HILLER

separation & process

NEWS 2_09

GERMANY AUSTRIA INDIA

EDIBLES OLIVE OIL

GREECE SPAIN ITALY

MINERAL OIL NATURAL GAS

HUNGARY TUNISIA USA

RENEWABLE ENGERY

RUSSIA MALAYSIA CHINA

CHEMISTRY PHARMA

GERMANY - BAVARIA EMIRATES

ENVIRONMENTAL TECHNOLOGY

CHINA TURKEY ENGLAND

WASTEWATER TREATMENT

AUSTRIA GREECE RUSSIA

MINING TUNNELING

SPAIN ITALY INDIA POLAND

E

Dear Reader,

Now more than ever!

Is there anyone who hasn't been anxiously following the endless doom and gloom regarding the economic situation? And is there anyone who hasn't asked themselves when and to what extent a real recovery will begin? Naturally we as machine manufacturer are also directly affected by the current state of affairs, and we need strategies for making the best out of the situation.

This is why it is particularly interesting for me to view the activities in the marketplace with some perspective and to evaluate the situation with regard to our company. Across all sectors I see insolvencies and acquisitions, price dumping, drastic reductions in product ranges, and extended delivery times – to name just a few examples. At the same time, trust and solid, sustainable business practices are becoming increasingly rare.

Having now reached this point in my evaluation, one thing came as quite a relief: We are different!

Business strategies based on medium to long-term activities have always been the main focus of our company's strategy. All along it has been important for us to be a trustworthy partner to our customers. These demands we place on ourselves are ones that we fulfil a new day after day, without exception, searching for options for improvement.

A decanter, with or without the relevant peripheral equipment, represents a substantial investment that our customers benefit from over the long term. We achieve this of course with high quality production standards, as well as with comprehensive, honest and specific consultation services during the sales process and the system planning stage with professional and customer-oriented advice. That means we are not always the cheapest, but the above average level of satisfaction that we hear from our customers in our regular surveys clearly demonstrates that our products represent excellent value for money.

So, valued customer and reader, I would like to convey one thing above all else:
Trust!
Because:
Now more than ever – we will continue to manufacture goods at the highest possible quality standard, and refuse to entertain the idea of any short-sighted compromises.
Now more than ever – we will listen to your concerns and needs with maximum attentiveness as part of our customer service offering.
Now more than ever – we will assist you in selecting the right machine and process technology, and help set you up to deal more successfully with these difficult times and to equip you for the future.

I am proud to be able to say this with clarity and confidence, knowing that the entire staff at Hiller will be following and embodying these concepts with full commitment, even in these challenging times. As John Ruskin said: "Quality is never an accident; it is always the result of intelligent effort and the desire to do a thing better." – That's us!

With warm greetings from Bavaria, and a friendly "Hello!"
to our customers, partners and staff.

Regards,
Georg Hiller

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HILLER success in Denmark

In the short time since signing the agency contract in August 2008 (we reported on this in Hiller News 2/2008), our new sales partner for Denmark, EnviDan Service, has already clocked up three successes.

Envidan Service obtained the first order, for the Assen sewage treatment plant, at the end of 2008. This plant is designed for 25-28,000 PE. The sludge produced is aerobically stabilised and then dehydrated using a **HILLER DecaPress DP 37-422** high-performance centrifuge with the **HILLER DecaTorque** hydraulic worm drive system. The machine is operated at an average throughput of 12 m^3/h and despite high ignition losses, achieves >22% TR on discharge with clean centrate.

Based on this success, EnviDan Service was able to install a **HILLER DecaPress DP31-422** into another of Assen's sewage treatment plants, as well as a **HILLER DecaPress DP51-422** for a sewage treatment plant in Mosede.

EnviDan

This provides compelling evidence of our Assen-based customer's high level of satisfaction with our product and with the support from our Envidan Service partner, and demonstrates that even during, or even because of the economic crisis, quality and professional expertise remains a winning formula.

Bad Driburg sewage treatment plant – original report from a highly satisfied customer

The following report was kindly provided by Mr. Johle, from the Bad Driburg-Herste sewage treatment plant. We liked this report so much that we decided to reproduce it here, unabridged in its original version. Please take a look for yourself:

Replacement of sludge dehydration equipment at the Bad Driburg-Herste sewage treatment plant

In the 23rd/24th calendar weeks of 2009, the 17 year old, worn out decanter centrifuge was replaced with a new one.

