



## A premier discipline: increasing reliability and data security in data centres

Sector: IT, data centres

Reading time: three minutes

A major software developer from the Rhine-Neckar metropolitan region is using its data centres to form the basis for data hosting on behalf of its global customers. An exceptionally high value is therefore placed on reliability and data security.

### **Greater security regarding the mains backup systems**

LAE was commissioned to completely modernise the electrical control system during expansion of the storage facility to reduce the risk of a systems failure and to increase data security.

The storage facility is responsible for supplying fuel to the mains backup systems. These guarantee availability of the data centres in the event of a power failure.

### **Expansion required a re-evaluation of the facility**

The storage facility had until now consisted of a total of two oil tanks and a control system for the entire fuel supply to the mains backup systems. A third tank was to be added to the existing storage facility to provide greater redundancy.

New concepts relating to availability of the mains backup systems were developed and evaluated during a joint assessment of the existing facility.

### **Individual structure for optimum customer benefit**

LAE worked with the customer to define a new functional layout. This consisted of an integrated system structure, which guarantees optimum customer benefits from the perspective of equipment availability and operation. The power supply, the control system and the distribution in new control cabinets form a logical, cross-functional virtual structure in the systems that now ensures maximum system availability.

The system was divided into different functional units to ensure faster and clearer troubleshooting. The search for faults and pending maintenance can therefore be reduced to individual units.

### **Autonomous functional units for maximum system availability**

Just one control system for all system components existed prior to the conversion. Now each functional group has a separate controller. This ensures maximum system availability at all times.

### **Outstanding performance during implementation in ongoing operation – autonomous conversion steps for constant system availability**

The challenge for LAE was that the mains backup systems had to be constantly ready for use. LAE's work was therefore not permitted to affect system availability at any time. Each individual conversion step had to be planned in advance in such a way that the systems could be put into operation within minutes – which required a very high level of preparation, planning and refinement. All conversion steps had to be performed independently of each other.

### **Transparency leads to higher operational safety**

The LAE team additionally realised fully manual operation by means of a touch panel complying with the latest standards. A bus connection to the existing control system enables complete operability and system overview from the control room. Activation for remote support is now also possible at any time.