

The GRIME

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Newsletter

Ware customizes portable boilers to get customers up and running

Container boilers save companies time and money

One of Ware's newest customers, Altela Inc. is fundamentally changing the way water is purified.

Ware's director of sales, for ease of use and in order to maintain a small footprint for the project.

as a base model for our other sites." Altela currently has two sites in New Mexico and Colorado with plans to add more.



Steve Taylor and Mike Wimberly

Altela takes the simplest of nature's processes for purifying water (making rain) and through revolutionary technology, re-creates that process using readily available materials and low energy compared with conventional thermal distillation.

Altela turned to Ware to develop the custom container portable boiler room needed for their process. The company needed Ware to run the steam headers out the front and have all the piping going in the same direction. This set-up was needed, according to Steve Taylor,

The portable boiler room allows for a company to have a fully operational boiler room without having to invest time and money in a building. "This type of container boiler is ideal for a company that has a short-term process that needs to be replicated by relocating the portable boiler to different sites," said Taylor.

"We were very happy with Ware and had no problems," said Michael Wimberly, process manager for Altela Inc. "In fact, we will be using this container unit, built by Ware,

Ware also installed a Limpsfield Burner for its ability to have the settings programmed exactly the same for each site, its overall efficiency and ease of use. "Altela should see a return on investment in less than a year," said Taylor.

The portable system allows Altela to treat the most highly-challenged water in almost any application. And it meets or exceeds even the strictest U.S. government environmental protection (EPA) standards for discharge of the purified water.

Other Applications

The natural gas industry has also found portable boiler rooms to be highly effective in their operations. The process of gas fracking injects chemicals and steam into underground rock to burst the rocks and create natural gas. The process stirs up salt and minerals and creates polluted water that then has to be dumped.

A company in Pennsylvania has employed Ware's portable boilers at the locations where they are conducting the process of gas fracking. The steam from the boilers enables them to purify the water before it is dumped allowing the company to avoid polluting ground water.

Another company in Nicaragua is using a portable boiler room to heat

SUFFICIENT AIR SUPPLY IS ESSENTIAL FOR PROPER BOILER OPERATION

The three elements required for combustion to take place are: fuel, heat (ignition) and air. The need for fuel and ignition is obvious. The requirement for air is less obvious and therefore is often overlooked. If one of these three elements is missing, the combustion process stops.

An adequate combustion air supply is a requirement to minimize the possibility of a furnace explosion.

Installing permanent air intakes is essential to the proper operation of a boiler. When the combustion air supply is closed off, the fire starts to smoke as the air supply is extinguished. Incomplete combustion occurs and carbon monoxide is generated. In many cases, before the flame detection system can close the fuel safety shutoff valve(s), the fire goes out. The build-up of fuel is re-ignited as oxygen leaks in through cracks and crevices; a furnace explosion can occur with catastrophic effects on personnel and property.

Two openings leading directly to the outside are required when boilers are installed in a confined space such as a boiler room. One opening should be located high on the outside wall and the second opening should be

located close to the floor. If the boiler room is located partially or entirely below grade, a duct should be installed from the lower opening ending at a point equal to the depth of the duct above the floor. An outside window well or area way can also be utilized.

The size of the openings depends on the total fuel input rate of all fuel-burning devices located in the boiler room. The Btu rate per hour of all boilers at maximum burning rate, plus other devices such as water heaters, are used to size air openings and their associated duct work.

The outside air openings may be protected by louvers or grills, but the blocking effect of the louver or grill must be considered, and sizing must be done based on its free area. If dampers are fitted to these intakes for energy conservation or other reasons, they must be interlocked so the burners cannot be fired unless the dampers are in the open position.

The use of exhaust fans in boiler rooms is not recommended, especially if the use of the fan places the boiler room under negative pressure. The upper opening provides a means of ventilating the boiler room.

If there was only one air intake opening, heat build-up in the boiler room would reduce the density of the air and because the air is lighter than the cold outside air, it would escape through the single opening. This escape would cause a negative pressure condition which would cause a down draft in the chimney and breaching adversely affecting combustion. The use of two openings with one located near the floor avoids this situation.

Most boiler and burner manufacturers have procedures for sizing combustion air supplies included in their installation instructions. These instructions can be followed; however, caution is required as local codes may supersede the manufacturer's instructions.

Specially engineered combustion air intake systems can be used if they are acceptable to the authority having jurisdiction.

