



Weapon Systems



Vehicle Builds



OEM



Oil and Gas

JWF Industries Company Brief



The Work Fighters Supporting the War Fighters™



JWF History

- ▶ Back in 1957...
 - ▶ John Polacek Sr. was a struggling steelworker trying to provide for his wife and 9 children.
 - ▶ He put a welding machine on the back of his pick-up truck and started Johnny's Welding.
 - ▶ The first shop was a two-car garage located next to the family residence.



JWF History

- ▶ American Dream
 - ▶ Bill Polacek purchased his father's business in 1987.
 - ▶ Changed name to JWF Industries.
 - ▶ Began with two employees. Now employs over 400.
 - ▶ Started in a two-car garage. Now occupies 1,000,000 sq. ft.



Culture



“The purpose of JWF Industries is to allow our people to succeed.”

- JWF Industries Purpose Statement



Partial Domestic and Foreign Client List

BAE SYSTEMS



NIST

National Institute of
Standards and Technology
U.S. Department of Commerce

MACK
DEFENSE

KONGSBERG

**LOCKHEED
MARTIN**

GENERAL DYNAMICS

Ordnance and Tactical Systems



LAURA METAAL

We care, we create



FLUOR

JLG



**FreightCar
America**

CalgonCarbon



Manitowoc

OSHKOSH



JWF DEFENSE
SYSTEMS

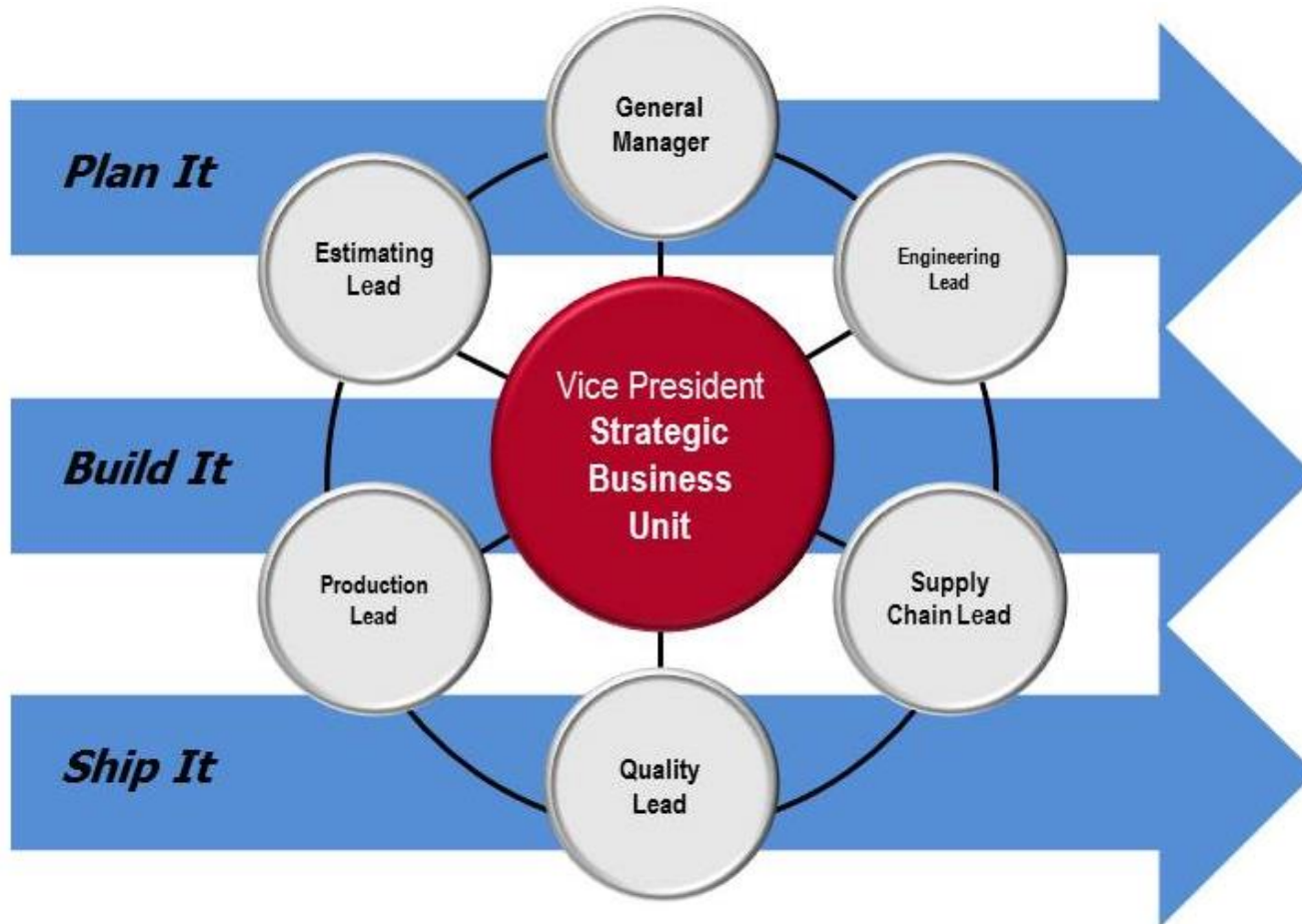
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JWF Industries Family of Businesses



