



Ceramic Welding Specialists

www.fusetech.com

Fuse Tech is a full-service, long-term solutions provider, delivering turnkey furnace maintenance, service and repair solutions engineered to your precise needs.

Our industrial furnace services help reduce costs and increase productivity, resulting in extended savings for your business.

We will partner with you to maintain the most efficient working environment possible, helping your company strive to exceed industry standards.



Services

Hot Face Ceramic Welding

Cold Face Ceramic Welding

Cleaning: Port & Checker, Stacks, Flue

Periscope Furnace Inspection

Bottom Pours

Hot Repairs

Overcoating

Diamond Chainsaw

Drilling

Burner Block Replacement

Cold Repairs

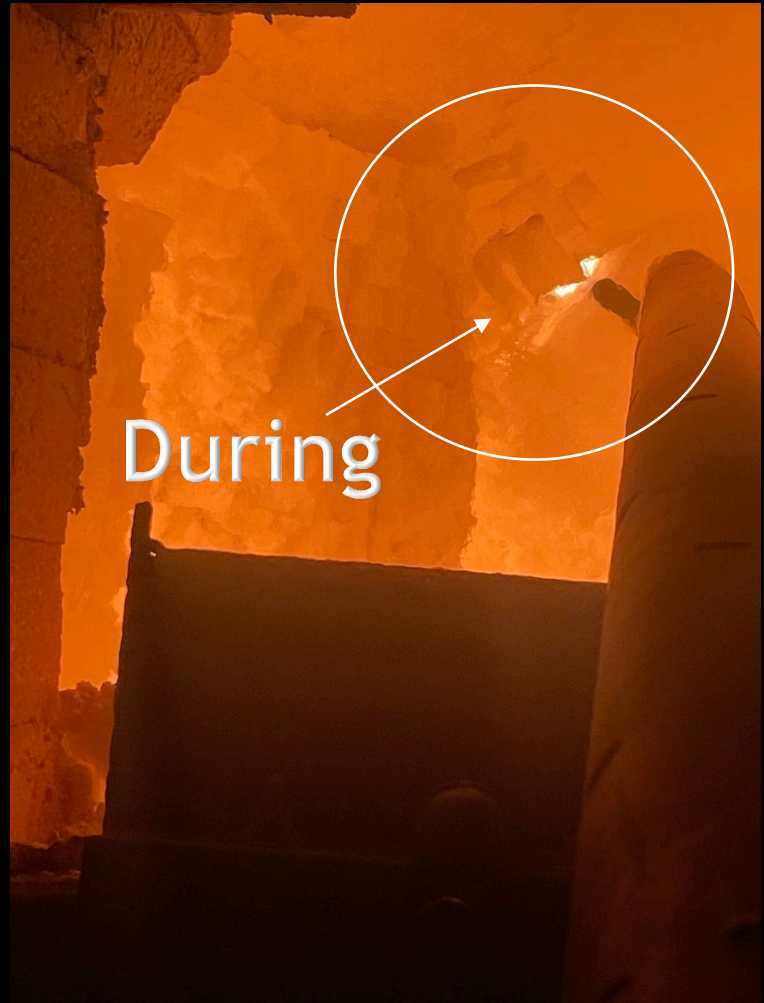
Rebuilds: Refurbishment & Replacement

Before



Ceramic welding is a proven method for making hot repairs of industrial furnaces at operating temperatures.

During



After



Because ceramic welding is a hot repair method, furnace repair work can be conducted while the furnace is hot - there is no need to cool down the surface nor shut down the furnace. The ability to perform this process during normal furnace operation is a key benefit to our customers as it helps to eliminate the potential loss of production.

Regenerator Port Arch

Ceramic Welding

Fuse Tech provides two types of ceramic welding for industrial glass furnaces - both hot face welding and cold face welding.

Hot face welding is performed inside the furnace for the repair of damaged walls.

Cold face welding is used for the repair of material outside the furnace.