The most cost-effective provider (Hiller company from Vilsbiburg, Germany) [note from editor: Quality doesn't have to be expensive!] was requested to conduct a 3-day test with a mobile dehydration machine to determine that the machine being offered was able to dehydrate the plant sludge.

Test results:	Old machine (17 years old)	System under test
Flow rate	16 m^3/h	22 m^3/h
Dehydration result	24% TR	28% TR
Energy consumption	2.1 kW/m^3	1.6 kW/m^3

This successful result meant that the conditions for awarding the contract to the Hiller company were fully met.

Dehydration operations started using the new machine on 13.05.09 for stored sludge and new sludge produced, following a conversion and installation period of just 8 days (20 days had been scheduled).

The required values were improved even further with the new system:

	New system
Flow rate	28 m^3/h
Dehydration result	30% TR
Energy consumption	1.6 kW/m^3

That was the original report from our customer.

Hiller would like to emphasise at this point that the rapid setup of the system was only possible thanks to the excellent collaboration with Mr. Johle and his staff. With that in mind, we would like to take this opportunity to give a big thank you to their team!

Fazakerley WWTP centrifuges: On time, on budget, on performance

As part of their ongoing framework agreement, MSE Hiller in the UK have now installed and commissioned two **HILLER DP58-422 BD** centrifuges at Fazakerley Wastewater Treatment Works for United Utilities, Liverpool.

United Utilities provide water and sewage services to some seven million people in the North West of Britain. The Fazakerley plant was required to dewater 100 m^3 per hour of limed sludge prior to storage in silos ready for transport.

This project is yet another example for the approach that Hiller, **MSE HILLER**, and all other Hiller sales partners take towards their customers: Reliability and performance on highest level in regards to the goods supplied, as well as in regard to project delivery:

Working with United Utilities' framework engineering partner, the machines were delivered, installed and commissioned on time and to budget. On the technical side, the performance trials have now been completed and the machines are performing well within their guarantee figures.

MSE HILLER are currently offering several more centrifuges to United Utilities sites, and have signed a further two framework agreements with other UK water companies.

Crema now has a new HILLER decanter

The town of Crema is located in the Lombardy region between Milan and Cremona. The town's sewage treatment plant treats the waste water for around 100,000 inhabitants. The sludge produced by the sewage plant is rotted down, and until 2008 was dehydrated using two filter belt presses with a belt width of 2 m. On average, a dehydration result of 17% TS was achieved using these presses.

In July 2008, the town's waste water company decided to replace the old filter belt presses, and therefore put a tender out to a competition to provide a dehydration plant with decanting centrifuge. The competition required all participants conduct the dehydration tests using a mobile unit directly on-site at the Crema sewage treatment plant. Any decanter manufacturers were able to take part. In the end only Hiller requested to be involved via our representative in Italy, Huber Technology, alongside two other competitors.
The tests were conducted in October 2008 and were carried out using a mobile test system with a **DP45-422**. The test results were very good and the technical offering was also positively evaluated. In the end, Huber Technology GmbH, Italy, was awarded the contract to supply the dehydration unit in January 2009.
The installation work for the **HILLER DP51-422** centrifuge, including accessories, was completed in April 2009 and the machine was commissioned.

The performance runs for the machine acceptance process were completed admirably and far exceeded the minimum values required:

In relation to the required flow rate of 20 m^3/h, we achieved an average TR of over 25%; and the required value was just 22% TR, which was already 5% over the result of the old filter belt presses, however. Even with the average flocculation agent consumption of just 8-12 kg/t TR, the required limit values were far exceeded.
The customer is very happy with our system and is pleased with this successful project.

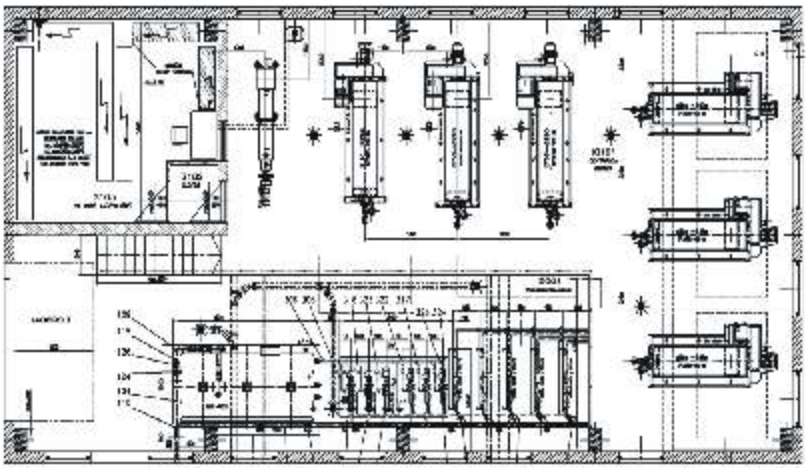
HILLER decanters for Debrecen WWTP, Hungary

At the beginning of 2009, within the scope of an EU supported programme, the main contractor for Debrecen city's wastewater treatment plant enlargement and modernisation was chosen.

