



Oil and gas industry service provider

Non-man entry tank cleaning solutions



Eco-friendly

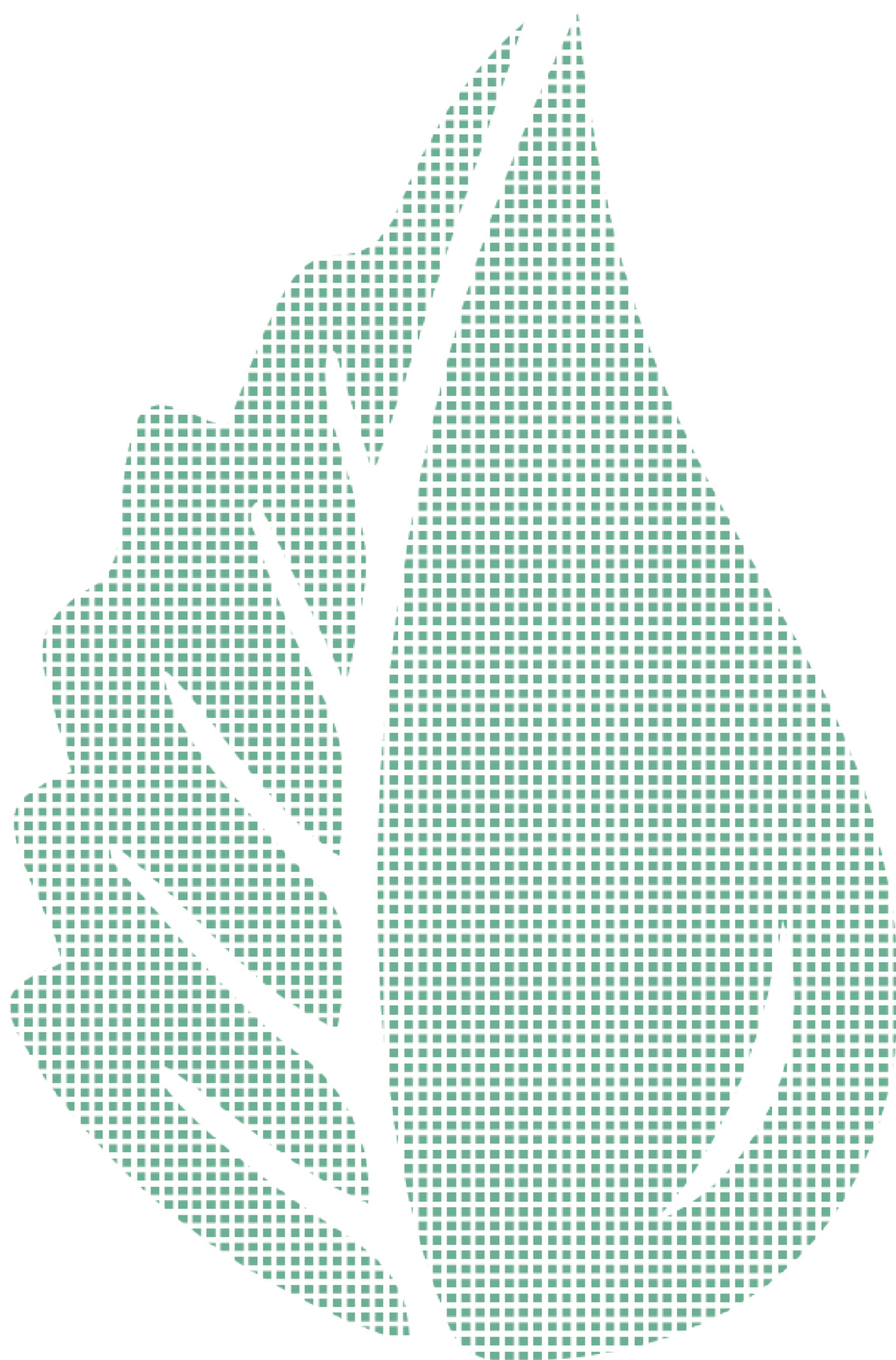


Time-efficient



Cost-effective





Who we are

ARKOIL Technologies Nederland B.V. is an uprising Dutch-formed oil and gas industry service provider which gathered talented oil industry specialists with a view to catering to the Clients' most ambitious needs and requirements.