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Strategic Business Unit (SBU) Structure



Safety



- ▶ JWFI has a state-certified safety committee with 20 employee-members representing each area of the plants.
- ▶ SBU Leads are expected to incorporate a safety plan and Job Safety Analysis into their work process for each project under their control.
- ▶ Each new employee undergoes a new employee safety orientation to increase safety awareness early on in their career at JWF.
- ▶ Equipment safety training is performed by either the Safety Administrator or highly qualified safety consultants.
- ▶ Safety Committee members engage in a documented monthly meeting/inspection of “areas of concern” in a particular facility or department. The location rotates each month.
- ▶ Full-Time Safety Administrator on staff
- ▶ Incident rates are tracked on a monthly basis by SBU. Division Heads are responsible for their divisional rate.
- ▶ Personal protective equipment (PPE) is provided to employees at no cost to them.

Quality Certifications

- ▶ ISO 9001:2015 Certification
- ▶ American Society of Mechanical Engineers (ASME)
- ▶ Military Welding Certifications
 - ▶ Ground Combat Vehicle Welding Code Steel 12479550 (MIL-STD-3057)
 - ▶ Ground Combat Vehicle Welding Code Aluminum 12472301 (MIL-STD-3057)



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Quality Assurance



FARO Laser ScanArm V3

- Pint cloud-to-CAD comparison, rapid prototyping, reverse engineering, and 3D modeling.
- Accuracy: $\pm 0.014''$
- Repeatability: $.0014$



Faro Laser Tracker

- For large to very large applications.
- Accuracy at 10m = $\pm 0.0013''$
- Repeatability at 10m = $0.0005''$
- Volume = "unlimited"



Zeiss Contura G2 CMM

- Utilizes CALYPSO Visual Metrology Software.
- All axes are equipped with 4-sided Carl Zeiss air bearings
- Computer Aided Accuracy (CAA) for real-time dynamic correction of the CMM and sensor
- Accuracy $\pm 0.0001''$
- Volume $\sim 59 \text{ ft}^3$



Two Faro Arm Platinums (10ft) and One Faro Arm Gold (10ft)

- Ability to mount and measure parts in process on shop floor (*Bluetooth*[®] Cable-Free Operation: Inspect and digitize wirelessly up to 30ft. Mounted on 5ft x 12ft granite table in Quality Assurance Inspection Lab
- Repeatability $.002''$
- Accuracy $\pm 0.0029''$
- Volume $\sim 500 \text{ ft}^3$



3D Laser QC

- LaserQC captures over 500 data points per second to make part inspections.
- High speed/high volume
- Accurate to $\pm 0.002''$
- Reverse engineering – The scanning process captures the complete profile of existing parts and stores the data in CAD-compatible .dxf files.
- SPC and quality reporting Inspection data (Histogram, Run Chart, and X Bar/Range)

Patents and Proprietary

- ▶ Six proprietary energy product patents
- ▶ Multiple defense and commercial NDA's (Non Disclosure Agreements) protecting a diverse base of classified and proprietary customer information
- ▶ 15 acre main campus secured by fence and 24 hour security guard
- ▶ ITAR (International Traffic in Arms Regulations) compliant and registered
- ▶ Pennsylvania state IGA (Industrial Grant Award) winner in 2013 and 2014



Foreign Sales

- ▶ Proprietary manufacturer and distributor of Laura Metaal Barrier Guard products – Kerkrade, The Netherlands
- ▶ Proprietary manufacturer and distributor of ITAR controlled Kongsberg Protech Systems CROWS (Common Remotely Operated Weapon Station) ballistic protection system, ammunition boxes, and hardware. Exporting to Canada, Norway, and other European countries.
- ▶ NDA protected manufacturer of ITAR controlled Stryker and LAV components exporting to General Dynamics Lands Systems Canada.