The winner of the net 21 million EUR project was the Keviép - Euroaszfalt consortium.

Present: 2 pc CP3-01 NS HY, 2 pc DP450-422 VA HY

HILLER's exclusive sales partner for Hungary, **AQUINNO Service Kft.**, proudly reports, that they were able to secure the supply sub-contract for the new sludge thickening and dewatering equipment.



The new sludge thickening and dewatering building's design

The WWTP of Debrecen currently operates 2 pc. KHD CP3-01 NS HY (Hiller-made) and **2 pc. HILLER DecaPress DP450-422** dewatering centrifuges. After the modernisation of the plant, Debrecen WWTP's sludge treatment process will comprise of primary and secondary sludge thickening, mesophilic anaerobic digestion, dewatering, and finally, composting of the dewatered sludge.

The new sludge thickening and dewatering technology is designed and will be built by AQUINNO Service. It will comprise of **1 pc. HILLER DecaThick DT54-422** for the thickening of primary sludge, 2 pc. HILLER DecaThick DT58-422 BD for thickening of surplus activated sludge, and **3 pc. HILLER DecaPress DP54-422** for dewatering.

AQUINNO Service

With a total of **six HILLER decanters**, the enlarged and modernised Debrecen WWTP will be HILLER's largest installation in Hungary. We are very proud that we will be able to install a third generation of decanters in this plant, since the first CP3-01 was delivered in 1993. But most of all **HILLER congratulates AQUINNO Service** for this success, based on many years of trustful co-operation and competent after-sales services for the customer.

According to plans the technological and electric works will be started by November 2009 and will have to be ready by April 2010. During the six month long test-run – which will start in May 2010 - the HILLER machines will have to prove that they are capable of ensuring the required technology parameters. According to the tender the guarantee period ends at the end of October 2012.

AQUINNO Service Kft., the Hungarian representative of HILLER GmbH

AQUINNO Service colleagues with their managing director István Marcsik, with Georg Hiller jun. and Frank Gillengerten at Ökotech 2007 exhibition

AQUINNO Service Kft. is a private limited liability company specializing in complex trade, deployment, installation and service of technologies of separation, drying and pumping, especially of sludge dewatering and drying.
The company has been the representative of HILLER GmbH since the year 2000, beside Hungary also in Slovenia, Croatia, Serbia, Montenegro, Bosnia and Herzegovina, and Romania. The firm has a verified ISO 9001:2000 Quality Management System.

A compact unit constructed by AQUINNO Service

The basic goal of AQUINNO Service is to familiarize and establish modern, state of the art, environmentally friendly technologies especially in wastewater treatment. To attain this the firm has a team of 15 highly qualified employees with an experience of 10 years on average in the field of assembling, servicing and maintenance of modern sewage treatment systems. Each employee has a degree or a special mid-level qualification in the field of their activities, therefore they have all the knowledge and instruments necessary for success.

The company and HILLER are very successful on the Hungarian market. In the past 20 years more than 100 HILLER-made centrifuges have been sold in Hungary mainly for municipal wastewater treatment applications, more than half of which are of the new DP design. Although in Hungary decanters are already state-of-the-art for sewage sludge dewatering, this does not necessarily apply to other applications. Hence AQUINNO Service is working on familiarizing potential customers with the advantages of decanter centrifuges in other industries as well.

AQUINNO Service offers delivery of individual machines or of system solutions, as well as of complete facilities. They support designers in the pre- and main-phases of projects to ensure an up-to-date and efficient system in all technical, technological and economical aspects.

In order to offer system solutions to clients beside centrifuges AQUINNO Service also delivers dryers, progressive cavity pumps and macerators, polyelectrolyte dosing systems, screw-conveyors and electric switch- and control cabinets. After delivery and installation, at the end of each project complete functional tests, commissioning, optimising, and training of the future operators is carried out by them.

A few of the currently operating machines in Hungary:

DT37-422 BD

DP450-422 HY

DP450-422 HY

DP350-422 HY

AQUINNO Service provides regular after-sales service for all the appliances sold, both during warranty and after warranty periods, and last but not least they undertake renewal of all appliances delivered by AQUINNO Service and/or manufactured by the companies they represent. For renewals they use the same modern technologies as the manufacturers.