What we do

- Storage tanks cleaning
- Microbiological remediation and oil-contaminated soil restoration
- Oil-contaminated soil washing
- Oil-contaminated groundwater cleaning and restoration
- Treatment of oil-containing waste
- Containment, migration trapping and extraction of LNAPL

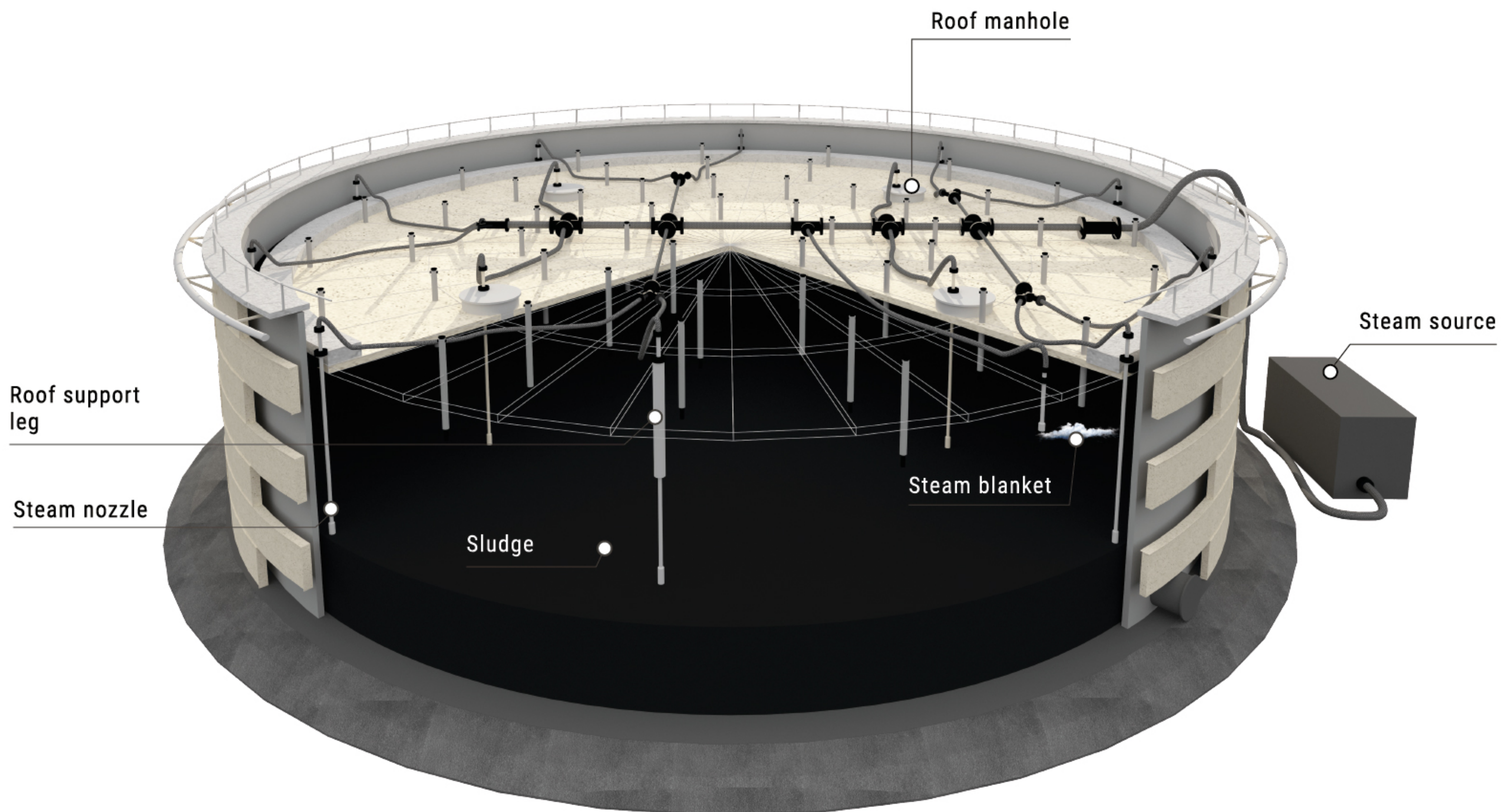
What we deliver

- ✓ Effective ecological solutions
- ✓ Client-oriented approach
- ✓ Safety-conscious attitude to the project
- ✓ Extra profit for Clients

