Agvance Agronomy team, responsible for capturing business goals and objectives, gathering information and defining project vision by superseding the communicating business requirements. Identify and achieve business opportunities while providing value-added services to our clients.

- Exceptional planning and implementation capabilities in the areas of managing special project requests from clients to enhance the software product line.
- Extensive experience with software application development and mobile phone applications.
- Crucial member of the development team responsible for strategic planning and product development.
- Solely responsible for the integration of the RFID Grain Scale Interface project with Kahler Automation
- Well versed with MapShots, AgStudio and the implementation within the Agvance Mapping module.
- Strong background with Geographis Information Systems (GIS).

GRAIN SYSTEMS INC – Assumption, IL

Product Engineer – Storage: Key member of an elite team responsible for the development and implementation of test plans.

- Fully responsible for the development of data acquisition system and testing used to correlate Finite Element Analysis for a bin roof redesign. The data acquired was a key driver to take out 40% material and labor cost.
- Designed and utilized 128-channel data acquisition system to capture thermal temperature recordings, displacement readings, and multi-axis force measurements.
- Engineering project manager responsible for obtaining CSA certification for the DMC Stir-Ator product line, including 3D design, CAD drawing, testing, functionality, documentation, and writing user manuals.
- Solved the number one problem on DMC Stir-Ator line by redesigning the key operating mechanism resulting in unit quality improvement and improving manufacturability that reduced the number of failure modes by 50%.
- Conducted 12 major field engineering investigations over multiple product lines. Responsible for communication with the customer, site documentation, forensic investigation, report summary, and follow-up.
- Worked directly with suppliers to optimize product performance, work with suppliers to change their manufactures processes which reduce complexity and costs therefore improve product application needs.
- Provide aftermarket product support on the DMC Stir-Ator product line and electrical panel setup for Power Sweeps.

PACKER ENGINEERING, INC. – Naperville, Illinois

Staff Consultant, Mechanical Engineering: Responsible for providing engineering services in the areas of failure analysis, accident reconstruction, insurance evaluations, and industrial testing. Key team member in the areas of mechanical processes, developing test protocols, and conducting fire investigations on multiple functions of mechanical equipment.

- Top 15% billable engineers within the consulting firm. Consistently exceeded standards for billable hours.
- Took the initiative to reinstate Packer Engineering’s Agricultural Services after 10 years. Conducted third-party research and development to evaluate issues on large farm implements, grain handling equipment, spraying equipment, construction equipment, and automotive vehicles.
- Key team member for one of the largest Agricultural patent infringement cases in Packer Engineering History.
- Manager of over 100 projects including litigation and industrial testing. Coordinated third-party product development, trial deposition and site documentation. Provided project summaries and directed multiple projects simultaneously.
- Consulted in the areas of agriculture components, hydraulic systems, electrical systems, vehicular structural analysis, design analysis, product testing, mechanical testing, and fire damage analysis.
- Key team member of metallurgy laboratory responsible for conducting material analysis and material evaluation.
- Created laboratory test plans for conducting standardization third-party testing for accident reconstruction to resolve the root cause of problems. Designed test standards for product qualification and validation.

Professional Affiliations

- AgGateway, SPADE2 Team member serving as Scrum Master for Regulatory Reporting Context Data & AGIIS Integration projects. (2014)
- American Society of Agricultural and Biological Engineers: (Chairman 2008, Board of Trustees 2012-2015)

Presentations

- “Engineering Your Future,” Olivet Nazarene University Engineering Department, Bourbonnais, Illinois (2014)
- “Capturing the Facts,” Iowa Defense Counsel Association Annual Meeting, Des Moines, Iowa (2010)
- “Applying Technology to Site Documentation and Evidence Preservation,” Defense Trial Counsel of Indiana, Michigan City, Indiana (2010)

License, Patents, & Awards

- Service Agent License for the State of California issued by the Department of Food & Agriculture Division of Measurement Standards: License #30486 expires 2/5/2019
- US Patent No: 8,845,772 B2 (September 30, 2014) “Process and System for Syngas Production From Biomass Materials
- Awarded Order of the Engineer (ASABE 2012)