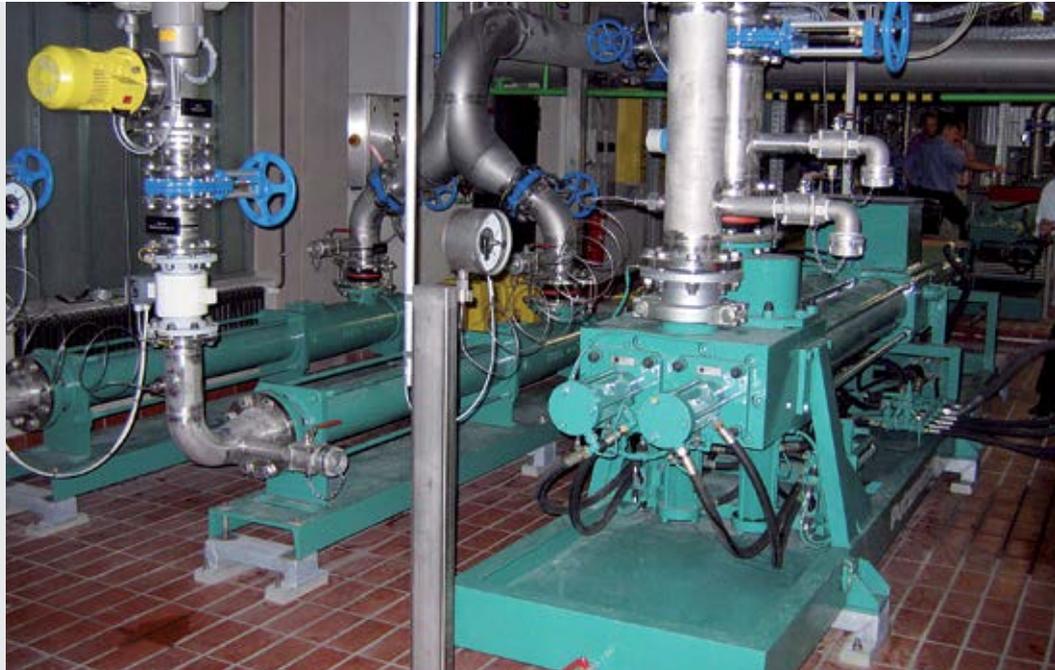


# Feeding chamber filter presses using HSP valve pumps at the Augsburg sewage treatment plant

## Using high pressure for the optimum result

The Augsburg sewage treatment plant is designed to cope with 800,000 residents, including a population equivalent of approx. 450,000 from industry and business, and has an average daily influx of 150,000 m<sup>3</sup> of waste water. In the drive to use the most up-to-date technology in sludge treatment, in 2003, 2005 and 2006, Putzmeister type HSP 1470 valve pumps, offering a charging pressure of 3 MPa (435 psi), were installed to feed three high-pressure chamber filter presses.



Previously, the flocked sewage sludge (5 – 7 % dry solids) was imported at a maximum of 1.8 MPa (216 psi) using eccentric screw pumps, thus achieving a dry solids content of 25 to a maximum of 28 %. The 36,000 t/a of mechanically dewatered sewage sludge is then conveyed to a thermal recycling process for co-incineration, so that an increase in the dry solids content to up to 35 % was projected. This objective is achieved by using the HSP pumps and new chamber filter presses.



HSP seat valve pump

**Above:** HSP 1470; to the left the replaced eccentric screw pump



Chamber filter press with feed supply line, NP 150 / NP 40, max. 3 MPa (435 psi)

## Machine equipment

- 3 HSP 1470 type valve pumps
- 3 HA 30 CE type hydraulic power packs
- 3 control cabinets with PLC 314 C – 2 DP controller



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## Know how

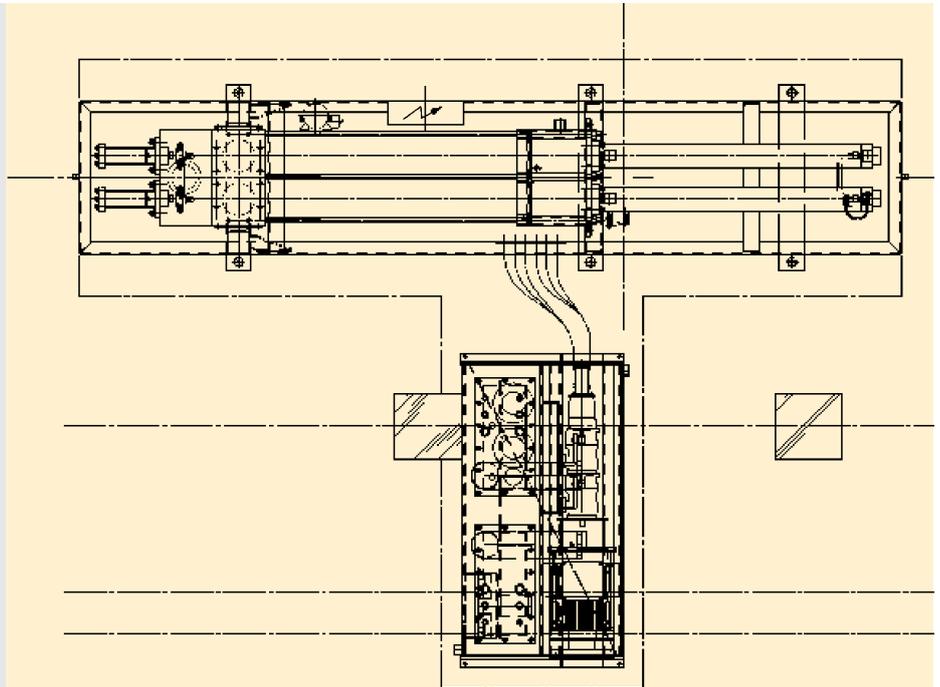
- Putzmeister controller with smoothed pumping flow path, which achieves pressure fluctuations of less than  $\pm 0.05$  MPa (7.3 psi)
- Dual-circuit control with a travel sensor in the drive cylinders
- Hydraulically actuated poppet valves

## Conclusion

When feeding high-pressure chamber filter presses, HSP valve pumps with a controller developed by Putzmeister guarantee low-fluctuation and flock-conserving pumping of the conditioned sewage sludge.

### Delivery rates / pressures

Control range	5 – 25 m <sup>3</sup> /h
Output max.	25 m <sup>3</sup> /h against 0.8 MPa (116 psi) (filling phase)
Output min.	5 m <sup>3</sup> /h against 3 MPa (435 psi) (holding phase)
Piston stroke	1400 mm
Filling level	95 %



Above: HA 30 CE, HSP 1470 in the background

Left: Seat valve pump HSP 1470



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