

Andy J. Egan Takes Industrial Fabrication to the Next Level

AN MSUITE CASE STUDY

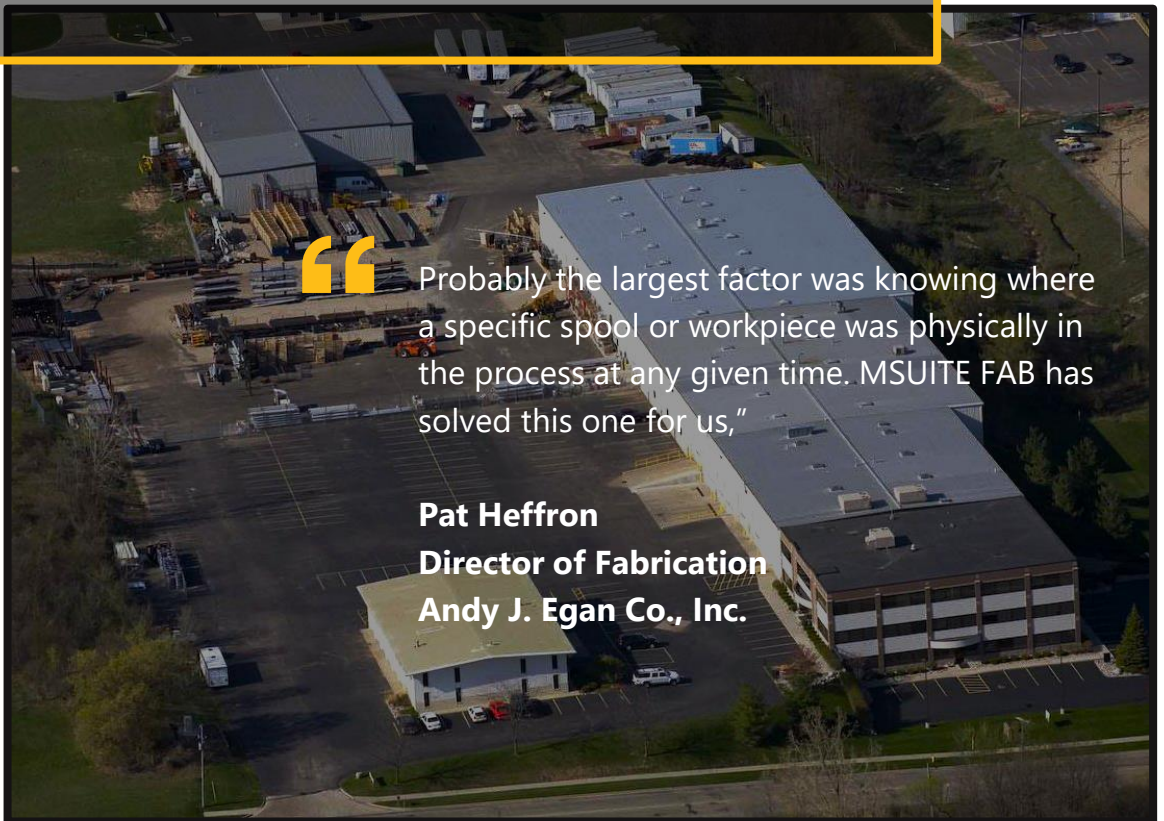


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Pat Heffron
Director of Fabrication
Andy J. Egan Co., Inc.

