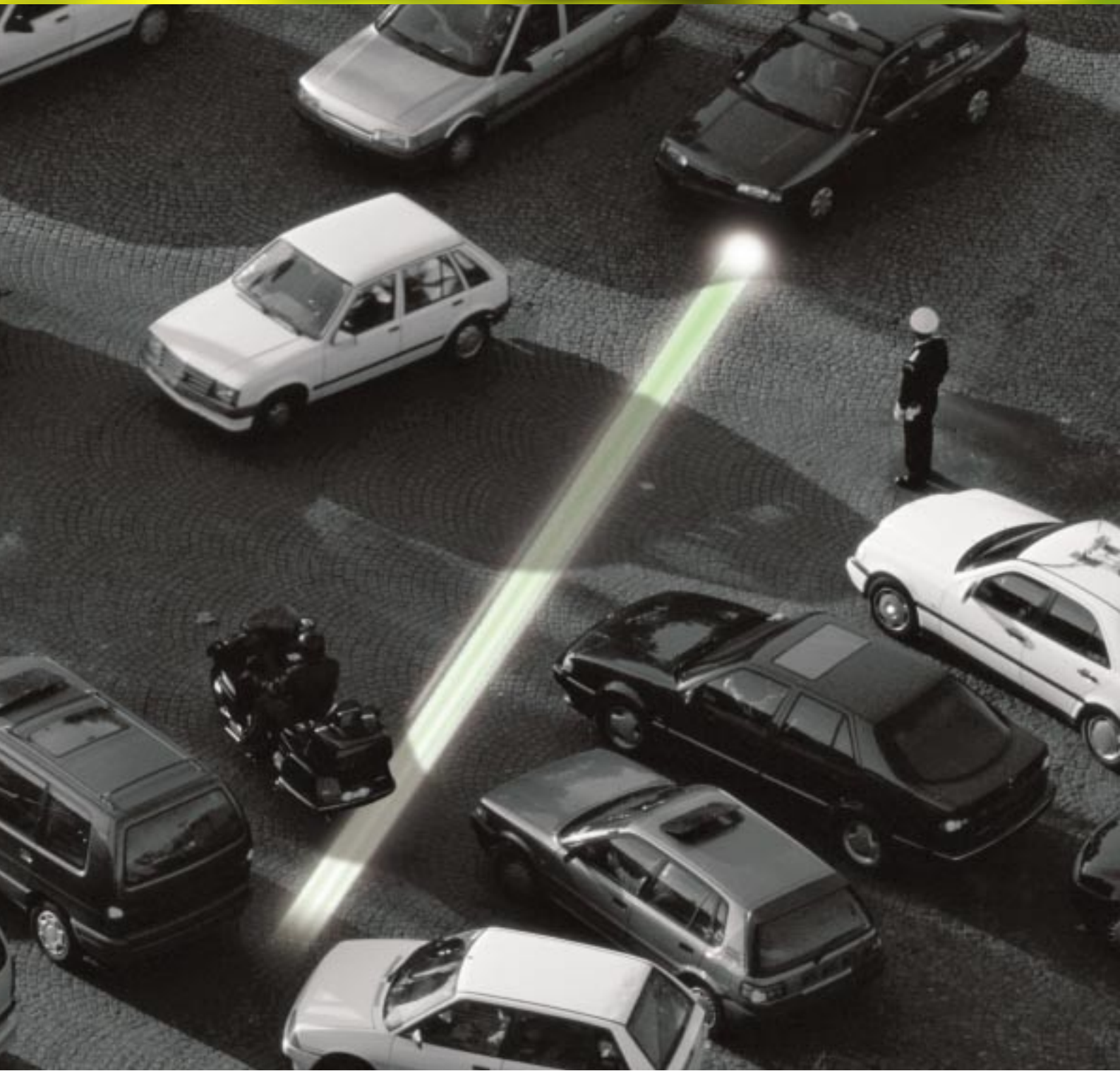


the speed of light systemized



advantage:

environment | productivity | energy

Inpipe installs new pipes during the rush hour

INPIPE AND THE ENVIRONMENT



Shine our light on environmental problems and solve them

It's only when you complicate things that pipe renovation becomes a costly item for the environment. Inpipe™ simplifies the whole process by systemising the speed of light. Using compressed air, we insert a liner into the old pipe from an installation vehicle that contains all the necessary equipment. A UV light train carries out the quickest liner curing process on the market before the lines are cleaned up by a robot. The stretch of pipe is renovated in a working day. **The system also includes** carefully planned routines, quality-assessed production, stringent tests and well-functioning training programmes the world over. We are not the only UV light method on the market, but at the end of the day technical consistency weighs heavily in our favour. **We offer total solutions** for efficient and environmental pipe renovations.



The world cannot cope with more emissions

Whether it's Tokyo or London, a well-functioning pipe system is one of the corner stones of modern society. Stops and leaks must be kept to a minimum because they are an environmental hazard and costly. Unnecessary chemicals are also used to clean them up. When a pipe breaks, the *Inpipe System* is the best course of action.

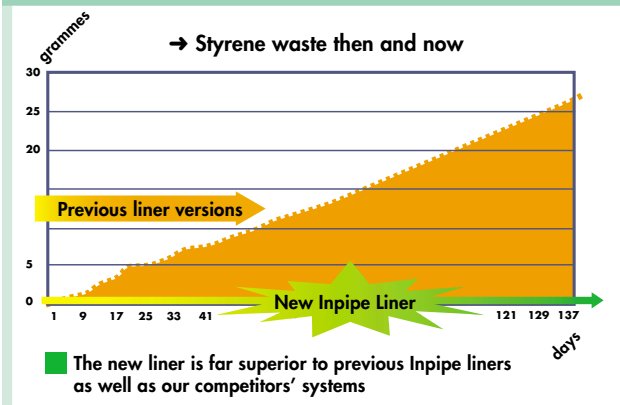
Thanks to pioneering UV light technology, Inpipe is not only far superior to traditional digging it is also the most effective No Dig alternative. Particularly in towns where Inpipe fulfils the central requirements of pipe renovation: Swiftness. So that traffic can move smoothly, for the benefit of both the environment and the economy.

Environmental criminals are costly

All industrialised societies are dependent on chemicals (in Sweden, with a population of nine million, use of chemicals has increased from 7 million tonnes to 250 million tonnes in forty years). This puts great demands on the management of hazardous emissions. One expensive mistake is choosing a method of renovation that risks leakage into our pipe systems. This has serious consequences for wastewater treatment plants where the use of chemicals must radically increase in order to cope.

Pipe renovation is all about letting life go on in the broadest possible sense. The Inpipe method prevents all forms of hazardous discharge. A joint-free, non-corrosive liner is inserted with the help of compressed air and cured using UV light to create a new pipe within the old one. The shortest installation time on the market is the secret behind the efficiency of the system. The price of cleaning up the site is next to nothing. This is important when liability demands for hazardous discharge increase in the future.

Inpipe minimises the risk of using styrene



Styrene is a component used in most No Dig methods. The *Inpipe System* eliminates the risks. The liner is styrene-tight, with an inner and outer protective foil that ensures safe transportation and handling. We have also improved the compressed air method. This means better cooling during installation and paves the way for an advanced UV light train with better output. All in all, the *Inpipe System* gives very low styrene content.

FACTS STYRENE

Styrene is classed as Extremely Hazardous by the environmental authorities. The substance releases an unpleasant odour even at very low concentrates. Exposure can cause coughing, headache, eye irritation and the fumes can have an anaesthetic effect on the central nervous system. Styrene must never end up in drains, soil or surface and ground water.

