

Giving water a lift



The main line of activity of the engineering firm **LEK** in Kaliningrad, Russia which has been in service since 2000, is producing environmentally friendly devices with relatively small capacity for lifting and transferring water. It could be applied for personal water supply. The firm possesses five years experience in production and operation of water lifting pump units operated by inexpensive rotary and sailing windmill. They have two modifications of units with output 0.2 t/h at a speed of wind of 6 m/s and at a height difference of 10 meters.

However, the most useful project in the context of water supply would be the compact submersible inertial pump (patented). It is intended for rise of water from depth 30 meters and more. The principle of operation of the pump is based on the effect of the water hammer. As a result of long experiments, the company managed to replace all rubbing details with motionless mem-

branes. Now the design is very simple, durable, and suitable for abrasive water. The design implies the presence of the auxiliary pump and the accumulating tank, which is located on ground surface.

It is worth mentioning that unlike other similar devices, this submersible inertial pump consumes small amounts of energy from the auxiliary pump. So, one of modifications works very well at water delivery from the auxiliary pump of only 5 l/min with volumetric efficiency up to 50%. Therefore, the submersible inertial pump easily will be able to extract water from the deepest wells by means of the ordinary hand pump, the small windmill pump, or the centrifugal pump. ■



تقدم شركة LEK الروسية منذ عام ٢٠٠٠ آلات خاصة مراعية للبيئة ذات القدرة المحدودة لنقل المياه. وأفضل منتجاتها نفعاً لحقل توفير المياه هو المضخة الجادة الغاطسة.

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We are a leading manufacturer of refractory products for various applications

• Incineration

Side wall lining with nitride-bonded SiC tile system in a waste incineration boiler
Picture inside: T-Clip tile backfilled with SiC self-flowing castable



• Non-Ferrous SiC products

• Foundry Systems

Refractory products for induction melting of all metals and their alloys



• Heat Treatment

Refractory lining in industrial furnaces (e.g. SiC muffle lining in hardening furnaces)



• Chemical/Petrochemical

Example of a refractory lining for a chemical gasifier (1450 °C)

• Wear Resistant Technologies

WRT in power plants (e.g. SiC pulverized coal distributors, burner components, nozzles, etc.)



• Blast Furnace Refractory Lining

• Hearth

Carbon
Hearth Ceramic Cups
Shaped tuyere blocks

• Bosh, Belly and Stack

Nitride-bonded and sialon-bonded Corundum and SiC qualities

• Iron Transport Systems

• Torpedo car linings



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