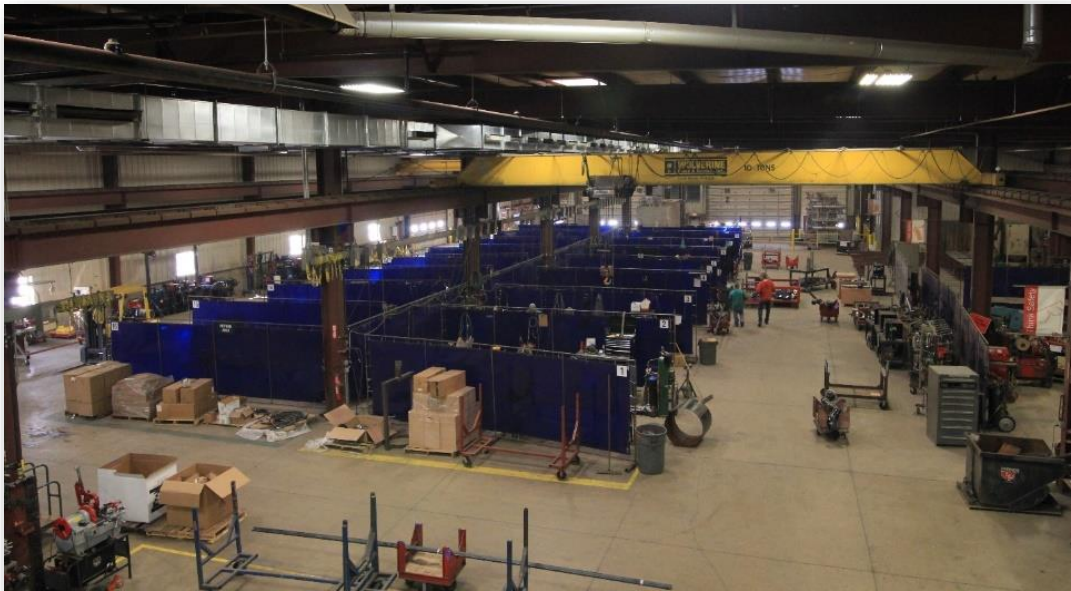


Overview

Founded in 1919, **Andy J. Egan Co., Inc.**, has been a leader in the mechanical and fabrication industries. Sustaining four consecutive generations of family ownership, Andy Egan represents the modern American Dream. Their legacy exists in the mechanical systems installed for west Michigan's largest and most complicated projects.

Shortly after Andy Egan opened the doors of its Fabrication Shop in 1999, Pat Heffron joined the company at the ground level and worked his way up in large construction and estimating. However, his passion for tackling fabrication challenges, designing the near impossible and manufacturing end-products on expedited deadlines drove him to work his way up from a Brickie to Andy Egan's Director of Fabrication. He manages a large fabrication team that succeeds at delivering for both internal Andy Egan projects and external customers.

Over the years, Pat has led the fabrication team through production challenges and kept up with the amount of growth Andy Egan has been achieving. The fabrication facility expanded three times and has been at a steady growth pace for the last few years. **Pat shares the keys to his success in helping Andy Egan take industrial fabrication to the next level.**



Andy Egan Fabrication Facility

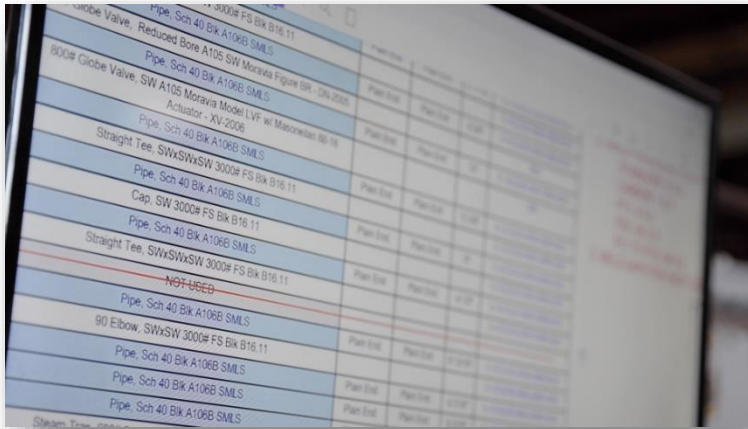
Fabrication Facility Facts

- 60,000 square feet of fabrication space
- Secure 1.5-acre laydown area for storage of materials.
- Fab Shop Staff: 20-30 / One-Shift | 50-70 / Two-Shifts (short term multi-trade projects)
- Offices: Grand Rapids, Kalamazoo, St. Joseph/Benton Harbor and Muskegon.
- Technicians support southwest Michigan, lakeshore, and northern Indiana customers.

