

# USGasTech Inc

Providing gas-related technologies to the American Gas Industry

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**Line construction by means of  
directional drilling**

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## ➤ Application

With this technique, a new polyethylene pipe can be laid without cutting a ditch along the entire length. All that is needed are an access hole and an end hole, each covering about 10 ft<sup>2</sup> and spaced 300 to 600 ft apart

This technique can also be used to pass under waterways, train tracks, major roads.

The drilling operation is guided with the help of a transmitter on the drilling head which gives its position underground at all times. Thus, it avoids damaging all the obstacles and other underground lines.



Since this technique does not allow installation of a warning grillwork (for fluid recognition when the pavement is dug up again), cartography updates of the network, which specify the depth of the pipe every 10 ft, are imperative.

This technique is suitable for constructing and installing most lines in buried networks.

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## ➤ Principle



Pushed by a drilling machine, a drill string on a drilling head penetrates into the ground, digging a narrow pilot hole (2" in diameter). Once the end hole is reached, the pipe, with a reamer fitted on the front end, is connected to the drill string and then pulled back to the access hole.

Depending on conditions, drilling is facilitated by percussion or the use of a liquid (water or bentonite) to loosen the soil.

## ➤ Characteristics



In laying polyethylene gas mains, a thrust load of 4,000 lb to 33,000 lb is exerted. Laying large-diameter steel pipes can be achieved with much higher performance equipment.

This technique is particularly well suited to laying polyethylene piping up to 6" in diameter rolled on drums.