FREQUENTLY ASKED QUESTIONS (FAQ) AND ANSWERS REGARDING THE HYDRO-GEL PIPELINE CLEANING TECHNOLOGY

What can you do with the Hydro-Gel and with the connecting technology?

The Hydro-Gel and the connected new, hungarian high technology can mainly be used to mechanically clean water-supply systems. Using this new technology it is possibble to complete the pipeline cleaning and system upkeep procedures in a simpler and more economical manner, compared to the already known techniques. A number of other jobs can be achieved with the Hydro-Gel, see below for details!

What are the components of the Hydro-Gel?

The Hydro-Gel is made of harmless components, which are also used in food industry as additional material to various foods.

How does the Hydro-Gel cleans?

The Hydro-Gel rubs off and collects the residual materials from the pipes and from the inner walls of pipelines. The gel itself has a huge surface, so it can collect almost all residue. The collected wastes exit the system along with the gel.

What is a „gel-train”?

We use different property gels for different cleaning purposes. For example, high viscosity „pushing gels” rub off rough wastes, the more diluted „pick-up gels” collects more loose materials inside. Between the individual „gel plugs” we can deliver disinfectants, this way we can complete the mechanical cleaning and the disinfection in one step! The different types of gel plugs travel inside the pipelines like the carriages of a longer train, this is called a „gel-train”.

How long is a „gel-train”?

The setup of the „gel train” is always done according to local circumstances and needs. The usuall lenght of the „gel train” is 30-70 m. (Please note, that the lenght of a single sponge plug is minimal compared to the gel, approx. 1 m long.)

How does the Hydro-Gel behave if it encounters a diameter narrowing?

The Hydro-Gel – thanks to its positive viscosity and elasticity properties – fills the available space completely, and therefore takes on the shape of the pipeline at all times. It does not gets stuck at corners, at narrowing diameters or at the location of devices (imagine a half closed gate valve, for example).

What kind of pipeline diameters can be cleaned with the Hydro-Gel?

The Hydro-Gel can be used with the usual diameters of drinking water-supply systems: from the small diameter service pipes to largescale, crawlable transmission lines. In case of the mostly occuring diameters of DN 25-300 mm the operation is a routine, and plans need to be done in case of bigger diameters.

How do you control the Gel inside the system?

The gel advances due to the effect of water pressure, navigation is achieved using the existing valves.

How fast the Gel travels inside the system?

The gel travels with the same speed as the water, depending on the applied water pressure. This is usually 0,5-1 m/s.

Is there a problem if the Gel gets inside the users' subsystem?

Randomly it can occur, that during the cleaning operation – despite the prior notification of the users – someone opens some taps and the gel gets inside the local service line. Since the Hydro-Gel does not contain any harmful materials, this will not cause any problems at the enduser, will not cause any jamming, and after the cleaning process the user only needs to let the gel out through the tap, untill there is clean water flowing.

What type of operator assistance is needed during the Hydro-Gel cleaning?

We need operator assistance during the planning and during the cleaning operation. The operator is tasked with providing input and output points, opening and closing valves, notifying users of the upcoming cleaning, and providing further fixing work on the system. We provide experts to help with all types of technological operations. (Based on a prior agreement, we can provide the necessary fixing works, under the operator's supervision.)

Is there any Gel residue left inside the pipelines?

The Hydro-Gel is not soluble in water, it does not stick to the pipe's walls and all of it will exit the system after the cleaning. This fact is based on actual experimental data.

Where can you deposit the used Gel, are there any wastes generated which must be treated?

Since the used gel does not contain any harmful materials, it can be ejected to a public sewer. After the cleaning process is finished the gel will break up into pieces, and will not cause any jamming in the sewer. In case there is no sewer available, the gel can be ejected to an open ditch or to an appropriate neutral area. The gel will decay within a few days, without leaving any waste that needs further treatment.

Does Hydro-Gel removes limescale from the pipeline?

The Hydro-Gel can primarly remove the loose, adherent contaminations (sediment, bacterial layer). In case of strongly adhered limescale and other mineral secessions it is expedient to use high frequency cleaning methods. Using this method it is possibble to remove these strongly adherent residues from industrial heat exchangers without major structural works. This way we can save time and money! Please contact us if you need furhter assistance in this subject!

Can you disinfect the system using the Hydro-Gel?

Yes, the disinfectant can be diluted into the Hydro-Gel material, but we suggest using nano-fluids to disinfect. The nano-fluids can be transmitted between gel plugs (in a gel-train), and it has a proved bactericidal effect.

What additional technologies can be combined with the Hydro-Gel technology?

The Hydro-Gel can be combined with technologies other than the nano-fluids. Our newest development is a miniature device called the **Pipe-Finder**, which travels along with the gel and maps the system and provides further useful technical data from the operation.

Another new development is the **Pig+Gel** technology, which can be employed during video surveillance of the inside of pipelines. During this operation a special type of pig is being moved with the Hydro-Gel at a constant speed, in order to achieve the best video quality. This technology can be used to economically and succesfully provide the inside surveillance of hydrocarbon pipelines also.

Does the Hydro-Gel technology have official licenses?

The Hydro-Gel and the Hydro-Gel technology has OTH (National Public Health Association) licens, identification number: KEF-22881-2/2014.

Is the Hydro-Gel technology free to use?

The Hydro-Gel high technology developed by Olajipari Karbantartó Fejlesztő és Tervező Ltd. (OKFT Ltd.) is protected by hungarian and international patents. The inventor and manufacturer has exclusive rights of this technology, and third parties cannot be apply it without the prior license of the owner. In case you are interested in this new technology, please do not hesitate to contact us, we are open to cooperation with mutual benefits!