Industrial Industry Trends

It's clear right now there is a movement toward alternative energies and away from the traditional sources, such as coal fired. The new generation plants are trending toward combined cycle or wind and solar.

In the Midwest, and specifically in Michigan, there are two or three main utility contractors with aggressive commitments to going coal free by 2025. Andy Egan performs a lot of work for different clients and even the smaller municipalities and towns, doing the same thing. "They're shutting off their coal burners and moving over to the combined cycle or a Phase Out Peaker project. Andy Egan has performed a couple of those both in the installation and then also worked with different customers only on fabrication," said Pat.



Item Description	Plan	Est	Proc	Ship
Globe Valve, Reduced Bore A106B SMLS	Plan	Est	Proc	Ship
Pipe, Sch 40 Bk A106B SMLS	Plan	Est	Proc	Ship
90° Globe Valve, SW A106B SMLS	Plan	Est	Proc	Ship
Actuator - XV-2006	Plan	Est	Proc	Ship
Pipe, Sch 40 Bk A106B SMLS	Plan	Est	Proc	Ship
Straight Tee, SWxSWxSW 3000# FS Bk B16.11	Plan	Est	Proc	Ship
Pipe, Sch 40 Bk A106B SMLS	Plan	Est	Proc	Ship
Cap, SW 3000# FS Bk B16.11	Plan	Est	Proc	Ship
Pipe, Sch 40 Bk A106B SMLS	Plan	Est	Proc	Ship
Straight Tee, SWxSWxSW 3000# FS Bk B16.11	Plan	Est	Proc	Ship
NOT USED				
Pipe, Sch 40 Bk A106B SMLS	Plan	Est	Proc	Ship
90 Elbow, SWxSW 3000# FS Bk B16.11	Plan	Est	Proc	Ship
Pipe, Sch 40 Bk A106B SMLS	Plan	Est	Proc	Ship
Pipe, Sch 40 Bk A106B SMLS	Plan	Est	Proc	Ship
Pipe, Sch 40 Bk A106B SMLS	Plan	Est	Proc	Ship

MSUITE FAB Project Tracking

Fabrication Challenges

Andy Egan Fabrication Leadership saw an opportunity to improve their fabrication operations and exponentially grow. Adopting fabrication shop software addresses these challenges:

- Standardizing for improved throughput, efficiency, and productivity.
- Achieving consistency in fabrication processes.
- Eliminating the master production spreadsheet that took hours of daily updates.
- Eliminating paper and manual activity tracking such as MTR tracking, welder tracing requirements.
- Improving Quality Control and QC tracking for large industrial clients.

Pat's team used to spend countless hours doing manual inventory to get status updates. Their team could easily keep track of what hadn't started production and what was complete, but **AT WHAT STAGE IN PRODUCTION was nearly impossible to track**. As a result, consistent and accurate production updates were almost impossible, **making forecasting and scheduling extremely difficult** [until rolling out MSUITE](#).

Unique Aspects of Industrial Fabrication

Overall, Industrial fabrication involves very high quality and technical standards, so it's just a smaller group in terms of the labor force and companies that can handle and manage the technical requirements of projects. For contractors like Egan, there is higher risk but a higher reward if the project goes well.

"Documentation, quality control, and certifications of the welders are critical—the difference is in material and metals, such as chrome, and working on projects like pressure vessels. Andy Egan is an ASME code shop, so they build a fair amount of pressure vessels and stamp them for both internal and external projects within the industrial sector."

Introducing MSUITE

After meeting at a convention several years ago and reviewing how MSUITE has enhanced its FAB, BIM, and FIELD products, Andy Egan was ready to jump aboard and has now utilized MSUITE's full suite of products for several years including MSUITE FAB in their fabrication shop.

“Back in those days, we were impressed by MSUITE being 100% dedicated to Mechanical Contractors, and that was a key decision factor in moving forward,” said Pat.

Using BIM, Andy Egan is utilizing the MSUITE platform while it's transitioning from CAD MEP to Revit.