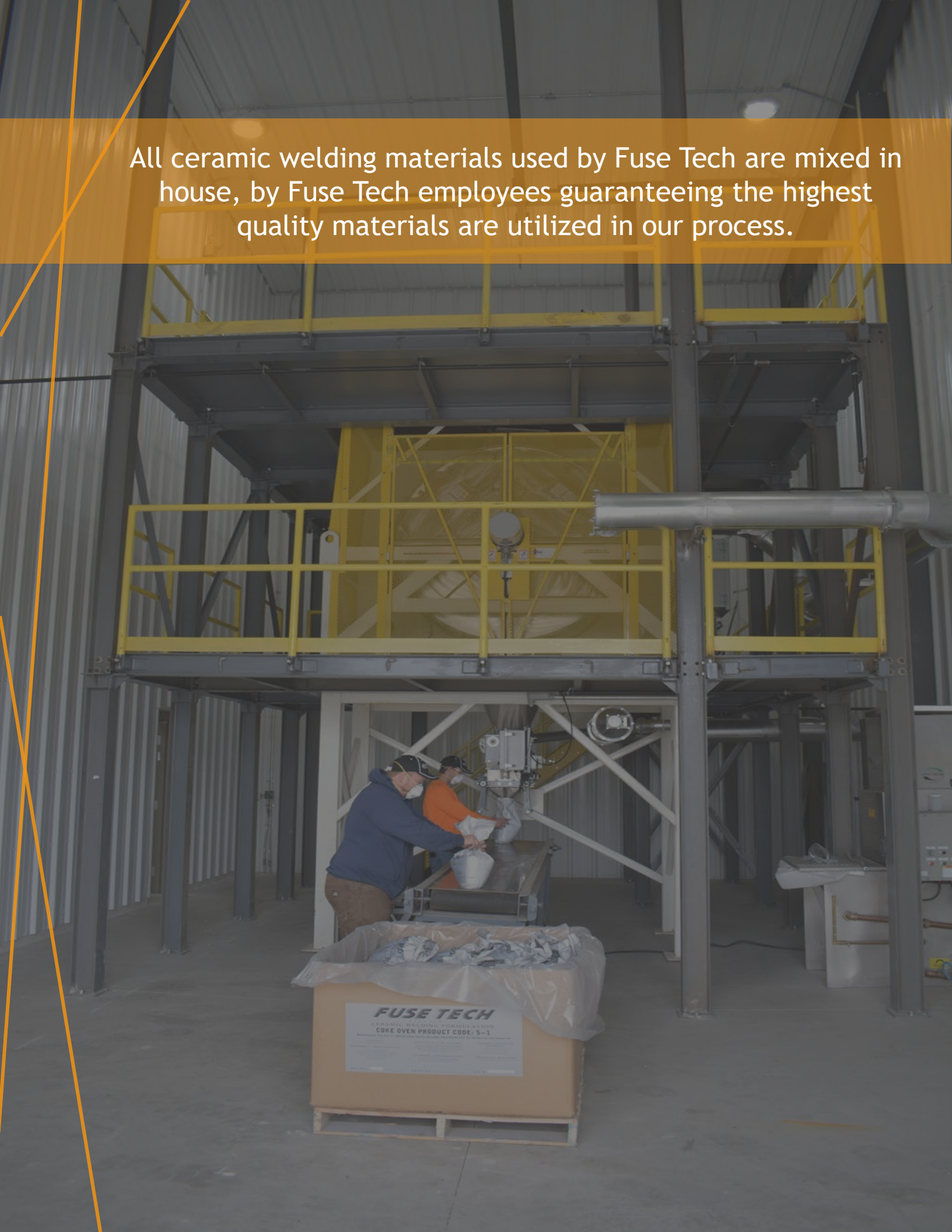
Regenerator Target Wall





Hot Face Ceramic Welding
Breast Wall Tuck Line

All ceramic welding materials used by Fuse Tech are mixed in house, by Fuse Tech employees guaranteeing the highest quality materials are utilized in our process.





On-Site Mixing, Testing & Storage Facility





Ceramic Welding Materials & Compositions

HWC-AL-1	HIGH ALUMINA BASED MATERIAL <i>Primarily used in the repair of cement kiln nose rings, rider arches and furnace stacks.</i>
HWC-AL-2	MIXED BLEND, HIGH ALUMINA & FUSED SILICA MATERIAL <i>Primarily used in the repair for glass furnaces.</i>
HWC-AZS	BONDED AZS BASED MATERIAL <i>Primarily used in the repair of glass furnaces.</i>
HWC-AZS-2	MIXED BLEND, BONDED AZS & FUSED SILICA MATERIAL <i>Primarily used in the repair of glass furnaces.</i>
HWC-S-1	CRYSTALLINE SILICA BASED MATERIAL <i>Primarily used in the repair of coke ovens.</i>
HWC-S-2	HIGH PURITY FUSED SILICA BASED MATERIAL <i>Primarily used in the repair of glass furnaces.</i>
HWC-FC-1	FIRE CLAY BASED MATERIAL <i>Primarily used in the repair of coke oven.</i>

Cold Face Welding
Furnace Tuck Line





Ceramic Welding
Furnace Stack



Before



During



After

Port Cleaning

Cleaning

Keeping your furnace clean and free of debris are some of the most important preventative maintenance steps you can invest in to protect and preserve the life of your furnace.





Checker Cleaning

Port & Checker Cleaning

Debris or a clogged furnace can have a significant detrimental impact on furnace efficiency. With blockages, additional energy from the burner is required to achieve optimal internal furnace temperatures. Furnace performance can also be affected by the reduction of available exhaust cross air flow therefore causing higher furnace pressure. Our proven method for port & checker cleaning uses a water-cooled lance that reaches through the regenerator target wall.



