



TSURUMI PUMP

Application Reports in 2010

Established in 1924 Tsurumi is one of the most experienced pump manufacturers. Tsurumi is quality and durability. Pumps for professional use.



Lindner-Werke, Dettelbach, Germany



The Project:

Industrial manufacture of gypsum fibreboard panels

Companies involved:

Lindner GFT GmbH

Grebner Reinigungssysteme (Cleaning Systems)



The Problem:

Pumping of residual water containing gypsum from the production process, with a solids content of 15-20%. The pumps are required to operate in prospecting mode, with fluctuating delivery volumes.

The Solution:

Use of one pump each of the types KTV2-50 and KTV2-80 with stirring systems (weight 24kg and 37kg in each case). These types are easy to clean and, with the aid of the stirring systems, can pump water containing solids without any problems. First maintenance was carried out after 16 months, and the oil was absolutely perfect. The only replacements made were the shaft protection sleeve, the shaft sealing ring, and the rubber parts of the pump housing.

In the event of abrasive and corrosive utilization, stronger wear and tear will take place naturally in certain components. With regards to the above application wear and tear can take place mainly in impeller, agitator, suction plate, shaft sleeve, oil ring, mechanical seal, pump casing, strainer, motor casing and discharge coupling. Depending on the working conditions the lifetime of those parts might vary significantly and can be shorter than the legal warranty period.

In this regard, please pay attention to our general conditions of sales (www.tsurumi.eu/english/GCS.htm) that we also send to you by mail on request.

Surface Suction Removal, Wallenhorst, Germany



The Project:

Suction removal of foam and floating dirt particles from the surface of the clarification basin

Company involved:

Clarification Plant of Wallenhorst Municipality

Dealers: Vernhold Baumaschinen, Osnabrück

Tsurumi supervisor:

Mr. Jürgen Rohring (Regional Sales Director, Construction, North Rhine Westphalia)



The Problem:

Surface suction removal by means of a pump, avoiding dry running and prospecting mode operation. The permanently installed pumps frequently break down due to motor damage.

The Solution:

Use of a surface suction unit, type 8-FSP.

Suspending the pump from a float meant that the water level could be matched easily. Optimum suction

performance was achieved by using the Venturi principle (Operation via bypass). The 8-FSP only works for a few hours a day, which makes it considerably more efficient than the previous solution.

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Dealer Support, Lingen, Germany



The Project:

Holding an open day at a key dealership

Companies involved:

Ludden GmbH, Lingen
“Luki – die Handwerkerstadt (The Town of Craftsmanship)”

Our Support

Ludden and Kistermann Company was holding an open day for regular and new customers with the aim of presenting their own range of products.

Suppliers from the core product range were asked to present their products during the event.

We were happy to oblige, and two members of our sales and marketing team were ready to meet visitors throughout the period, to answer questions and present Tsurumi products.

Pump Testing Days, Fürth, Germany



The Project:

Pump testing days at the premises of Gebr. Mayer, electrical and mechanical testing

Companies involved:

Gebr. Mayer GmbH&Co. KG, Fürth

The Problem:

Testing the pumps in accordance with the health and safety regulations at work from the BGV A3 professional association, for operational media with changing locations.

Our Support

Testing the pumps at the premises of the company Gebr. Mayer within the framework of the on-site standardization day.

Electrical testing with the aid of a calibrated Secutester, mechanical testing (oil, parts subject to wear, cables). Once the tests had been successfully passed, the pump was issued with a test plate for the next six months. Cable repairs were carried out on the spot, as was the replacement of the impeller, the shaft protection sleeve, the lip sealing ring, and the wear plate.



Bibra Tunnel, Germany



The Project:

The Bibra Tunnel is part of the German Unit No. 8 construction project, the extension stretch on the route Nuremberg-Erfurt-Leipzig-Halle-Berlin.

Company involved:

Marti Tunnelbau
Bunte

The Problem:

Maintaining water clearance by means of submersible pumps at the tunnel portals and during the tunnel advance.

The Solution:

Use of Tsurumi dirty water submersible pumps of widely differing types to remove water from the tunnel.

Thanks to their tough, robust design, and the special internally-located slide-ring seal, Tsurumi pumps can be kept permanently in operation in prospecting mode.



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On-site training, Vianden, Luxemburg



The largest pumped storage power station in Europe in the township of Vianden in Luxemburg, with a peak capacity at the present time of 1,100 MW, is being extended by a further turbine with a capacity of 200 MW.