MSUITE FAB

Implementing & Adopting Fabrication Shop Software



MSUITE FAB Helps Improve Quality Control
(Andy Egan)

When Pat and the Fabrication Leadership team were ready to implement MSUITE, the group's overall sentiment was apprehension to use it throughout the fabrication facility.

"We had to be cautious because we had glaring needs for improvement and employees that were averse to using technology in the fabrication shop," Pat said. "Our guys got into the trades because they like building stuff, not using software, but MSUITE's focus on the mechanical trade and being onsite for training is a big reason for overcoming this culture shock."

Pat further described the brutal reality of looking in the mirror when you get into a system like MSUITE. The MSUITE team configured it correctly to their exact specifications and mirrored process requirements. By holding the team of 30 - 50 employees to that process, it removed the risk of taking shortcuts that could create larger issues.

The Solution

Twenty years ago, in fabrication, mechanical contractors rarely saw a customer request for MTR tracking, welder traceability, etc., and now it is required for nearly every project. This transition is placing a considerable strain on manual systems, so contractors are looking for technology to help manage production in the fabrication shops.



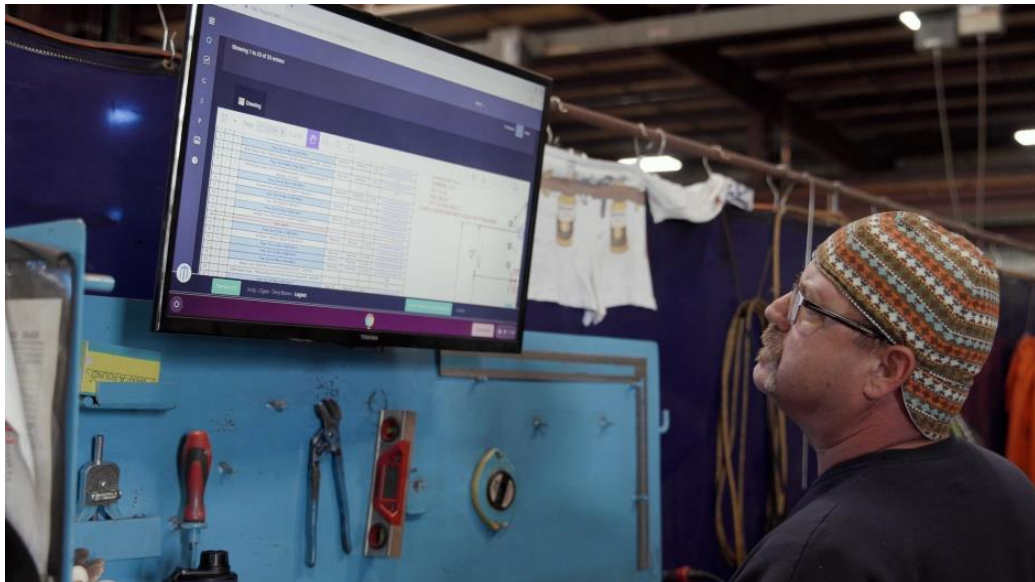
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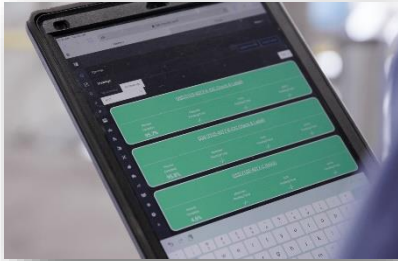
Workflow Standardization

MSUITE helps Andy Egan standardize workflows for improving throughput, efficiency, and productivity and achieve consistency in fabrication processes. Some of the benefits of using MSUITE include eliminating the master production spreadsheet that took hours of daily updates; eliminating paper and manual activity tracking, such as MTR tracking and welder tracing requirements; and improving Quality Control and QC tracking for large industrial clients.



