

CASE STUDY

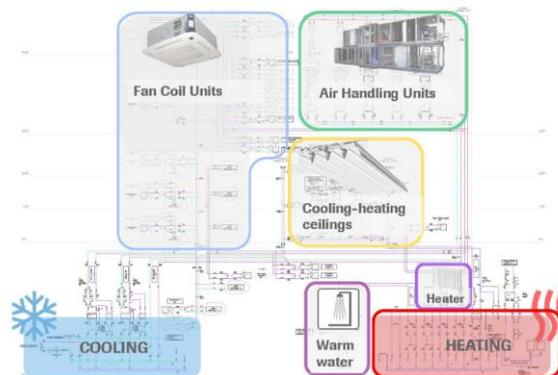
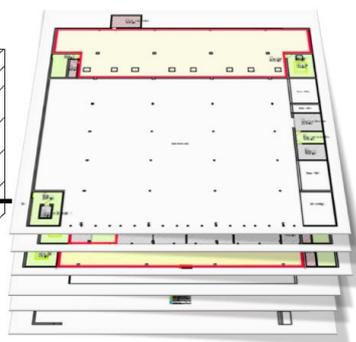
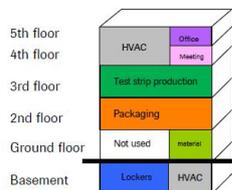


BAELZ PRODUCT: Jet pump 480
INDUSTRY: Pharmaceutical
COMPANY: Leading pharmaceutical company
COUNTRY: Germany, southeastern region

INITIAL SITUATION

A leading pharmaceutical company has decided to construct a new modular production building at its site with the following structure:

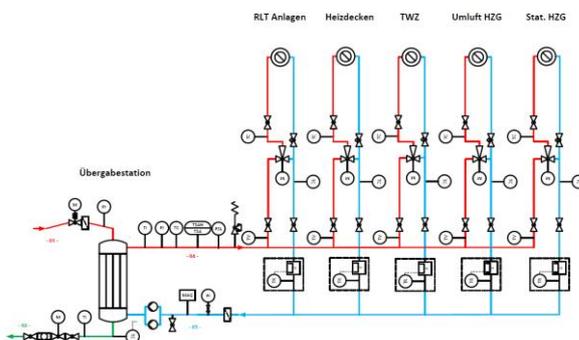
Building Concept



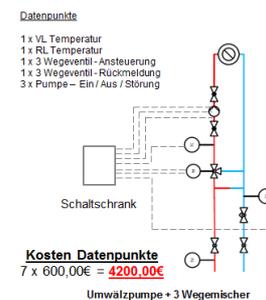
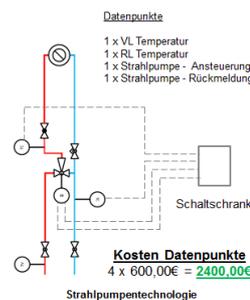
The building is supplied with cold water, cooling water, steam, drinking water and compressed air by a central power plant. Until now, all buildings at the site were planned conventionally. In the case of the production building, however, the decision was taken to utilize jet pump technology for the first time. So far around 50 to 60 steam/hot water solutions with condensate accumulation control have been installed, these forming the optimum basis for an economical steam/condensate circulation at the site.

TECHNICAL MODIFICATIONS

The use of jet pump technology enabled the number of fittings and hence also the number of data points to be reduced significantly. The following figures show the optimized hydraulics and the savings potential of 1800 euros solely in data point costs per group.



Anzahl der Datenpunkte in einer Gruppe



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SAVINGS / PROFITABILITY

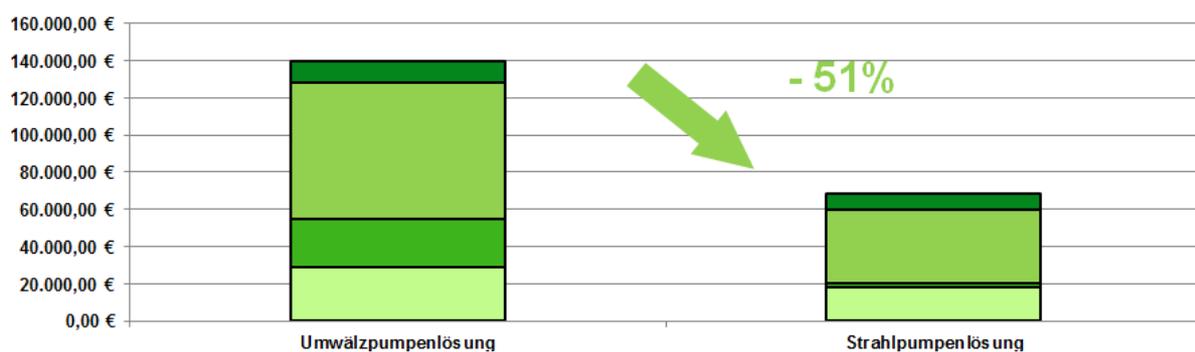
After successful technical implementation, the project involved a comprehensive viability assessment with detailed consideration of the following costs: CS_jetpump_0001_an_MSC_1708

- **Planning costs** (HOAI fee band 2 (Technology))
- **Energy costs** (DIN V 18599 Part 5 Clause 6.2.1)
- **Investment costs** (Taken from gross price lists of standard suppliers)
- **Service and maintenance costs*** (VDI 2067)

The total **life cycle costs** can be derived from the above costs (GEFMA 220). The example shown compares the jet pump solution with conventional solutions over 10 years. This reveals savings amounting to 51%.

Life cycle costs over 10 years – main distribution

	Umwälzpumpenlösung	Strahlpumpenlösung	Einsparung in €	Einsparung in %
Investitionskosten	72.889,41€	39.073,69€	33.815,72€	46%
Planungskosten	11.810,00€	8.913,00€	2.897,00€	25%
Nutzungsdauer / Austausch	25.907,29€	2.190,83€	23.716,46€	92%
Energie- und Wartungskosten	29.055,22€	18.273,97€	10.781,26€	37%
Lebenszykluskosten 10 Jahre	139.661,92€	68.451,49€	71.210,44€	51%



Overview of the technology

Customer feedback regarding the project:

- Economic advantages
- Application for admixture control
- Robust system
- Early involvement of colleagues in the maintenance area
- Intensive collaboration with the installation company
- Support from the manufacturer