The construction work includes the carcass work for the cavern, as well as the access galleries, shafts, and intake and outlet structures.

The Problem:

Tunnel construction in particular is where pumps are in most cases required to work under especially difficult conditions. This is why the sites

The Project:

Extension of the pumped storage power station at Vianden by an 11th machine, Lot 1 – Structural installations, Luxemburg

Companies involved:

Ed. Züblin AG, IU Directorate – Tunnel Construction, Stuttgart
Strabag AG, IQ Directorate, Vienna
Jäger Bau GmbH, Schruns



have their own workshops, where machinery and equipment can be repaired and maintained. In this situation, simple maintenance of the pumps is an important consideration in ensuring long and trouble-free operation.

The Solution:

Training the workshop personnel, with the aim of enabling them to carry out the maintenance and repair of Tsurumi pumps themselves.



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Pumped Storage Power Station, Vianden, Luxemburg



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The construction work includes the carcass work for the cavern, as well as the access galleries, shafts, and intake and outlet structures.

The Problem:

Fresh water supply by means of submersible pumps for the washing area, drill carriages, etc. Keeping the water clear by means of submersible pumps during the driving of the tunnel.

The Project:

Extension of the pumped storage power station at Vianden by an 11th machine, Lot 1 – Structural installations, Luxemburg

Companies involved:

Ed. Züblin AG, IU Directorate - Tunnel Construction, Stuttgart
Strabag AG, IQ Directorate, Vienna
Jäger Bau GmbH, Schruns



The Solution:

Use of Tsurumi dirty water pumps of widely differing types:

KTZ22.2, KTZ35.5, KTZ47.5, tough, robust pumps in cast iron design for clearing water from the drift or heading face, KRS2150 with stirring mechanism for sludge disposal, and LH25.5 high-pressure pump for removing water from the entire tunnel stretch.



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MUCEM, Marseille, France



The Project:

New construction of the MUCEM (Museum of European and Mediterranean Civilizations) in Marseille, France, on an area of 26,000 m³.

Company involved:

Messrs. Dumez Mediterranée (VINCI Group)
Construction Manager: Mr. Francis Berny



The Problem:

The site is located in the immediate vicinity of the Mediterranean coast and the Old Harbour of Marseille.

In the first construction phase, a square pit was excavated, with an edge length of 72 m. From a depth of 6 m seawater began to infiltrate, and flooded the excavation.



The Solution:

In the first phase, dirty water pumps were used, of the types KTZ31.5, KTZ21.5 and KRS2-80. Settling basins were then installed, each with a pump of the type KTZ33.7, with plastic piping and switchboxes.

The KTZ pumps will be running until the site has been completed, and the settling basin allows for the continuous purification of the dirty water.

Toulon Tunnel, France



The Project:

Tunnelling beneath the city centre of Toulon. The tunnel runs parallel to the north bore, in the direction of Nice/Marseille, which was already completed in 2002.

The tunnel is at the present time the most important tunnel construction project in France, and the technical challenges are enormous. Length: 3310 m, diameter: 8.25 m, depth: 35 m. The tunnel was driven from two faces, with breakthrough taking place on 3.03.2011.



Companies involved:

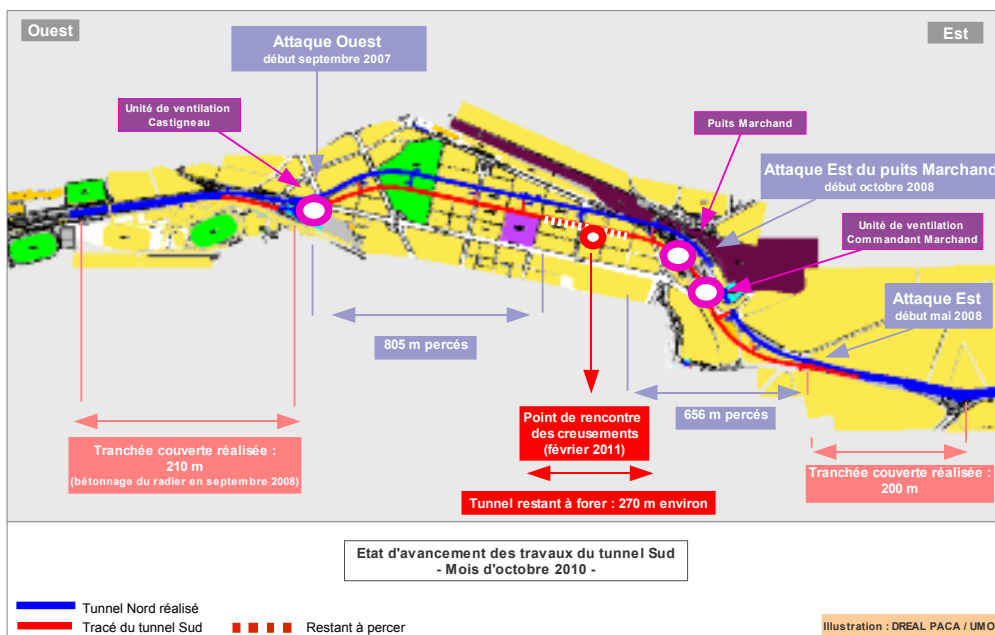
Bouygues Travaux Public Group
Soletanche-Bachy
Colas Méditerranée
Screg South-East