MSUITE FAB at Shop Floor Workstation

FEATURED INDUSTRIAL PROJECTS



MSUITE FAB on the Shopfloor

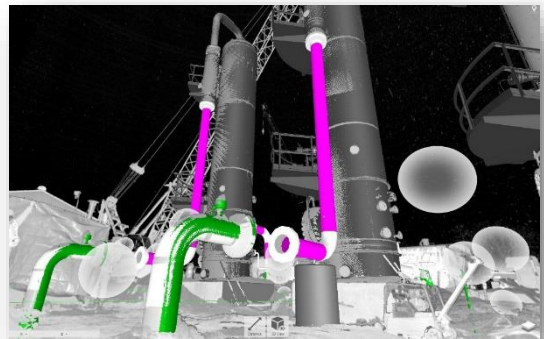
Industrial projects for Andy Egan's external customers are unique in terms of being more technical and customizable. Still, the mechanical contractor has discovered a niche in Industrial, Power, Oil & Gas, Renewable Energy, and Water Treatment industries.

Below are three featured industrial projects where MSUITE has helped Andy Egan's fabrication team meet extreme requirements on compressed schedules.

Major Utility Company Saves 3 Weeks on Tight Schedule

A major **power, oil & gas utility company** partnered with Andy Egan to replace significant equipment and associated piping at one of its compressor stations. The **\$8.2 million project** required the installation of 6,200 linear feet of piping along routes with 14 different tie-in points.

Andy Egan's superintendent said that without the 3D scan, fabrication would have been impossible, and the crew would have constructed everything in the field. Instead, they were able to install the 80-foot towers without any of the connected piping, **saving 3 weeks on a compressed project schedule**. Field welds were kept to a minimum, and because so much of the documentation took place in the fabrication shop, paperwork required for QA/QC was also minimized for the field crew.



Source: Andy Egan

Read the [full story](#).

- OWNER: Major Utility Company
- INDUSTRY: Power, Oil & Gas
- EGAN SERVICES: 3D Laser Scanning, Construction Tech Solutions, Fabrication, Mechanical Contracting
- PROJECT VALUE: \$8,200,000

FEATURED INDUSTRIAL PROJECTS

Delta Energy Park

Winner of the 2022 ENR Midwest Best Project Award in the Energy and Industrial Category.

Watch how Andy Egan's preconstruction, VDC, construction, and controls teams collaborate to help construct a 250 MW combined cycle power plant in Lansing, MI. MSUITE FAB helps the Fabrication Shop Supervisor manage and track each piece on the floor, eliminating frequent walks until reviewing the packages at the final QC stage before shipping.

Watch [video](#).

- OWNER: Lansing Board of Water and Light
- INDUSTRY: Power, Oil & Gas
- EGAN SERVICES: BIM, Construction Tech Solutions, Fabrication, Mechanical Contracting
- PROJECT VALUE: \$21,500,000
- CONSTRUCTION MANAGER/GENERAL CONTRACTOR: Barton Malow and Clark Construction



Source: Andy Egan

Bowen Engineering Corp

Andy Egan fabricates more than 2,500 carbon steel, coated spools for a dry ash system.

MSUITE helped Andy Egan manage this large-scale spool fabrication project to enable spools to be shipped to the project jobsite and installed with a 99.4% accuracy rate at the largest coal-fired plant in the western hemisphere. [See photos](#).

- OWNER: Bowen Engineering
- INDUSTRY: Power, Oil & Gas
- EGAN SERVICES: Fabrication
- PROJECT VALUE: \$1,000,000 | SIZE: 2500 spools



Source: Andy Egan

The DEWALT logo is displayed in a bold, black, sans-serif font, underlined, and set against a bright yellow rectangular background.The logo for CONSTRUCTION TECHNOLOGY features a stylized blue icon of a building or structure to the left of the company name, which is written in a bold, blue, sans-serif font.

MSUITE

MSUITE is cloud-based suite of management software to connect BIM, Fab, and Field Construction Teams. MSUITE helps you track, manage, and share data throughout the entire life-cycle of a construction project. Stemming from a Mechanical Contractor in Iowa in 2015, MSUITE's products have been a solution to a problem that the construction industry has needed for decades.

Andy J. Egan Co., Inc.

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