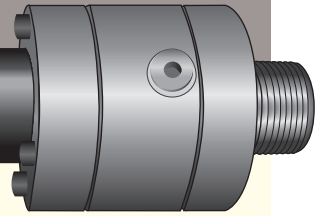




## CASE STUDY

### DoubleTrac® piping for Generator Applications



- Saves Time
- Saves Money
- Increases Installation Options

**Product:**

**DoubleTrac®** Stainless Steel Double Containment Fuel Piping for UL1369 Listed Aboveground Fuel Piping for Data Centers Backup Power Generators

**Location:** Milwaukee, WI

The need for data centers with backup power generation is increasing. Many older vintage commercial buildings that were once all office space are now being retrofitted as Data Centers.

Joe Barker of Petroleum Equipment Inc., located at 3950 W Douglas Ave, Milwaukee, WI 53209, was awarded the contract to install the fuel system for two new generators with the ability to add a third generator at a retrofitted data center in downtown Milwaukee. This older vintage building is located in downtown Milwaukee, WI 53202.

Petroleum Equipment, Inc. worked with an engineering firm, AEI (Affiliated Engineers, Inc.), located at 5802 Research Park Blvd, Madison, WI 53719, to change the original specification from welded steel over steel piping to the DoubleTrac piping system.

A huge benefit of using DoubleTrac piping is the ability to purchase DoubleTrac piping in continuous long lengths that eliminate all the welded joints that are required for a rigid steel over-steel system. Having the ability to run a continuous section of fuel piping with no intermediate connections from point A to point B results in a 90% reduction in potential leak points and fewer installation hours.

The fuel system for the new generators consists of a built-in place aboveground storage tank in the basement inside a newly constructed containment basin, three sections of 2" DoubleTrac piping running through the basement wall ceiling and, then up through the 1st floor, through the 1st-floor ceiling, into the retrofitted 2nd-floor mechanical room, where the new generators will be installed. There is also a Simplex Fill Station for the basement aboveground storage tank at street level that is piped with DoubleTrac piping.

DoubleTrac's piping ability to easily pull throughout the building made the job go well. The technicians could pull the three 2" DoubleTrac piping runs from the basement, through an "S" shaped offset around a column on the 1st floor, up to the 2nd-floor mechanical room in one day. The piping in the mechanical room is supported from the wall and ceiling, out over the generator pads branching out for the two generators with DoubleTrac Tees supported by heavy-duty Unistrut supports.

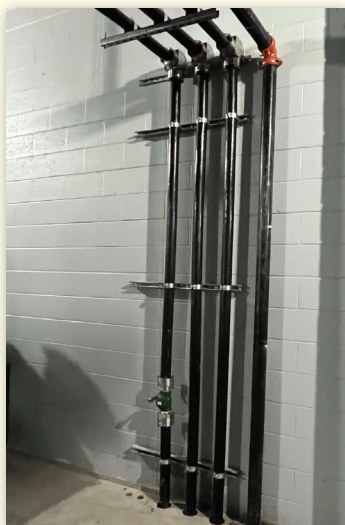
When the generator day tanks are set 2" DoubleTrac piping will be connected to the day tanks, and 1" DoubleTrac piping will connect the day tanks to the generators. The system will have leak detection at the basement AST (Aboveground Storage Tank) and at the generator day tanks.

Joe Barker of Petroleum Equipment Inc. Milwaukee says he will use DoubleTrac piping wherever possible instead of welded steel over steel fuel piping.

*(continued on back)*



First Floor 2" DoubleTrac® piping around column.



2" DoubleTrac® piping entering 2nd floor mechanical room with DoubleTrac® 90°elbows.

## CASE STUDY

### DoubleTrac<sup>®</sup> piping for Generator Applications

#### Features and Benefits of DoubleTrac Piping

*(continued from front)*

The DoubleTrac double containment fuel piping system is optimized for installations in existing building structures. The outer shell is a smooth Nylon 12, which allows DoubleTrac piping to slide easily over and around structures during installation. The outside diameter of the DoubleTrac piping is equivalent to steel piping (NPS), so off-the-shelf pipe hangers and mounts can be used. DoubleTrac piping is available in 1", 1 1/2" and 2" sizes to accommodate most fuel system requirements. It is sold in off-the-shelf reel quantities for quick delivery and can be ordered in custom lengths to accommodate long, continuous runs.

Type 316 stainless steel Tee and 90-degree fittings are available for multi-branch systems or installations requiring bending below DoubleTrac piping minimum bend radius. All DoubleTrac fittings carry interstitial communication internally and are not required to be installed within containment sumps on aboveground applications.

DoubleTrac pipings innovative double wall design includes a primary interior of zero permeation, highly corrosion resistant corrugated 316 stainless steel with an outer EFEP barrier layer bonded to a Nylon 12 protective layer. DoubleTrac piping can be considered a "green product" because the stainless-steel piping has zero permeation, and the EFEP/Nylon 12 outer jacket has nearly zero permeation (.000001%). DoubleTrac piping is a true future fuel piping system and is the best choice for fuel oil, low Sulphur diesel blends, biodiesel, gasoline, and jet fuels.



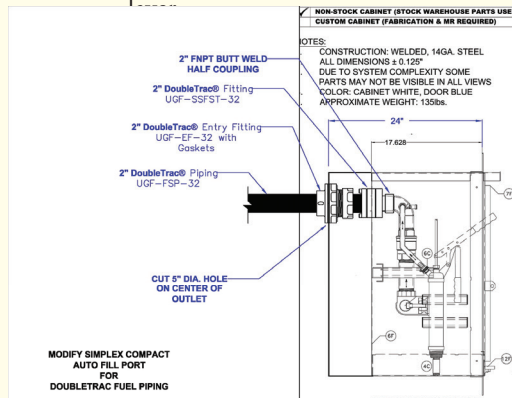
2" DoubleTrac<sup>®</sup> piping and 2" DoubleTrac<sup>®</sup> tees over generator pads



1" DoubleTrac<sup>®</sup> fuel oil supply and 1" DoubleTrac fuel oil return piping from Day Tanks to Generators.



2" DoubleTrac fuel oil fill from Simplex Fill Station



Simplex Fill Station with DoubleTrac<sup>®</sup> Piping and Rigid Entry fitting.

DoubleTrac piping and fittings are UL 971A (for belowground flammable fuels) and UL 1369 listed (for aboveground flammable fuels).

DoubleTrac piping passed a 2-hour Fire test Per UL 1369 listing.

DoubleTrac piping passed General-use Fuels, B100, DEF, Ammonia Hydroxide testing per UL 1369 listing.

DoubleTrac piping has a patented mechanically field attachable fitting that creates a metal-to-metal seal that requires NO O-rings, which have a finite lifespan and can degrade over time.

DoubleTrac piping has a 15 Year Aboveground Limited Warranty and a 30 Year Belowground Limited Warranty.

Omega Flex, Inc. offers a team of in-house engineers dedicated to assisting with piping layouts and answering technical questions about DoubleTrac piping systems. Omega Flex, Inc. offers no-cost training and certification of new installers.