JWF Facility Locations

▶ Johnstown, PA Locations:

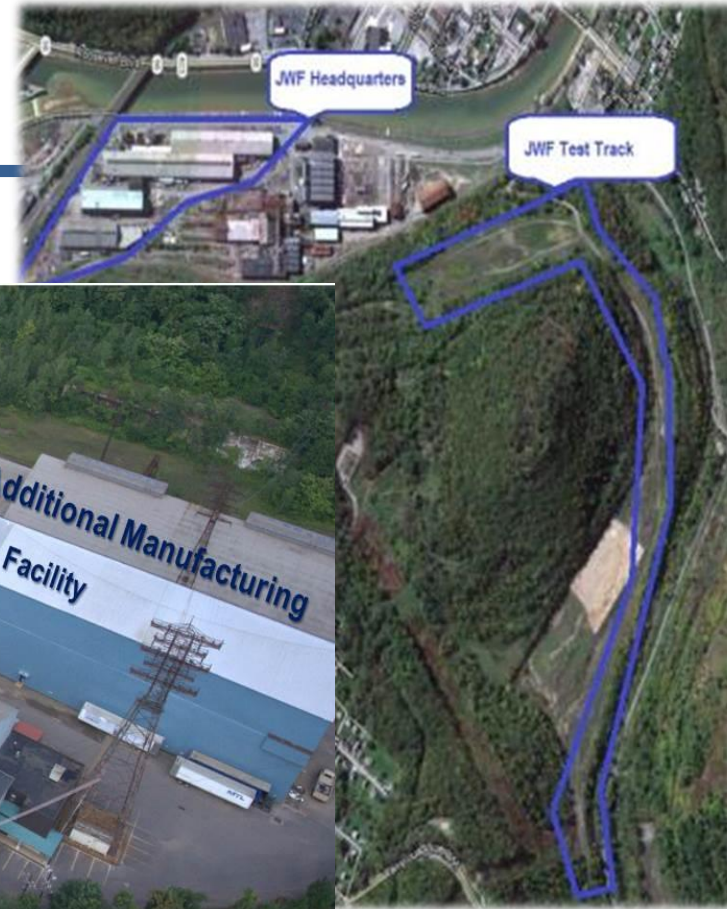
- ▶ 600,000 square foot, 15 Acre Iron Street Main Campus
- ▶ 100,000 square foot Machining facility
- ▶ 200,000 square foot Gas & Oil facility
- ▶ 120,00 square foot Integration facility

▶ National Locations:

- ▶ 200,000 square foot Gas & Oil Southwest facility, Sulphur Springs, TX
- ▶ Atlantic Welders Petroleum services Center Baltimore, MD