One of the latest success stories of AQUINNO Service is the project Debrecen, which is covered in a separate report in this issue of the Hiller News.

Expoliva Fair in Jaén

In May 2009, the Expoliva trade show once again took place in Jaén, Spain. The trade show is the world's largest in the olive processing and oil extraction sector.

This year's Expoliva trade show saw the mobile system for environmentally friendly oil extraction being exhibited by our sales partner Centrifugación Alemana. It was a real highlight of the entire exhibition. At the end of show, the jury awarded this innovative system the prize for the best innovation and technology.

What is so special about this system? This system produces olive oil of the highest quality, almost completely without water! This is an extremely valuable benefit considering the lack of water in many typical olive oil producing regions.

The heart of the system is an olive oil decanter from **HILLER**, model **OV260-43-1**. Without exception, this decanter functions in two-phase mode, where the olive oil is extracted as a liquid phase and the juice and pulp are extracted as a solid phase. A conscious decision was made to avoid the use of a plate separator. Instead, the oil was clarified in a special container.

The machine for pre-cleaning the olives also operates without water. Water is only required for cleaning the system components, e.g. for rinsing the decanter, and not for actual operation. Thanks to all these technical specifications for water saving measures, **HILLER's partner Centrifugación Alemana** can justifiably call this as an environmentally friendly system.

In addition to the environmental aspect, the system design means that it can be used as a mobile system. It processes twenty-five tonnes of olives per day. That makes this mobile system of particular interest to smaller oil mills or olive grove owners who want to produce their own oil. Demand has also been brisk among operations following the general trend for healthy nutrition and producing environmentally friendly olive oil (organic olive oil).

The Technical Manager at Centrifugación Alemana, Mr Benito Castillo, was very pleased to receive the prize for innovation along with Mr Valeriano Troyano (member of the management board). As a result of the prize, the Sales Manager at Centrifugación Alemana, Mr Francis Bejarano, and Ms Ana-Maria Troyano (a member of the executive board) were in demand to provide information on this technology in numerous interviews with the local and international press (e.g. El Pais) and television.

We are very proud of this confirmation of the specialist expertise and innovative strength of our partner Centrifugación Alemana, and we are delighted that they have received this prize for innovation; we would like to offer our heartfelt congratulations to them for this success.

Solid basic research – pillar of our success

„Everybody does what he can, but not everybody can do what he says." – To discover that this applies to his supplier is certainly the worst that can happen to any customer. Naturally therefore "to do what we can, and to say what we will do" is one of the most important maxims of our company.

Apart from the high level of quality of our machines and service, our experience from decades of successful design and production of decanter centrifuge is our basis for that. However, this has to be broadened and developed further continuously, be it in order to account for plant-specific product properties, or for altered production methods, or in order to develop and demonstrate methods and processes for the processing of new products.

For these purposes **HILLER** is carrying out research and development, not only in regard to our machines, but also in respect to process technology – from feasibility studies and laboratory tests, up to pilot tests on site in full scale. In order to carry out all this R&D work, Hiller is well equipped with respective laboratory and pilot equipment, as well as with a large fleet of mobile test units for various applications.

Within the scope of these activities not only profane topics such as the preparation of commissioning jobs are covered, but we also develop solutions for processing of products for which decanter technology has not yet been applied, as well as adaptations of our machine designs for special applications.

In order to illustrate the diverseness of the requirements encountered, some industries and products are listed below as examples:

- Environmental technology: Sewage sludges, digestate from biogas plants, household refuse suspensions
- Oil industry: Oil sludges from all kinds of sources
- Food industry: Fruit and vegetable products, yeast suspensions, offal, waste food
- Chemical and process industry: Catalyst suspensions, suspensions of mineral and organic base materials, classification of various pigments and paint additives
- Metalworking and other industries: Coolants, lubricants, slurries from cutting of various mineral / inorganic products, paint sludges

A very important aspect is the fact, that in all that we do the value for the customer has paramount priority, and that we are not limiting ourselves by constraints such as using a certain existing decanter model or plant design for the sake of rationalising only. In particular our flexibility to also deliver a tailor-made machine if required, and to be able to do this cost-effectively and quickly, is one of the most prominent aspects differentiating us from our competitors in the market.
Hence every customer for whom we are carrying out studies and trials, regardless of their scale, can be sure that Hiller will, outright and without any reservations, work out the optimal result for his task at hand. Regardless whether it is a known application, or new territory which needs to be entered and explored.

