

USGasTech Inc

Providing gas-related technologies to the American Gas Industry

Repair of transmission pipelines by optimized grinding transmission

➤ **Technological offer :**

Sale of expertise

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➤ **Current development level :**

This repair technique has been recognized as valid by the French administrative agency DRIRE (Directorate Regional for Industry, Research and Environment), and used by a major European gas company.

➤ **Description :**

This technique, using optimized grinding, eliminates damages such as corrosion or scratches on gas transmission pipelines made of steel. With this technique, the wall of the pipe in the vicinity of the damage can be left thinner than the minimum originally specified, while a satisfactory strength is guaranteed. It avoids the replacement of the damaged pipe section and allows significant savings on pipe maintenance costs.

The validation of this technique was based on:

- ✓ a large experimental program with tests on ground pipe sections in service and on a great number of test pipes.
- ✓ theoretical analysis on mechanical performance of the ground sections.

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The theoretical analysis was used to:

- ✓ interpret the tests, and predict the performance of ground sections of pipes that were not tested during the experimental program
- ✓ define the geometry of ground sections, and the safety margins that can be guaranteed.

Two kinds of fault were taken into account: rupture (short-term performance) and fatigue due to pressure variations (long-term performance).

This offer concerns the validation file for this technique, which includes tests results, modeling, conclusions and main stages of the repair procedure on a damaged pipe.

➤ **Advantages :**

- ✓ Repairs are possible even when the pipe is under pressure, and can be performed without interrupting gas transmission.
- ✓ Avoiding removing a pipe section allows savings on pipe maintenance costs

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➤ Applications :

Gas transmission pipelines

➤ Source :

A major European gas company.

➤ Who should take advantage of this offer:

Any gas transmission company in the world (this expertise has already been sold to Tokyo Gas

This technique approximate price is 150,000 \$.

It is to be noticed that using this technique is profitable very quickly: there is no operating loss, no purchase of pipes, etc.