JWF Iron St. Campus with adjacent Test Track



Machining Facility

JWF has over 25 CNC machine centers



Gas & Oil Manufacturing Facility



JWF launched ETC in 2011 with its own product lines

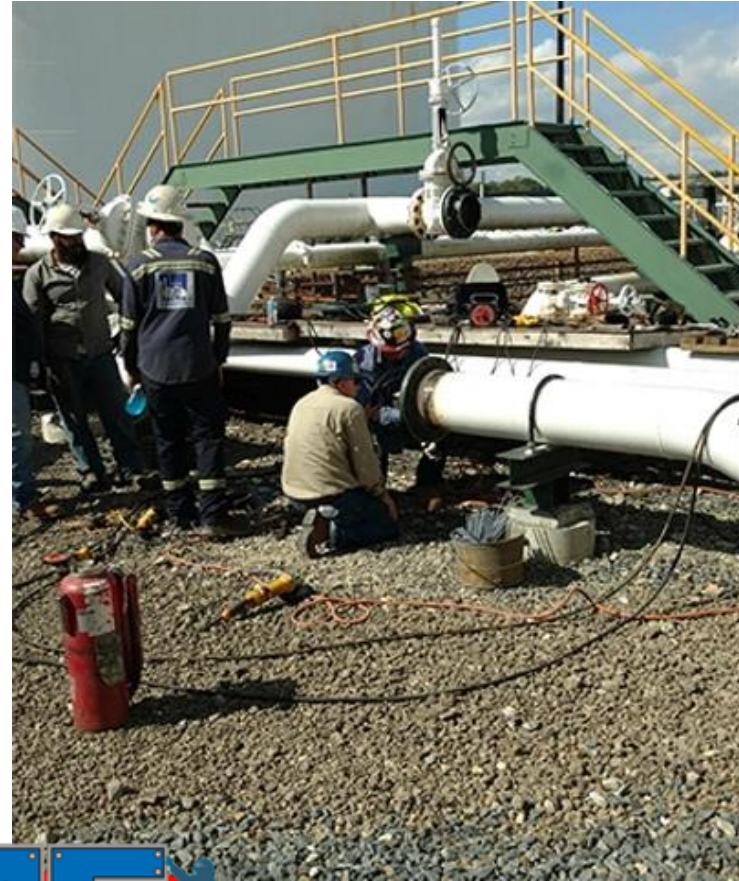
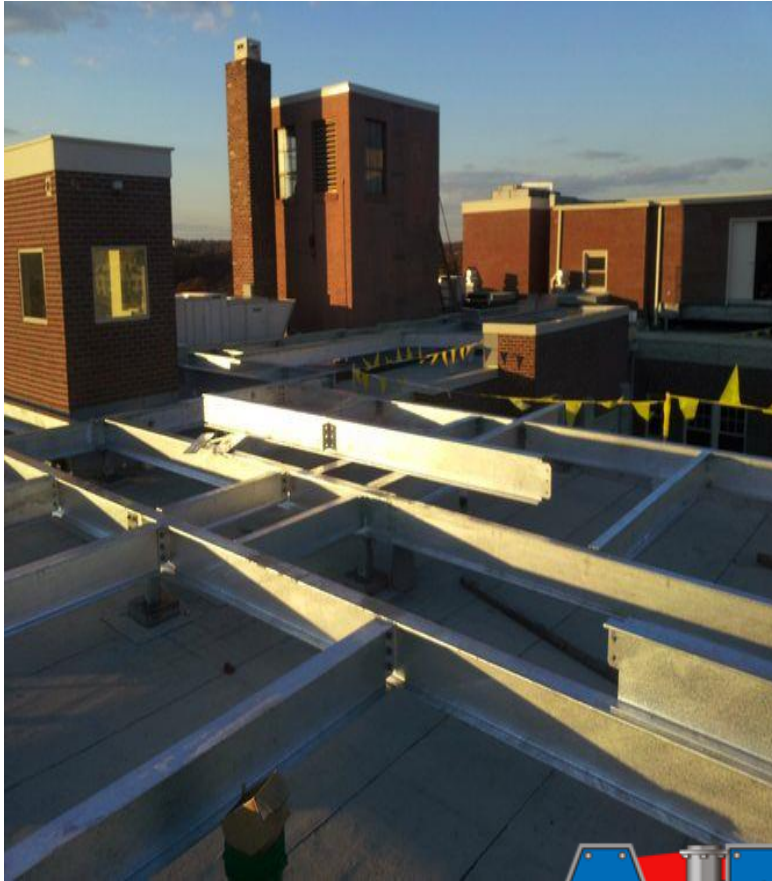


Vehicle Integration Center

JWF has a dedicated vehicle and product integration facility



Atlantic Welders – Baltimore, MD



ETC - Sulphur Springs, TX



\$10M Investment in New Technology

- ▶ **Mitsubishi 4020 RX-F 8.0KW EDM Laser**, capable of cutting up to 5500 inches per minute utilizing a 16 tier pallet system, producing more while minimizing the cost of operation.
- ▶ **BLM Lasertube LT8.10 Fiber** has a 3D measuring system for accurate cutting of all metal tube and pipe up to 6 inches in diameter.
- ▶ **Lincoln 55 Dual Arm Robotic Weld** with two Fanuc 710 arms with a 20 ft. reach as well as 40 ft. travel for large products
- ▶ **Lincoln Robotic Welder**, single 710 Fanuc arm with a 12 ft. reach and with laser tracking
- ▶ **SW-XERP-B-SD-16-50-SB Powder Coat Paint System** is 20 ft. high, 40 ft. long, and 20 ft. wide



Laser and Bending Capabilities

1,000 Ton Brake Press: +\$1m investment in 2012 to meet large capacity forming requirements +\$3M in new Fiber and Tube lasers.

