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# ON-SITE HEAT TREATING SERVICES: PRESSURE VESSELS



*“The Industry Leader in Heat Treatment  
of Pressure Vessels and Refractory Cures  
with Direct Combustion Gas Fire”*

**GULF COAST  
COMBUSTION**  
SERVICES, LLC

# GCC: The Industry Leader in Pre/Post Weld Heat Treatment of Pressure Vessels, Tanks and Towers with Direct Combustion Gas Fire

Established in 2013 in Houston, Texas, Gulf Coast Combustion (GCC) has heat treated more pressure vessels on-site per year with direct combustion gas fire than any other mobile heat treating company.

Many companies are looking for new ways to cut down on costs while maintaining a high quality of service.

We strive to generate the most competitive bid by providing an execution plan that offers the most productivity. Our customers are often impressed with our ability to cut down on lead time.

GCC specializes in combustion heat treating, primarily the on-site stress relieving of Pressure Vessels.

With GCC's management team and highly trained Combustion Technicians, we pride ourselves in being the fastest and safest Vessel Heat Treating company in the United States. We work meticulously with each customer to ensure that every vessel is completed accurately and to full satisfaction. Our on-site services are used on vessels, tanks and towers from 10' long to over 150' long, with any diameter and wall thickness.



GCC executing PWHT on a 70' Long x 8' ID x 2.5" Thick, over 110,000 lb. vessel.

## Benefits of GCC's On-Site Stress Relieving of Vessels:

### 1. Cost:

Larger Vessels, even those close to industrial furnaces, are extremely costly to transport from point A to B, and back again to its original destination. In most situations, we can save customers significantly on their total heat treatment costs by coming on-site for direct gas fire. PWHT on two or more vessels at a time will keep total costs down as well. Not only does that eliminate transportation costs, but you have the benefit of our team

already being on-site, set up and ready to go for the next one without additional mobilization and labor costs. Multiple vessels at a time allow us to further reduce your total spending.

### 2. Time-saving:

We understand that timing is critical. We are in and out in most cases within 72 hours or less per vessel from start to

finish. Transportation and furnacing can take longer than expected with travel delays and a back-logged furnace. When you schedule our team, we arrive on time and get the job done when and where you need it, across the United States.

### 3. Quality Control:

Ever worry about the journey your vessel makes on the way to the furnace, or what happens to it once it gets there? With our on-site service, you are more in control of the process. Every step of the way you and your team can see the vessel and be assured that everything is going as planned. Our professional combustion technicians are happy to show our customers the heat treatment process and answer any questions.

**Simultaneous PWHT of (2) vessels. While #1 is in process, #2 is prepared for heat treatment.**



## Frequently Asked Questions: Vessels, Tanks and Towers

**Can GCC come to our shop and safely perform the gas fire process on our vessels?**

Yes. Most fabrication shops are built with highly ventilated air for the welding vapor. Our combustion systems are very efficient clean-burning gas equipment. With very little carbon emissions, the primary concern is the placement of the exhaust which can easily be manipulated to a safe location. Additionally, work performed on-site can be monitored 24/7.

**Has GCC ever performed this service on vessels in a refinery with reactive materials in the surrounding areas?**

Yes we have; very successfully. Much more detail goes into the execution plan from both GCC and the customer for safety and communication purposes. With proper planning, the gas fire process can be done very safely inside a refinery and is extremely cost effective compared to other methods.

## Formal/Budgetary Estimations and Customized Procedure Writing:

After an inquiry for services has been made, a trained estimator and our quality control department will work together to find the optimal solution for your heat treating needs. Before this process begins there are a few details of the project we need from you to get started:

### 1. Project Scope

A detailed drawing of a work piece would be sufficient for GCC to determine a procedure structure, but if you are still working on drawings and just want a budgetary estimate for your bid, these are the details we will need for accuracy:

- Material type
- Weight
- Length
- Diameter
- Wall Thickness
- Does the vessel have any parts that would need electric back up? (Repads, flange faces, etc.)



**GCC can help set your vessel in place with proper supports.**

Once these items are determined, GCC can configure an estimate for your bidding/purchasing purposes.

### 2. Location and Resources

The location of service is very important for a more accurate bid and should be included with all estimations. GCC's combustion equipment needs both a dry gas and electrical power to operate. By using resources available in shops or plants (ie. Natural gas and/or 480 Volt 3 phase power) a customer can immediately save up to thousands of dollars. If natural gas and/or electrical power is not available at the location work is to be performed, GCC can accommodate and mobilize gas and power to your location.

### 3. Customized Procedures

GCC has developed its own quality control manual that can be viewed by any customer at any time. When a custom heat treating procedure is being built for a specific heat treatment, GCC identifies it as an execution plan. This execution plan is written in detail the steps taken to heat treat (1) work piece. A copy will be sent to the customer for approval before the start of work. A copy of the procedure will also stay on-site with a GCC shift supervisor to ensure quality control.

The customized procedure will detail: where and how burners will be installed, number of thermocouple (T/C) readings, and placement of thermocouples. The execution plan will include a Quality Control section on how the T/C's are applied to the work piece and where to safely

exhaust. The procedure will also include a heat cycle using ASME code and/or customer specifications for a precise result. We strive to surpass all standards in our industry.



**GCC can design specialty Fire-Tubes for specific jobs. Pictured: Bakeout at 1650 °F for (8) hours on an 800H Tower.**

Call us at (713) 425-3773 or visit our website at [www.gulfcoastcombustion.com](http://www.gulfcoastcombustion.com) to learn what we can do for you. See the back page for additional heat treatment services offered.

**Contact GCC Today for a Solution to Your Heat Treating Needs**

### Sales & Technical Support:

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## Additional Services Offered by Gulf Coast Combustion:

- Coating/Paint Cures
- Consultation on Long and Short Term Projects
- Decontamination of Large Storage Vessels
- Expansions
- Full/Partial Refractory Dry-out
- Furnaced Post-Weld Heat Treatment
- Hardness Testing
- Hydrogen Bake-outs
- Hydrocarbon Bake-out
- Line Thawing
- Localized Post-Weld Heat Treatment
- Low-voltage electrical resistance
- Refractory Cures
- Service at GCC Shop in Spring, TX
- Space Heating
- Temporary and Permanent Furnace Operations
- Welding Pre-heats

*Please contact us at 713-425-3773 for information or quotes on any of the services listed above.*

