

### ABEL Triplex High-Pressure Plunger Pumps designed for mobile use as a total solution in containers

**Project Oil and Gas Industry, Romania, Service Water (corrosive)**

#### Application

The customer, a large Romanian oil and gas producer, was looking for a mobile concept that was easy to install.

#### Requirements:

- A) Solution for transporting saline and lightly contaminated service water
- B) Solution for filling underground bore holes with water up to 1000 m deep for better transport of residual oil out of These subterranean bore holes

With its efficient, high-quality, low-maintenance mobile concept, Abel was able to distinguish itself against strong, international competition.

Abel announces its sturdy pumps with low residual pulsation, which are shipped as a complete package so that the customer does not have to deal with additional connections to or in the existing system.

Due to their 120° crank misalignment, Triplex pumps produce a much lower residual pulsation in comparison to single-, double-, or quadruple-action pumps (greater running smoothness).

Abel supplies „turnkey“ systems. All customers need is a power connection and a connection to the suction and discharge side pipelines.



Wiring between the electrical consumers and the control or the frequency converter is not required. This is all already installed inside the container.

This makes the individual pumps as mobile as possible, so that they can be transported to any other location, connected, and operated there as desired.



**The ABEL solution**

A total of 16 Triplex high-pressure plunger pumps from the HPT series were shipped, mounted ready-to-use in 12' containers including frequency converters and control cabinets.

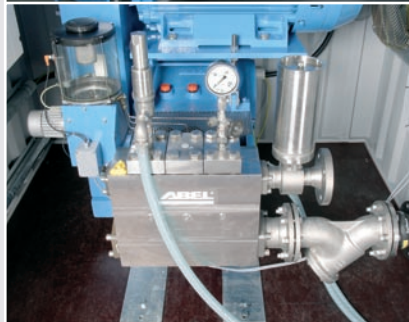
Flow rates: up to 21 m<sup>3</sup>/h,  
Discharge pressures: up to 10 MPa.  
Medium: Service water with slight impurities and lightly saline (corrosive).

**Application 1:** Transport over a distance of several kilometres in to storage tanks.

**Application 2:** Filling subterranean bore holes (> 1000 m deep) to maximise transport of residual oil. The oil floats on the water, the water pushes the remaining oil upwards and so can be pumped out with virtually no residual left.

The wet ends of the pumps are made of stainless steel; the pump cylinders are forged, not cast, in order to ensure higher quality.

The plunger packing is designed as a oil-lubricated packing box, as the water can contain contaminants.



The suction side and discharge side valves of the pump are designed as so-called spherical cone valves. Spherical cone valves combine the advantages of cone valves (spring-

loaded so the valve can close quickly) and ball valves (axial mobility to ensure even wear).

**ABEL Advantages**

- Transport in closed pipelines prevents impurities and eliminates unpleasant odour
- The flexible design of the pipelines allows for space-saving installation
- The flow rate is adjustable
- The pumps are resistant to variable particle concentrations