Existing Equipment:

- ▶ **4020 RX-F 8.0KW Fiber Laser** capable of cutting up to 5,500 inches per minute
- ▶ **ADIGE Lasertube LT8.10 Fiber** has a 3D measuring system for accurate cutting of all metal tube and pipe up to 6 inches.
- ▶ 5, CNC Brake Presses
- ▶ CNC tube bender



Welding Capability



- ▶ 195 Calibrated Welding Machines
- ▶ 16 – Single and Dual-Arm Robotic Welding Cells
- ▶ Over 160 AWS certified welders (steel, stainless, armor, aluminum)
- ▶ In House Welding Training Center



Machining Capabilities (Over 25 CNC Machining Centers)

In 2012, JWF invested \$5 Million to upgrade our large machining capabilities by purchasing an Okuma Double Column Machine Center

In 2017, we bought a G&L 6 ft. x 8 ft. x20 ft. Horizontal Mill

In 2019, we installed a VTEC, 20 ft. x 15 ft. x 7 ft. Vertical Bridge Mill



Painting Capabilities including CARC

JWF invested \$2.2m to increase blast/paint envelope size and capacity
Also boasts one of the largest powder non-dedicated coating line east of the Mississippi.



Defense



Serving DoD Direct and Tier-one defense contractors since 2002

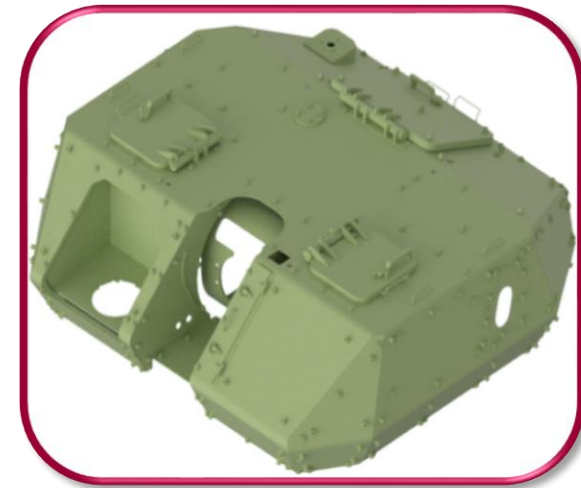
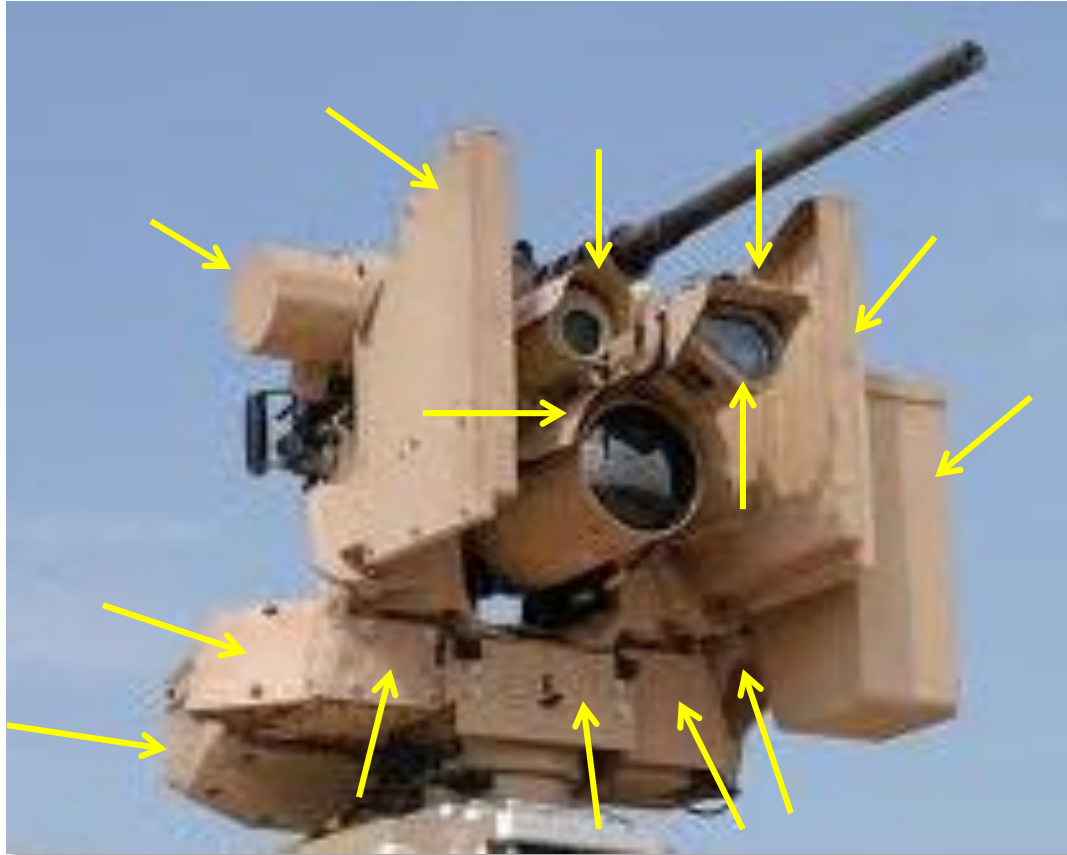