The Problem:

The site is located at a depth of 35 m, in the ground water, and has the effect of a huge drain pipe. All the construction sections must be kept dry, and the water also has to be pumped out which enters in fluctuating quantities as the tunnel is driven forwards.

The Solution:

Use of pumps of the KTZ Series, with components made of cast chrome iron, in order to pump the water out of the filters into the settling basins. There are slow impellers (1500 rev/min) located in the settling basins, of the KSR series with stirring mechanisms. Control is provided via switchboxes. High-pressure pumps of the LH Series are used to pump the water out of the settling basins. The high pressure of these pumps prevents the pipes from clogging.



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Renovation of a clarification plant, Põlgaste, Estonia



The Project:

Renovation of a clarification plant

Companies involved:

OÜ Impel Ltd (Tsurumi Partner)

The Problem:

Replacement of the clarification technology,
Installation of new items of equipment.



The Solution:

Preliminary clarification:

Installation of a screen of the Tsurumi type KS-200z-2.5, with the aid of which solids are removed from the waste water.



Activated sludge aeration:

Installation of three compressors of the Tsurumi type RSR-80, each rated at 5.5kW, 1750 rev/min. Two compressors are in permanent operation, with another in standby mode. The compressors stand on a vibration damping base made of rubber, in order to keep noise levels low.

Surface suction removal:

A floating surface suction unit of the Tsurumi type 4-FSP removes foam and floating dirt from the water surface by suction.

Pumps:

Five pumps of the 40UA2.25 type are in operation at different points in the purification process.

Flooding, Tartu, Estonia



The Project:

Pumping water out of a flood zone. The electricity power supply was ensured by a generator.

Companies involved:

AS Tartu Veevärk Ltd.
OÜ Impel Ltd (Tsurumi Partner)



The Problem:

Initially an 8kW pump was used. The pump capacity was inadequate, however, and the power supply using a generator with a rated performance of 8kW was also proving difficult.



The Solution:

Use of an energy-saving volume pump of the type KRS85.5, rated at 5.5 kW. This 4-pole pump provides high delivery quantities at low pressure (in this case, 63.3 l/sec at 5m), so making it ideally suited for operations in flooded areas

Waste Water Clarification at Campsite, Croatia



The Problem:

Because there is no local waste water treatment system available, a new clarification plant needed to be built. The intention was to provide this in SBR construction format as economically and as low-maintenance as possible.



The Project:

Provision of a clarification treatment plant for the "Skrla" and Stara Baska campsite on Krk island in Croatia.

Companies involved:

VIS-trgovina d.o.o.



The Solution:

Waste water clarification using the SBR principle - Two immersed aerators of the 50TRN43.7 type ensure the oxygen feed during the aeration phase.

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We reserve the right to change specifications and designs herein for improvement without prior notice. Our pumps are for professional use only. In the event that Tsurumi (Europe) GmbH have, in exceptional cases taken over, a manufacturer's warranty, this entitles the end-user to assert remedy free of charge against Tsurumi (Europe) GmbH due to any defect to the product occurring during the guarantee period (see below), also then when the warranty claims against the seller do not or no longer exist. In the event of malfunction, which is attributable to the improper handling by the enduser, no guarantee claim shall arise. Further claims shall not result from the warranty, unless if something to the contrary has explicitly been determined. The decision as to whether remedy is effected by way of replacement or repair shall be at the choice of Tsurumi (Europe) GmbH. The claims shall be time barred after a period of three months after expiry of the guarantee period, however, not before expiry of the warranty period which is valid towards the seller. In the event of doubt, the warranty period shall correspond with the warranty period which is valid between the end-user and his seller.

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