ARKOIL Technologies has been developing and has been successfully implementing innovative **Non-Man Entry Crude Oil Tank Cleaning and Oil Recovery Solutions.**

High efficiency is proved by many years of **experience** and multiple references from the leaders of the oil and gas industry. About 1,000 storages have been cleaned using our genuine technologies, of which 400 are crude oil tanks.

TANK STEAMING PLAN

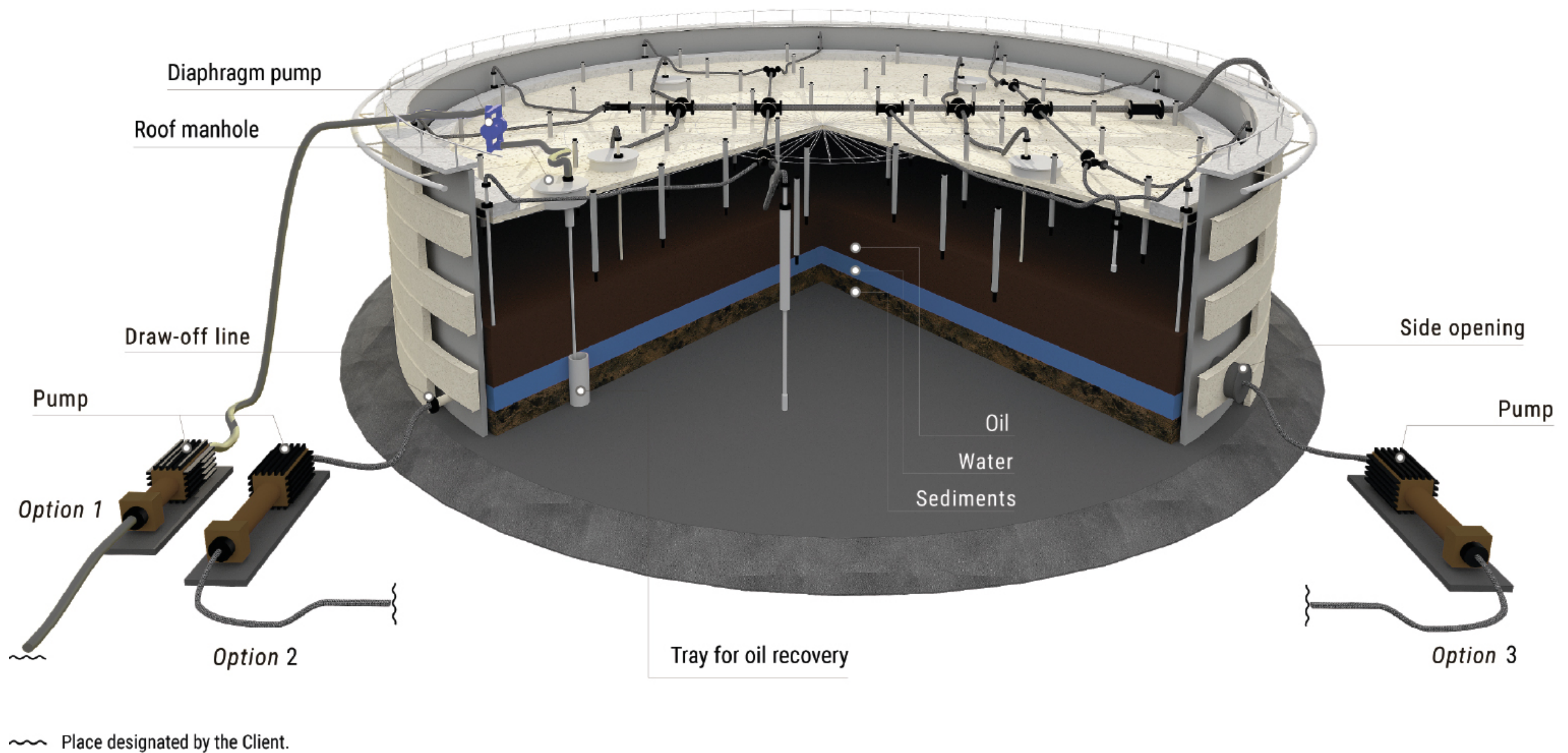


Steam nozzles installation can be performed:

