

// MODULAR
PREPARATION AND
DOSING SYSTEMS

// MODERNISATION IN
THE RAMLINGEN
WATERWORKS

// LIQUID-DIRECT-
INJECTION

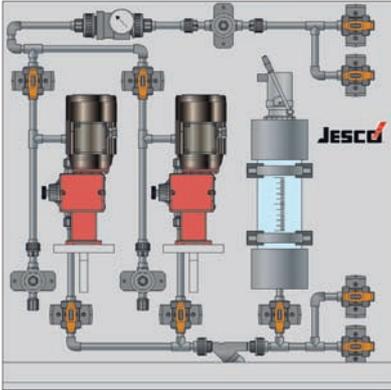
// PRESENTATION OF THE
SPANISH AGENCY

MODULAR PREPARATION AND DOSING SYSTEMS

AVAILABLE OPERATIONAL EX WORKS

Deadline and price – nowadays also top priority in the requirements in global project business. For order-specific system- and process technology for the treatment of water, waste water and exhaust air, Lutz-Jesco has also standardised the pre-assem-

bled construction. Consequently, today our customers can utilise the basic conception as a basis for a variety of dosing applications on prefabricated assembly plates with collecting pan.



Example of standardised dosing unit type AWR

STANDARDISED DOSING SYSTEMS

Here Lutz-Jesco differentiates between standardised dosing systems with selection from the extensive range of dosing pumps and accessories.

In the basic version of a dosing system customers have the possibility of equipping the system with one or two dosing pumps. Beyond the basic configuration, such as low-pulsation dosing, priming aid, dirt filter and vessel for gauging the capacity by litres, a dosing quantity measurement and leak detection system on the dosing pump and assembly unit are possible. Besides an overflow valve, that protects the pipelines from impermissibly high pipe pressures, two flushing connectors enable the pump to be flushed through after dosing. Automated solutions with switch cabinet and PLC form a compact ready-to-operate dosing system.

The material variants for piping and seals in stainless steel or plastics also create flexibility in the applications.



Customer-specific dosing systems in industrial waste water treatment



CUSTOMER-SPECIFIC DOSING SYSTEMS

As an alternative to the standard system, every requirement can be planned and produced in a customer-specific dosing system. For this the staff of the System & Process Technology Team at Lutz-Jesco are at your side with their experience in planning and design. Profes-

sional manufacture as well as service and maintenance in later operation are a matter of course.

With a prefabricated dosing system also tested in detail, projects can not only be optimised with regard to time, the costs and the constant high quality are also a big plus.

PREPARATION STATION POLY-MADE-LINE

For the standardised Lutz-Jesco preparation and mixing stations for liquid and powder polymers, activated carbon as well as lime milk, the compact design has proven reliable. The new Poly-Made-line preparation stations for the preparation of liquid and also powdery products available on the market are prefabricated in the sizes 500 to 16,000 litres preparation capacity. Here one still distinguishes between discontinuous and continuous operating systems.

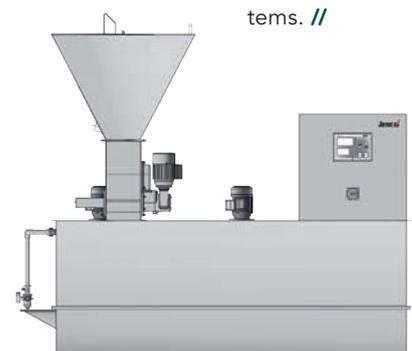
Preparation stations work fully auto-

matically and communicate with the process control centre over all known industrial networks. Consequently the control work is reduced to a minimum. All necessary process and fault messages are signalled locally on a panel, in addition all output signals can also be processed in external software.

To facilitate the handling on larger systems, Lutz-Jesco also provides the supply systems such as pneumatic delivery or BigBag emptying including crane systems. //



Customer-specific dosing systems as replacement for an installation, that was in operation for almost three decades with Lutz-Jesco pumps



Poly-Made-line: automatic preparation station for polymers

MODERNISATION IN THE RAMLINGEN WATERWORKS

REPLACEMENT OF ALMOST 40-YEAR OLD DOSING SYSTEM TECHNOLOGY IN THE WATER TREATMENT

The Ramlingen waterworks has been in operation since 1964. It is situated half way between Hanover and Celle and utilises part of the groundwater flowing away north in this region towards the glacial valley of the Aller.

Because of its constituents of iron, manganese, hydrogen sulphide, humic matter and surplus carbon dioxide, the groundwater – from which up to 18,000 m³ per day is pumped via a vertical filter well installation – must be treated with an output of 190 l/sec., so that it can be used as drinking water.

Besides a new physical high-performance neutralising plant, in which hydrogen sulphide and surplus carbon dioxide is extracted, a dosing system for caustic soda takes over this task for most of the other neutralising.

NEW FOR OLD

The existing plant is nevertheless getting old and no longer conforms to the state of technology. The Harzwasserwerke has therefore decided to completely replace the entire dosing system technology in the waterworks. A new compact design neutralising and flocculation plant has therefore been constructed next to the existing plant. This will shortly go into operation and take over from the old plant.

