When introducing a new production plant, the priority is fast time-to-market and operational reliability. E-PASS supports these goals through the efficient development of software. The Eisenmann PLC Application Software Standard comprises highly standardized software modules with outstanding functionality and powerful diagnostic capabilities.

It is based on an end-to-end development concept that combines the benefits of structured programming guidelines with the flexibility required for plant engineering. E-PASS was developed by Eisenmann in close collaboration with Siemens, and is based on the TIA (Totally Integrated Automation) portal and the S7-1500 controller generation.

E-PASS leverages integrated engineering tools to rapidly generate plant software. These tools guarantee fast development and high software quality. The Software Architect uses standardized technology modules and can directly access engineering data from other sources (e.g. EPLAN), enabling the largely automatic generation of plant software. At the end of the process, the CodeAnalyzer checks that the software is complete and complies with relevant programming guidelines. This ensures that extensive software programs for complex plants, comprising code supplied by multiple development teams, meet predefined quality criteria.

**In-depth testing accelerates implementation**
Rapid implementation of new production plant, up to and including commissioning, is key to ensuring cost-efficiency. E-PASS makes a significant contribution to this goal by enabling virtual commissioning. The entire plant software, linked to the visualization system to be used during actual operation, can be tested thoroughly and comprehensively via simulation. As a result, potential coding errors can be identified and rectified at an early stage, expediting project completion and physical on-site commissioning.

Last but not least, this method minimizes project risk, starting at the physical commissioning stage. A further benefit is reduced downtime: Users can create complex scenarios for training purposes based on a complete, digital model of the plant. This means new employees can be trained using realistic simulations without the risk of a plant malfunction during ongoing operations.
Advantages at a glance
- Software Architect for error-free and cost-effective software development
- CodeAnalyzer for robust quality assurance
- Reduced downtime thanks to comprehensive diagnostics functionality
- Seamless integration with E-MES and other production-control systems
- Virtual commissioning for accelerated time-to-market
- Realistic training without the risk of production outages
- Full software transparency through an open-source philosophy