Information for this tip was taken from The National Board of Boiler and Pressure Vessel Inspectors. More information can be found at www.nationalboard.org.





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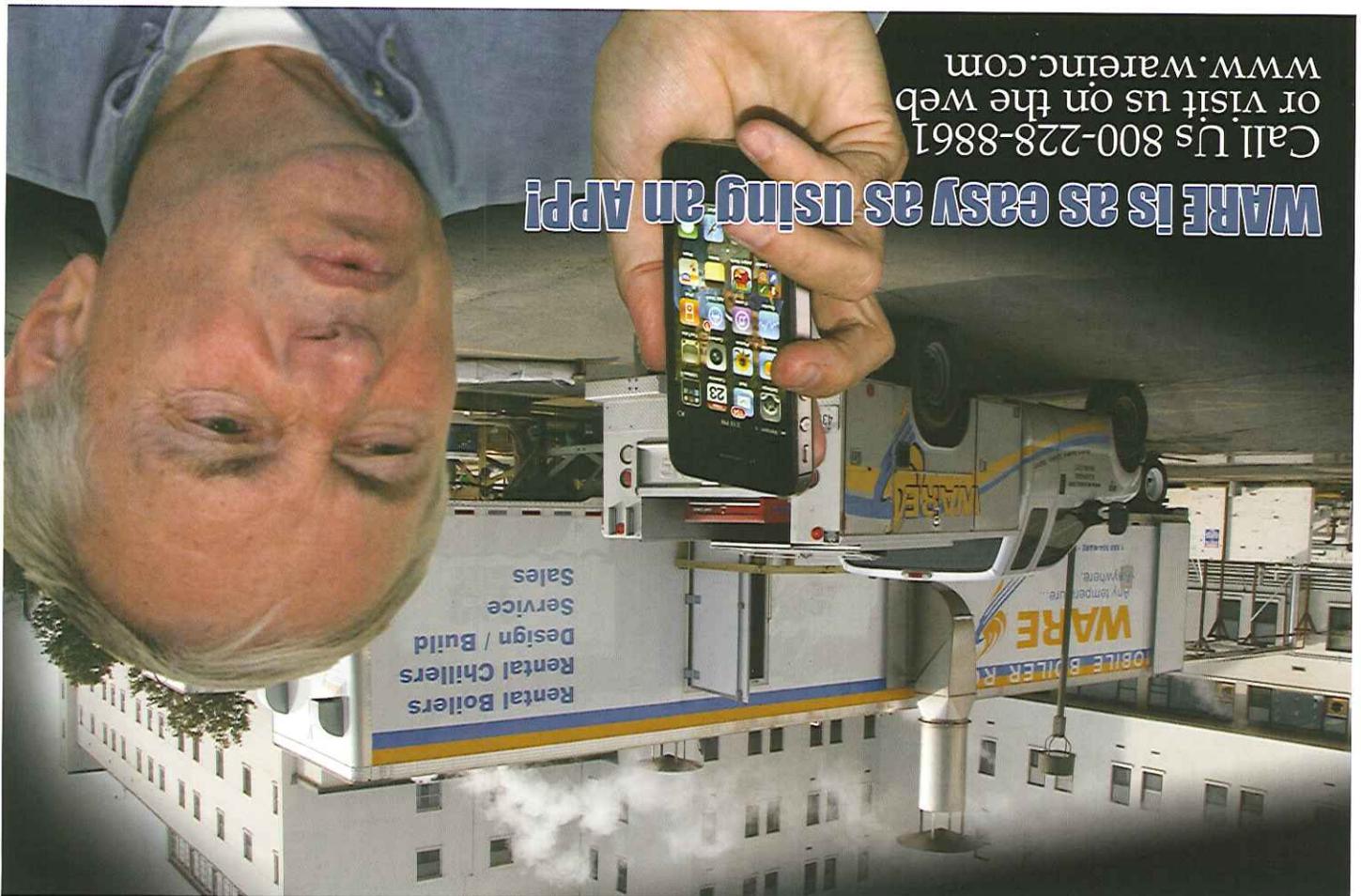


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“The size and design of the container boilers can be changed and customized to the individual needs of the customer and is only limited by the customer’s requirements, said Taylor.”

The portable container boilers can be up and running quickly and can replace a full sized boiler. Building codes and permits take time and can delay the process of installing a boiler room in a building, but the same permits are not needed for a portable boiler. Utilizing these container boilers by Ware can save a company money and time.