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CMC Missile Service Units



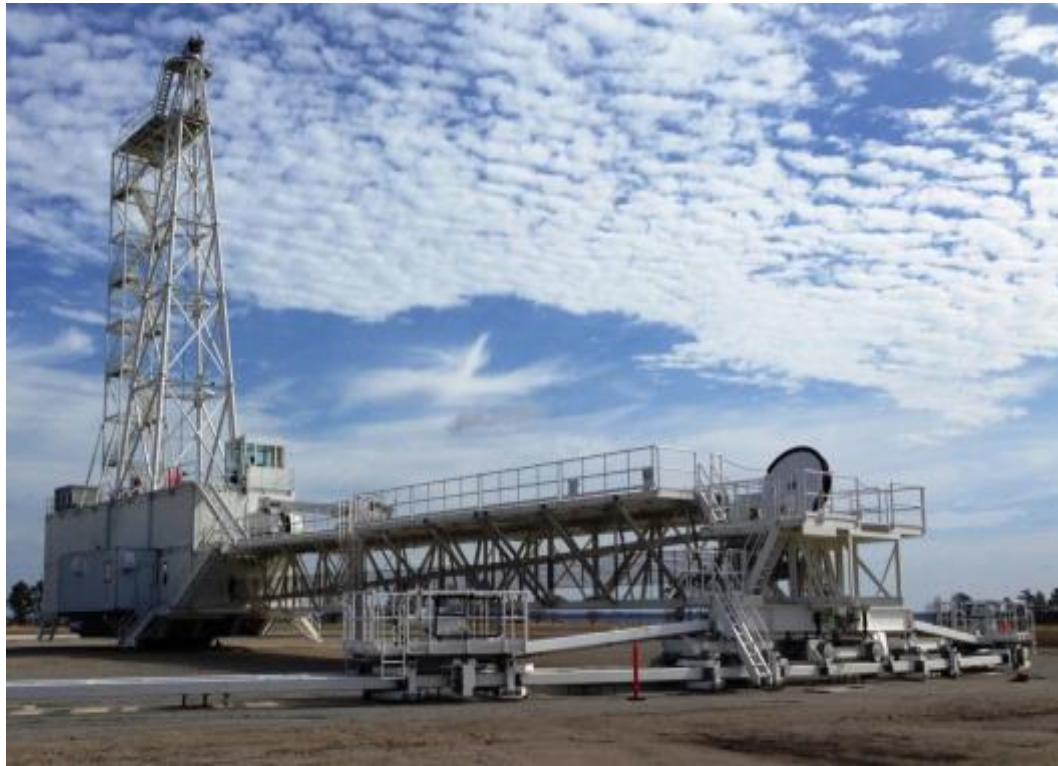
Ballistic Protection Kits & Remote Weapon Station Hardware



Radar Platforms



Mooring Stations



EMI Cabinets



EMI Cabinets



JWF Defense's History Supporting Tactical Wheeled Vehicle Programs

- ▶ SOCOM GMV 1.1 Chassis, armor kit, and body panel fab kit supplier, secondary vehicle integrator
- ▶ Up-Armoring of 245 HMMWV's for Naval Special Warfare and MARSOC: 2006-2008
- ▶ Three Programs involving the "Common Vehicle" based on British HMT SupaCat design:
 - ▶ **Conversion of 5 USMC Light Weight Prime Mover vehicles (LWPM) into vehicle for SAR Missions: 2009**
 - ▶ **Up-Armoring of 13 MK 1 Vehicles: 2010**
 - ▶ **Full Assembly and Integration of 12 MK 2 Vehicles: 2010**