- Through the space between tank shell and tank roof seal
- Through the roof manholes
- Through the roof support legs

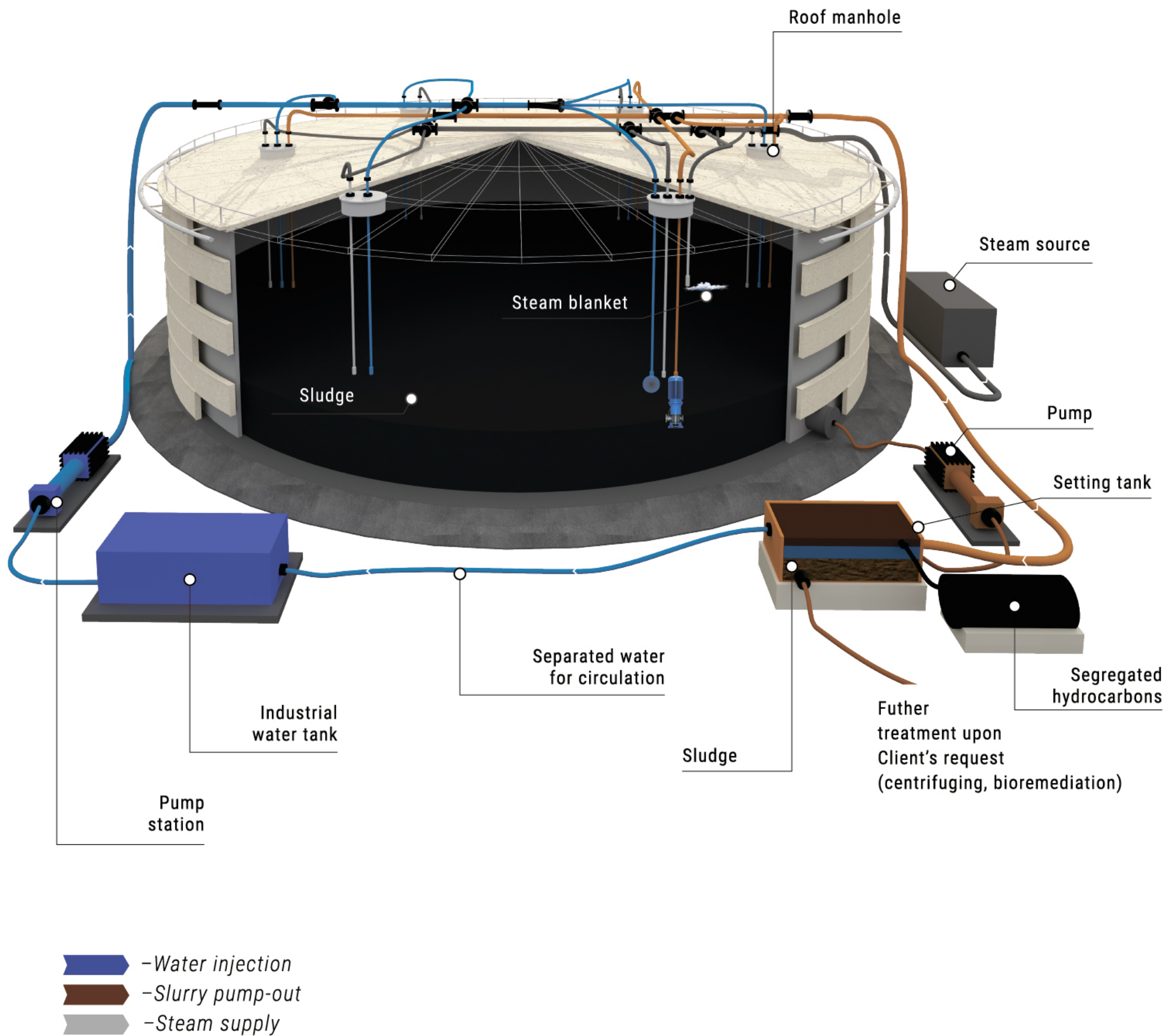
Any nozzles installation option is available upon the Client's request