Due to the extreme pressure and thermal shock of the water, debris comes out of the port in small pieces, which can fall through the checker pack to be removed below the rider arches. This process is only done on the exhaust portion of the reversing cycle to assure that all the debris goes toward the regenerator and does not contaminate the glass bath.



Cleaning Furnace Flue



Before



During



After

Periscope Furnace Inspection, Camera Welding & Cleaning



Camera Welding
Crown Expansion
Joint

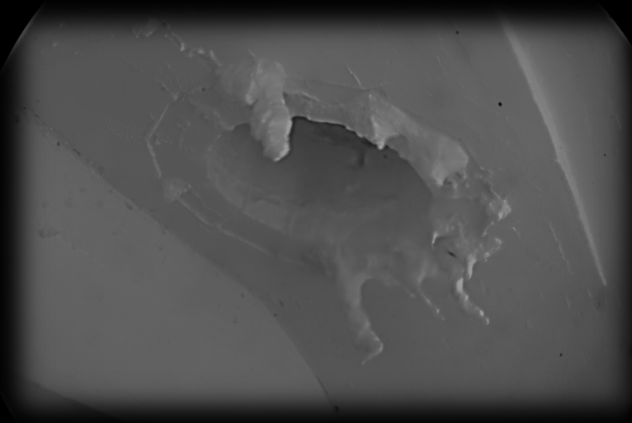




High-Temperature Imaging System & Surveying



Using a water-cooled periscope our high-temperature imaging system provides you with valuable insight into what is going on in your kiln or furnace, enabling you to view areas or actions that may not be visible through normal line of sight.



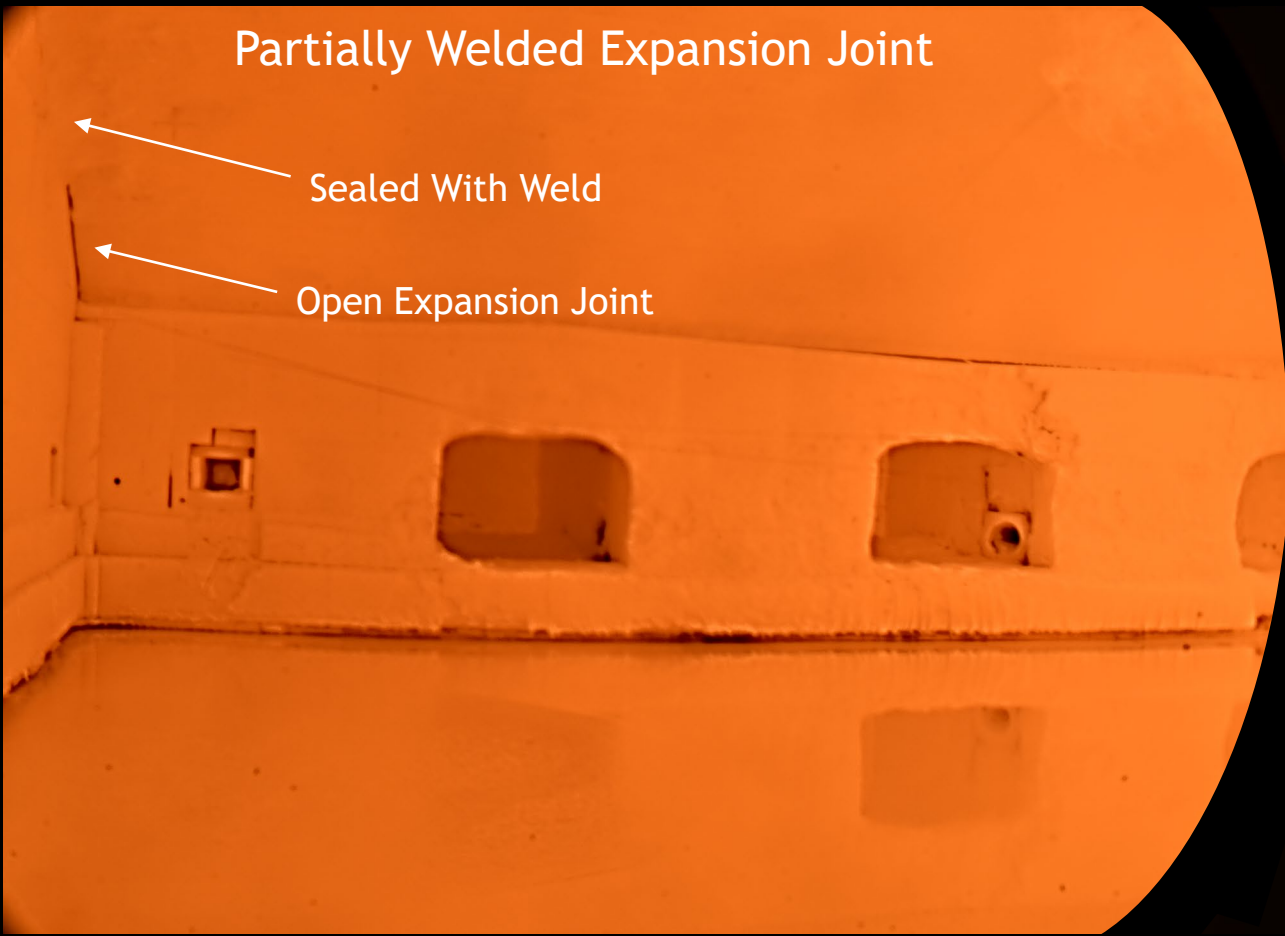
High definition, raw and refined images, as well as Power Point presentations can be provided to aid in describing your furnace conditions along with the need and method of repair if necessary.