Vehicle Integration – GMV 1.1



<https://www.youtube.com/watch?v=idiVWak-vOVM>



General Dynamics Ordnance & Tactical Systems - Flyer Gen III GMV 1.1 Advanced LSV - Shortcut.Ink



HMMWV Up-Armor for WARCOM & MARSOC



Armor installation Line



Conversion of LWPM



Up-Armoring of MK 1



Assembly and Integration of MK 2



MK 1 & MK2 – Full House



Vehicle Armored Cabs

- ▶ JWF is partnered with BAE Systems and LM MFC to fabricate the HIMARS ICP cab
- ▶ JWF is partnered with Mack Defense to fabricate the HDT (Heavy-duty Dump Truck) armored cab



Specialty Equipment



Vehicle testing

JWFDS has an onsite vehicle test course



Commercial



Supplying OEMS with Quality Fabrications
Nationally and Internationally



Construction Equipment

- ▶ JWF is partnered with JLG Industries to fabricate the LRT (Large Rough Terrain) scissor lift hardware kit.



Mobile Platforms

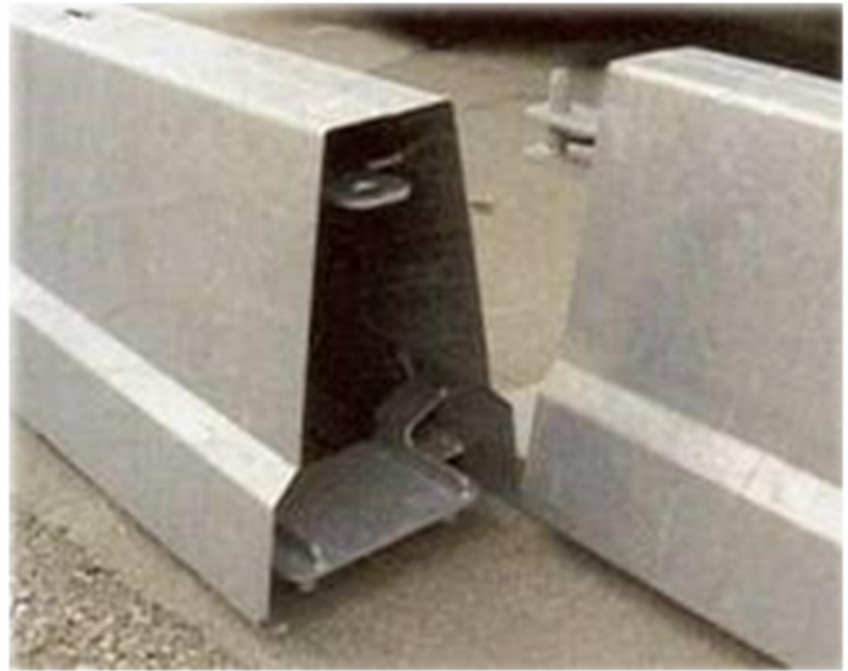
- ▶ JWF provides integrated mobile platform manufacturing solutions for logistics companies.



Automotive tanks



Road Barriers



Oil & Gas Industry



A rapid-response fabricator of natural gas power plant components and gas processing equipment