One of the many particular advantages of the new plant is that, for example, the neutralising and the associated oxygen supply can be carried out in a closed pipe system and no longer needs to be realised through an open reaction pool. Consequently the environmental influences can no longer affect the water quality.

THE MATCHING SOLUTION EVERY TIME

A large part of the newly installed dosing system technology is involved with the dosing of caustic soda, which replaces the old dosing system with lime milk. Here the company DFW Kunststoff und Anlagenbau GmbH from Osterholz-Scharmbeck has constructed two redundant dosing systems, whose tanks altogether have a capacity of 40,000 litres of caustic soda. Both systems run in alternating operation and are each equipped with a MEMDOS ZMR 140 and a MEMDOS E 50. According to requirements between 3 and 290 l/h can be dosed per system.

"We and the operator purposely decided on Lutz-Jesco, because we are simply very convinced of the quality and reliability of the dosing pumps!", explained



Old treatment plant with Jesco dosing pumps

Mr. Burghardt, CEO of DFW GmbH. Among other things, a special plus in the collaboration was the incredible flexibility of Lutz-Jesco, Mr. Burghardt continued. "In its compactness the system virtually constitutes a prototype. New modifications were constantly necessary during the construction phase and Lutz-Jesco thereby provided us with outstanding support!" Through a recalculation of the capacities, among other things already installed dosing pumps (MEMDOS ZMR 210) were exchanged and offset without any objection.

Besides the dosing pumps Lutz-Jesco also supplied the priming aids - as custom construction - and the pulsation dampers. In addition a flocculation aid system completed the profile of the plant. Here two MEMDOS E 110 take over the dosing of polyacrylamide.

"We are very satisfied with the collaboration with Lutz-Jesco and expect this cooperation in a similar manner for the next construction project, which we can gladly realise together as required." stated Mr. Burghardt finally.

If the dosing pumps uphold that which they have promised in the past, the plant will probably only need to be renewed all-round again in 40 years. //



Dosing systems from the company DFW Kunststoff- und Anlagenbau GmbH with MEMDOS pumps fitted

LIQUID-DIRECT-INJECTION WITH JESCO PISTON PUMPS

PROCESS FOR THE MANUFACTURE OF SNACKS AND BREAKFAST CEREALS

Who doesn't know them, the breakfast cereals and cheese puffs, jillies, wavy sticks, onion rings, cheese balls, flat bread or peanut puffs – they all have one thing in common, they are made with extruders.

For this a dough is used, that must have quite special toughness and elasticity. One mixes starch, protein, fat, sugar, fibrous substance and water in a certain ratio and places this mass in the extruder. There the dough is compressed and heated as a result. Temperatures develop up to more than 100 °C and pressures up to more than 100 bar. The trapped water naturally tries to evaporate, but cannot escape because of the pressure. Only after the outlet nozzle do steam bubbles form, which at the same time cool the material through the evaporation cold. The dough expands and solidifies. After a drying phase the little treats are ready.



By means of the so-called Direct Liquids Injection (DLI), a process developed by the company SchAAF Technologie GmbH, a few more creative modifications to the products can be achieved with regard to taste, colour and texture. The process enables the injection of a water-like quantity of liquid directly in the part of the process at pressures between 80 and 120 bar. The injected liquid modifies the dough composition

of the mass flow.

Since the dough expands differently with varying moisture and fat content, as a result multi-texture products can also be achieved. That means products that are harder/softer in some places or more coarsely bubbled/finely pored, in other words extruded materials, which represent completely innovative products for direct extrusion.

To do this a Lutz-Jesco piston pump of the type REKOS ZKR is used, that has been equipped with several special features. The dual pump head reduces the pulsation until no further extra damping is necessary. The dosing is carried out extremely reliably and precisely in order to realise a uniform product quality every time. //



TECNICA DE FLUIDOS – RELIABLE LOCAL SERVICE

PRESENTATION OF THE SPANISH AGENCY



Head office of Tecnica de Fluidos in Barcelona

The company Tecnica de Fluidos, the Spanish agency of Lutz-Jesco, was founded in 1976 in Barcelona.

Since then the company has been focussed on the sale of industrial pumps as well as water treatment plants. Today the family business employs over 50 employees in Spain, 10 in Portugal and 19 in France.

The Tecnica de Fluidos Group has represented Lutz-Jesco in all three countries since 2006. Because of their huge ware-

house with fully equipped service centres in Barcelona, Paris, Lisbon and Madrid, the company can provide outstanding service and short delivery times.

The rest of the portfolio also contains only first class manufacturers (also including Lutz Pumpen GmbH). With the experienced employees of the group of companies and the continuous investments in the operation, Tecnica de Fluidos can also guarantee future growth for Lutz-Jesco in southwest Europe. //

CONVENTION AND EXHIBITION DATES

+ Wasser Berlin, 02.05. – 05.05.11, Berlin

+ 10. Regenwassertage, 10.05. – 11.05.11, Bad Soden

+ parts2clean, 25.10. – 27.10.11, Stuttgart

+ aquanale, 26.10. – 29.10.11, Cologne



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