Partially Welded Expansion Joint

Sealed With Weld

Open Expansion Joint



High-
Temperature
Imaging



Our High Temperature Imaging System permits before and after pictures to document furnace changes.



Deteriorated tuck line before and after ceramic welding was conducted.



Furnace Repair & Maintenance

Bottom Pours

The furnace floor and forehearth, due to deterioration of refractory; can become one of the most strained areas of a glass furnace. Constant movement of molten glass over time causes depth changes in the furnace bottom.

Our process of applying targeted areas with repair material will reinforce the weakened areas while your furnace is still at operating temperature.



Fuse Tech has the capability to cut through refractory walls and crowns while the production unit is in operation.

This service is used to provide access entry points for Fuse Tech's Ceramic Welding Service as well as to provide additional openings in commercial furnaces for peepholes, oxy fuel conversions, drain or tap out openings, and expansion joints where required.

Not only do we provide our own access openings, but we also employ masons with many years of quality experience to brick in and seal the openings when we are finished with repairs inside the industrial furnace.



Bottom Pours

- Furnace
- Forehearth
- Port Pans

Hot Repairs

- Overcoating
- Diamond Chainsaw
- Drilling
- Burner Block Replacement

Cold Repairs

- Rebuilds
- Refurbishment
- Replacement

Hot Repairs

Glass furnaces are required over a long period of time to produce quality glass at the most efficient rate possible. Extending and maximizing the life of an industrial glass furnace is a top priority which can be challenging when keeping costs low and efficiency high. When replacements and cold refractory repair shutdowns are not an option, hot refractory repair is an ideal answer. Fuse Tech provides high quality, turnkey solutions for a variety of hot refractory repair needs, including sidewall, superstructure, crown and regenerator capabilities.

Cold Repairs

When damage is severe and a more in-depth repair or redesign is required, cold refractory repair is the preferred option. This requires a controlled cool down or complete shutdown and emptying of the industrial furnace to make the needed replacements and repairs. Due to the production stoppage, it is critical to have an experienced team to complete this process as quickly as possible, without compromising quality or safety protocols. Fuse Tech offers a complete solution from assessment to completion, keeping the suspension of production as short as possible. Our end result will be a more efficient commercial furnace, maximizing long-term production at the lowest cost possible.

★★★★★
CELEBRATING OVER
30 YEARS
OF EXCELLENCE



Founded in 1993, Fuse Tech offers over 30 years of operating experience and customer satisfaction in both glass furnaces and coke ovens, as well as 150+ years of combined employee experience in the specialized craft of ceramic welding and refractory repair.

The ability, adaptability, and experience of these employees have been major factors behind our past achievements and guarantees for our future success.

Safety is high priority within our organization. We continually train our employees, and upgrade and monitor our safety program. Up until 2008 Fuse Tech was only active in the USA. Fuse Tech is now International and offers ceramic welding services worldwide.



Headquarters / Warehouse

546 N. Main St.
Cadiz, OH 43907 USA

For North America, Central America;
including Trinidad/Tobago:



Headquarters / Warehouse

*546 N. Main St.
Cadiz, OH 43907 USA*

Warehouse Mexico City

*Francisco Javier Mina Mz. 201, Lt. 9
Margarita Maza de Juárez
Atizapán de Zaragoza
CP 52926, Estado de México, MEXICO*

Contact

E-Brochure
(English / Spanish)



Office: US (+1) 740-942-3565
Fax: US (+1) 740-942-1726

Email Inquiries: info@fusetech.com
Accounting: invoices@fusetech.com
Web: www.fusetech.com

For all other countries:

Fuse Tech Intl. GmbH
Stoltestr. 23
97816 Lohr am Main, Germany

Email: info@fuse-int.com
Web: www.fuse-int.com