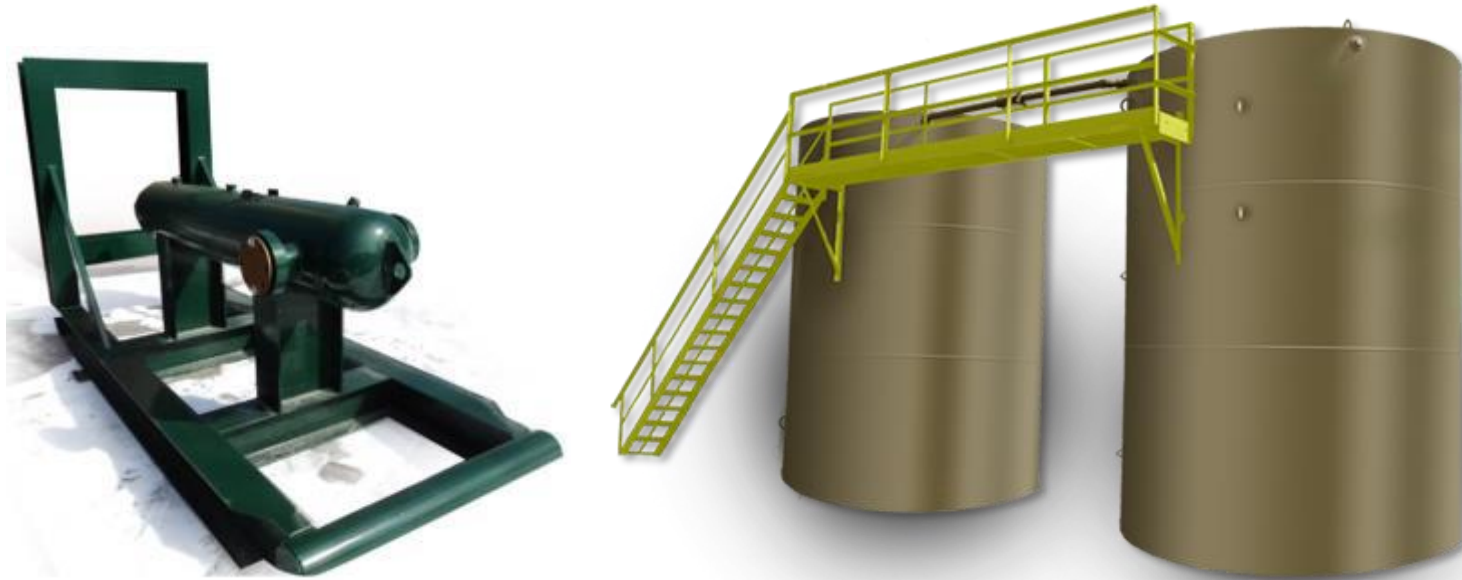
Onsite Storage Solutions



API Tank Manufacturing and Site Installation



Wellhead Equipment



ETC is ASME and API 12F Certified. Each tank is fabricated in accordance with the latest edition of API 12F specifications. Available in 3/16" and 1/4" steel plate construction. A variety of tank sizes, interior linings, exterior coatings, and customer modifications are available. We also offer walkways, crossovers, and stairways to complete your project.



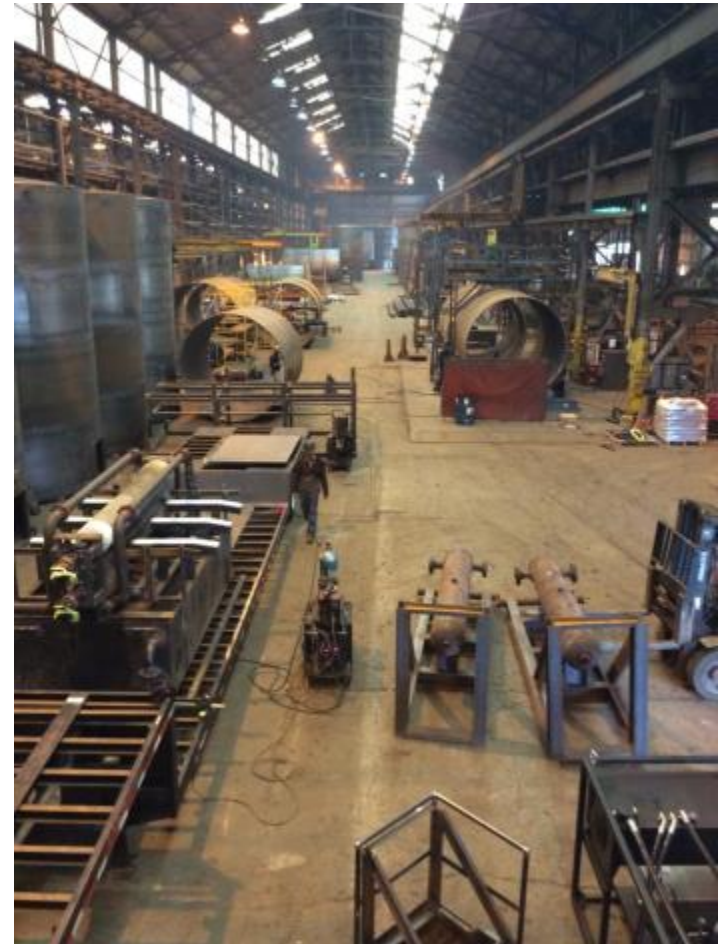
ASME Large Tank Facility



Hydroelectric



PowerGen Solutions



JWF Links and POC

Please view our company video at the link below:

<http://www.jwfds.com>

Please view our commercial capabilities at the links below:

<http://www.jwfi.com>

<http://www.etctank.com>

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