

Ready for modernisation

The matter of functional machine safety is of crucial importance to systems optimiser LAE.

LAE Engineering GmbH from Nussloch near Heidelberg also focuses on the safety of its staff at customer's premises when it comes to processing system modernisation. "That's why we had some of our employees certified as functional (industrial) safety engineers this year," explains sales manager Frank Kramer in an interview with C2. "This is essential in relation to our core expertise – retrofits and modernisations of processing systems." People who develop, construct or maintain such equipment must be familiar with the relevant safety standards to avoid errors and to manage unavoidable risks according to the requirements of the relevant standard. The extent of risk mitigation is quantified using the SIL (safety integrity level) or PL (performance level) measuring units. Determining the required risk minimisation and implementing it in compliance with the standards form the main focus of this training.

Keeping up with ever-increasing safety requirements

"The relevant directives, laws, regulations and standards are increasingly being amended, supplemented or updated," says Kramer. "The operators of ageing production systems are forced to negotiate the ever-expanding landscape of paragraphs." LAE's experience suggests that these companies often lack the expertise or capacity to answer the important question of whether safety at their plants is still adequate.



Heiko Ziegler,
Project safety and CE manager at LAE

Over 90% of industrial accidents within the European Union have been caused by organisational errors since 1982. Modernisation experts are convinced that the importance of organisational and management quality should not be underestimated.

"Our experience in safety and management systems means that we at LAE ensure these risks are minimised", Kramer is convinced. "We feel at home both in mechanical engineering, where hazards are usually clearly identifiable, and in process engineering, where hazards are often more complex and difficult to deal with."

Reversal of the burden of proof in favour of the operator

Laws and regulations must be strictly observed. Compliance with standards and recommendations can also lead to the reversal of the burden of proof in favour of the operator. Should technical or economic reasons result in non-compliance with the requirements of standards or recommendations, the risk to the employee must nevertheless be



kept at the same, if not at a lower level than the standard would require. Complete documentation is essential to provide evidence that employee safety has been maintained at a reasonable level – regardless of whether or not standards have been complied with.

A CE declaration of conformity from LAE for marking control cabinets

"We're not modernising everything, but everything is perfect", says Frank Kramer confidently. "We're already assisting our customers not only with in-depth advice, but also with competent support throughout the entire CE conformity process. There

are significant synergies when customers involve us as early as possible in projects that require CE conformity."

LAE experience suggests that many work packages to be implemented on the path to CE conformity are virtually ideal for teamwork. They should where possible be performed in cooperation between the operator and the implementer. These work packages include:

- ④ Risk assessment
- ④ Risk analysis
- ④ Determination and implementation of state-of-the-art technical protection measures
- ④ Research / analysis of standards
- ④ Safety matrix and safety-related software development according to the V model
- ④ Technical documentation
- ④ CE labelling

The LAE experts feel it is crucial that a safe, modern and reliable processing system is available to the customer after completion of their work. ■