It is a fact that this solid and 100% focussed work is an important basis for our company, and has played a major role in winning a number of challenging projects in the recent past against tough competition. But even more so, in the meantime some high profile customers are now personally coming to Hiller to carry out trials – a positive proof for the high quality and reliability of our basic R&D work.

So it is little wonder that our extensive activities in our laboratory, on pilot plants and with trial plants on the customers' sites are indeed a pillar for the success of Hiller.

The City of Tarpon Springs orders second Centrifuge System from Siemens Water Technologies

Tarpon Springs is a nice waterfront community located about a one hour drive north of Tampa, FL on the Gulf of Mexico.

Many years ago, Greek sponge divers made the area their home. They made a living diving for sponges on the sea floor and selling them throughout the area. Today, a tourist trade flourishes in the old part of town. If you go there, you can buy natural sponges and get some great Greek food.

HILLER SIEMENS

Last fall Siemens completed a major rebuild of the Centramax centrifuge which was installed at the wastewater treatment plant in 2004. This machine had been working extremely well since startup, but wear was noted in critical areas during an inspection last summer. The centrifuge runs sixteen hours per day, seven days per week, so plans had to be made carefully for the shutdown and rebuild.

Our service group did a great job of disassembling the rotating assembly and installing new components to bring the centrifuge into "like new" condition. Everything was completed within three days and the startup went smoothly. The City was very pleased with our performance and thanked us for our efforts.

The City then decided to go ahead with ordering of a second centrifuge to be used as a backup. It can also be used for times when sludge volumes were high such as the tourist season. The system will be designed to allow both centrifuges to be run at the same time to meet this demand. Both centrifuges discharge into a common conveyor system that provides for automatic and uniform loading of the large sludge haulage trucks. The conveyors and loadout system were also supplied by Siemens.

One of the major considerations for the integration of the two centrifuges was the control system. It was decided that each centrifuge would have its own individual control panel. This allows safe shutdown of either centrifuge for maintenance purposes. In addition, the controls for the pumps and dewatered solids loadout system will be re-located into a third control panel. With this system, operation of the conveyors and pumps is independent of either centrifuge panel and will not be affected if one of the centrifuges is shut down or out of service.

Another interesting item of note is in regard to the Polyblend polymer feed system. These systems are now made at the Siemens facility in Holland, Michigan. This is the same location where the centrifuges are assembled using the rotating assemblies from **HILLER**. Electrical controls for these products are also manufactured in this facility. For this and future projects, the controls for the Polyblend systems will be integrated with the system controls. When the customer purchases a system from Siemens, everything will be operated from a single Operator Interface Terminal.

When the new equipment is installed at Tarpon Springs, it will be a showplace installation and a great testimonial to a lot of hard work by "behind the scenes" personnel at Siemens. We will have another great reference to help sell a Centramax or Centrapac system.

South Staffordshire Water PLC choose HILLER Centrifuges at Hampton Loade WTW

Colin Richardson of SSW, Peter Halls of Naston and Arnim Hertle of Hiller GmbH

The installation contract included for the supply of a highly integrated and totally automatic HMI / SCADA based control panel, feed pumps, polymer make up and dosing system, pipework with trace heating, electrical wiring, support stand and dual discharge inclined shaftless screw conveyor systems for trailer loading.

Dewatered Cake from one of the two Hiller centrifuges

South Staffordshire Water serves a population of some 1.2 million throughout large parts of the Black Country and areas such as Tamworth, Burton, Lichfield, Sutton Coldfield and Cannock.

The Company supplies 330 million litres of clean water every day across a network of pipes that total some 6,000 km in length.

South Staffs Water company were due a major upgrade to their sludge processing centre at Hampton Loade clean water treatment works and so conducted a full review of the centrifuge market.

Naston and South Staffs Water worked closely together and after a series of presentations, tender submissions and reference plant visits, they chose to install two off **HILLER DP51-422** centrifuges with energy efficient regenerative backdrive systems.

South Staffordshire Water PLC, were recently praised by the industry regulator Ofwat for achieving a top efficiency (Band "A").

The centrifuges were supplied installed and commissioned, on time and to budget, and currently dewater 30 m3/hr of sludge at 2 – 3 % dry solids, producing a cake at > 25 % dry solids.

The system also provides for considerable savings in polymer use and lower electrical running costs due to the energy efficient nature of the Hiller regenerative backdrive arrangement.

Here, the scroll drive motor acts as a generator, reducing the overall power usage of the plant.

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