OIL RECOVERY PLAN



Oil recovery can be performed:

- Through a roof manhole (option 1)
- Through a draw-off line (option 2)
- Through a side opening (option 3), if the oil sludge level is lower than the level of the side opening



The system is applicable for tanks containing sludge with high content of asphaltens, sulphur or low content of hydrocarbons, and also for heavy oil tanks.



Profit

- Recovery of 95-97% of oil
- Profit from oil recovery often significantly exceeds the expenses for the services
- The recovered product is substantially free of mechanical impurities
- Minimal disposal of sediments



Safety

- No chemicals, additional crude oil or oil products used
- No personnel exposure inside the tank until the total degassing of the tank
- No emissions to the atmosphere
- Maintenance of the tank's integrity



Flexibility

- No weather or seasonal restrictions
- Applicable to any tank capacity and roof type
- Applicable to damaged tanks
- Tailored to the clients' special needs and requirements



Time

- Simultaneous cleaning and oil recovery
- Minimal tank downtime against conventional method

ADVANTAGES

COW-based
methods

ARKOIL

Economic efficiency

Return of the recovered oil to the Client	✓	✓
Profit from the oil recovery often significantly exceeds the expenses for the tank cleaning services	✓	✓
Time-efficient mobilization due to the technology mobility	✗	✓
Unnecessity of the inert gas (nitrogen) injection into the tank	✗	✓
Maintenance of the tank's integrity	✗	✓
Simultaneous cleaning and oil recovery	✗	✓
Reduction of the intervention time and the tank non-availability period	i	✓
Non-application of any cutter stocks or chemical agents	✗	✓

Application results

Recovered oil is substantially free of sediments	i	✓
Drained water is safe and can be discharged into the industrial sewage system	i	✓
High degree of sediments cleaning from hydrocarbons	✓	✓
Tank's internals are clean and oil-free after the oil recovery without any additional washing	✗	✓

Safety

No personnel exposure inside the tank	✓	✓
No emissions to the atmosphere	✓	✓
No risk of the electrostatic energy formation	✗	✓

Flexibility

Technology can be used for damaged tanks	✗	✓
Technology effectiveness in case the oil sludge height is less than 0.6 - 1 m	✗	✓
No weather or seasonal restrictions	✗	✓
Technology can be tailored to the Clients' special needs and requirements	✗	✓
Technology is applicable to any tank size, design and roof type	i	✓
Possibility of the application for a double-deck roof tank	✗	✓