Never be satisfied with less than the best for the environment

The *Inpipe System* solves concrete problems. Traffic jams, accidents and the environment are expensive items for road traffic costs within the EU. In a town with a million inhabitants like Stockholm, the cost of crowding and delays for vehicles is SEK 3.7 billion a year and for public transport it is 3 billion. The human and environmental costs are not insignificant either. Petrol consumption is 4 times higher in traffic queues, CO² emissions are 3.7 higher and cancer-inducing hydrocarbons are 2.8 higher. In a country like Sweden, air pollutants cause between 300 and 1,000 cases of cancer a year.

In other words, not planning for a functioning traffic network causes problems. This is why we need a system of pipe renovation to suit environmentally sensitive areas.

The quicker the better

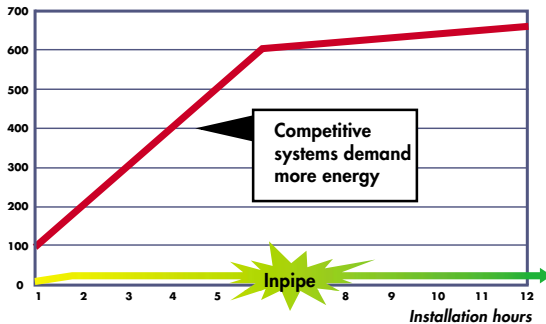
The *Inpipe System* fits into one vehicle, does not stop the traffic and supplies a 100 metre of pipe in half the time needed for No Dig methods that use heat curing. Half the time is extremely valuable for residents, businesses and commuters in any town with dense traffic

The working environment is also an important factor when choosing a method to renovate pipes. This is partly due to the cost of industrial injuries (between SEK 1,660 and 2,410 billion a year in the EU), and partly because they cause such unnecessary suffering. Inpipe offers a better solution here as well. On average, the installer only needs to spend around 5% of installation time in the service access, which is much lower than other systems.



If the liner is recycled (to energy) with the help of an incinerator plant, all that is left is harmless ash without hazardous substances.

Energy consumption in kWh



Renovate 10 miles and save enough energy to heat 190 houses

By saving energy you also save the environment. Inpipe uses less energy throughout the entire installation. Where other methods demand large amounts of energy before the curing process has even begun, Inpipe's UV light system provides full effect from the outset. It also keeps the same low level during curing whereas competitive methods increase energy consumption.

The difference is even more obvious if we compare with traditional excavating. The total energy consumption for an 80-metre stretch of pipe using traditional digging methods is 34,000 kWh. Inpipe uses only 1,500 kWh. If you calculate the cost of a 10,000-metre renovation, the difference corresponds to 190 houses or around 21,000 kWh/year.



the speed of light systemized

Best environmental solution

- No leaking in
- No leaking out
- Not affected by outdoor temperatures
- Energy saving method of installation (*light and air*) with minimum affect on the surroundings
- Accurate instructions for handling the product
- Old pipe systems are reused
- Long service life for the renovated pipe
- No leaky joints
- Order-controlled production with minimum waste

Inpipe is a global solution to a growing problem.

The world is full of leaking pipes. Inpipe's UV curing treatment is used in more than 20 countries in Europe, the Far East, the Middle East and Australia. The *Inpipe System* has undergone continuous development since our first commercial installation way back in 1985. In 1988, we built a new production plant in Vilhelmina in northern Sweden. Today we are part of the OVE ARKIL A/S Group, which gives us a great opportunity to become market leader in even more countries.

No Dig is just the beginning

We say it's better to reuse the existing pipeline by inserting a new pipe. No joints, prolonged durability, no traffic jams and great savings in energy, material and working hours. The No DIG method is the first step towards quicker and simpler pipe renovation.

The speed of light systemised

The next stage is to refine the No DIG method and make it quicker, more environmental and truly energy efficient. Because then we've systemised the speed of light with the help of UV light, patented liners, carefully planned routines, quality-assessed production, stringent tests and well-functioning training programmes the world over. *The technical advantages of the Inpipe System* offer clear benefits for our customers.



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