✓ – method fits the point

✗ – method misfits the point

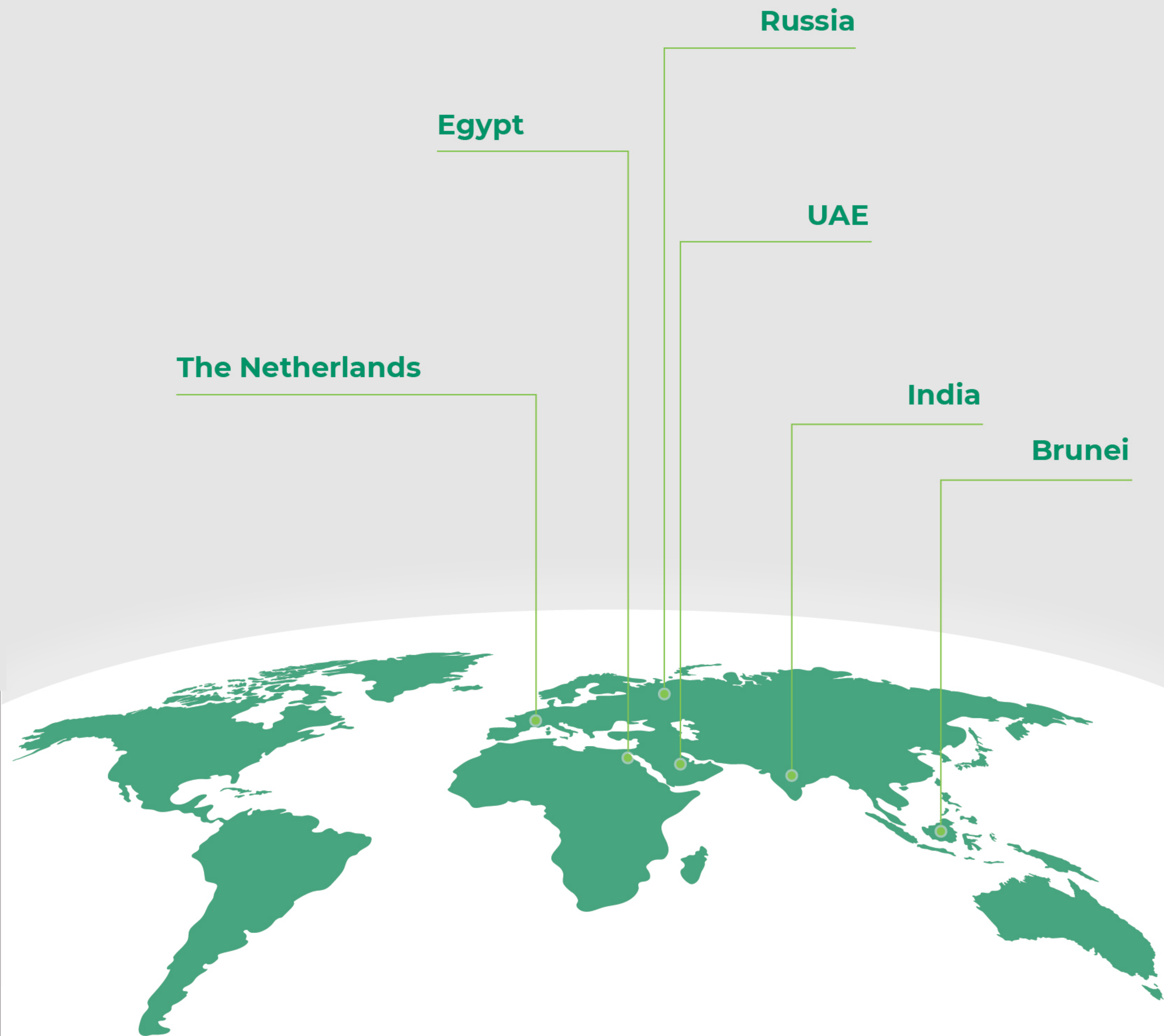
i – method concedes the point

ADVANTAGES

	Conventional method	ARKOIL-TECH
Economic efficiency		
Return of 96 – 97 % of the recovered oil to the Client	✗	✓
Profit from the oil recovery often significantly exceeds the expenses for the tank cleaning services	✗	✓
Maintenance of the tank’s integrity	✗	✓
Simultaneous cleaning and oil recovery	✗	✓
Reduction of the intervention time and the tank non-availability period	✗	✓
Non-application of any cutter stocks or chemical agents	✗	✓
Application results		
Recovered oil is substantially free of sediments	✗	✓
Drained water is safe and can be discharged into the industrial sewage system	✗	✓
High degree of sediments cleaning from hydrocarbons	✗	✓
Minimum sediments to dispose	✗	✓
Tank’s internals are clean and oil-free after the oil recovery without any additional washing	✗	✓
Safety		
No personnel exposure inside the tank	✗	✓
Flexibility		
Technology can be used for damaged tanks	✗	✓
No weather or seasonal restrictions	✗	✓
Technology can be tailored to the Clients’ special needs and requirements	✗	✓
Technology is applicable to any tank size, design and roof type	✗	✓

- ✓ – method fits the point
- ✗ – method misfits the point







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