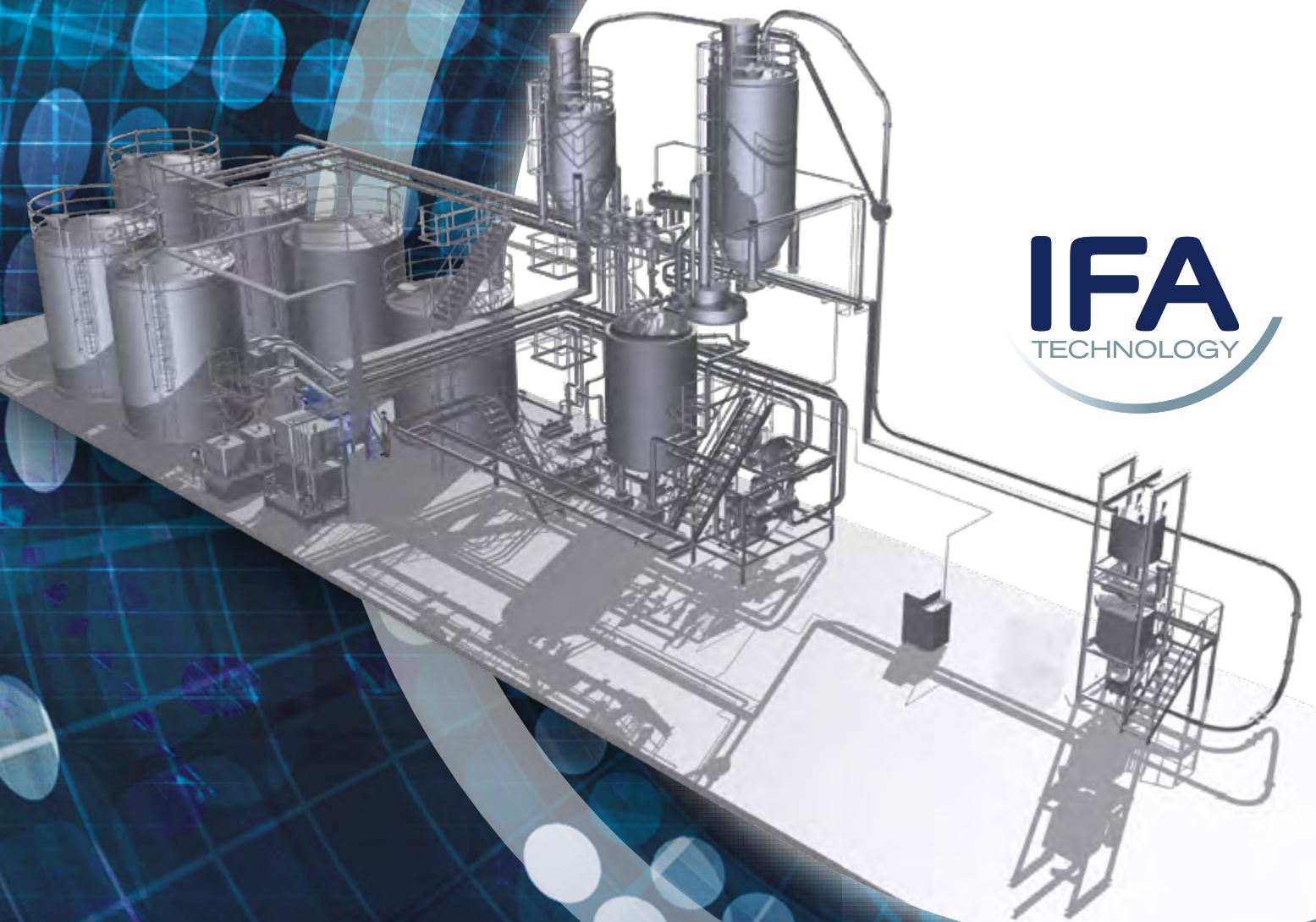


# REACTION SYSTEMS FOR RESIN AND GLUE PRODUCTION



**IFA**  
TECHNOLOGY

EXPERIENCE - INNOVATION - TECHNOLOGY  
STORING CONVEYING WEIGHING MIXING DOSING



## YOUR ADVANTAGES WITH IFA TECHNOLOGY

We are a global leader in resin production - which makes us your competent partner for complete solutions. Trust forms the basis of our business relationships and that is why we pass on our know-how and our developments in technology and systems engineering to our customers.

Innovative technologies are the key to effective resin production. For wood panel manufacturers and surface finishers, IFA Technology offers the right resins to produce high-quality end products.

The resins are typically based on formaldehyde - but special requirements such as **low emission, moisture resistant, flame retardant** or **antibacterial** (fungus and mould free) are also feasible. We make our knowledge and experience available to you.

Technology, recipe and production plant can be offered as a package. The product is always in the foreground. Thanks to our technical advice we can test the desired properties in advance in the laboratory and put them to the test under realistic production conditions.

TECHNOLOGY UF, UMF, MF, MUF, PF

SPECIFIC PROPERTIES E0, CARB P2, F\*\*\*\*



## SAFETY AS TOP PRIORITY

Chemical process plants are subject to strict safety regulations. Our target-oriented safety concepts always correspond to the latest state of the art and are continuously optimised with regard to the cost-benefit ratio. They take into account both the respective legal regulations and the operational and economic circumstances of your company.

- Preparation of risk assessments in accordance with EC Machinery Directive MD (2006/42/EC) and HAZOP
- Determination of the required performance level according to EN ISO 13849-1 and the safety integrity level or SIL requirements (Safety Integrity Level) according to IEC 61508/61511
- IT security of our machines and systems according to DIN IEC 62443

## EXPLOSION PROTECTION CONCEPTS

Our specialists design safe manufacturing processes that are tailored to the raw material used and its application. In compliance with the national EC Explosion Protection Directive 2014/34/EU and the international directives such as ATEX/NFPA/NEC/IECEX, protective measures are elaborated in careful planning.

- Ignition source analysis and ignition hazard assessment according to EN 1127 and EN 15198
- Assessment of explosion hazards during processing and handling of flammable gases, vapours, liquids and dusts
- Ignition hazard assessment as a result of electrostatic charging during handling and processing of flammable or explosive substances



# THE FOCUS IS ON PROCESS ENGINEERING

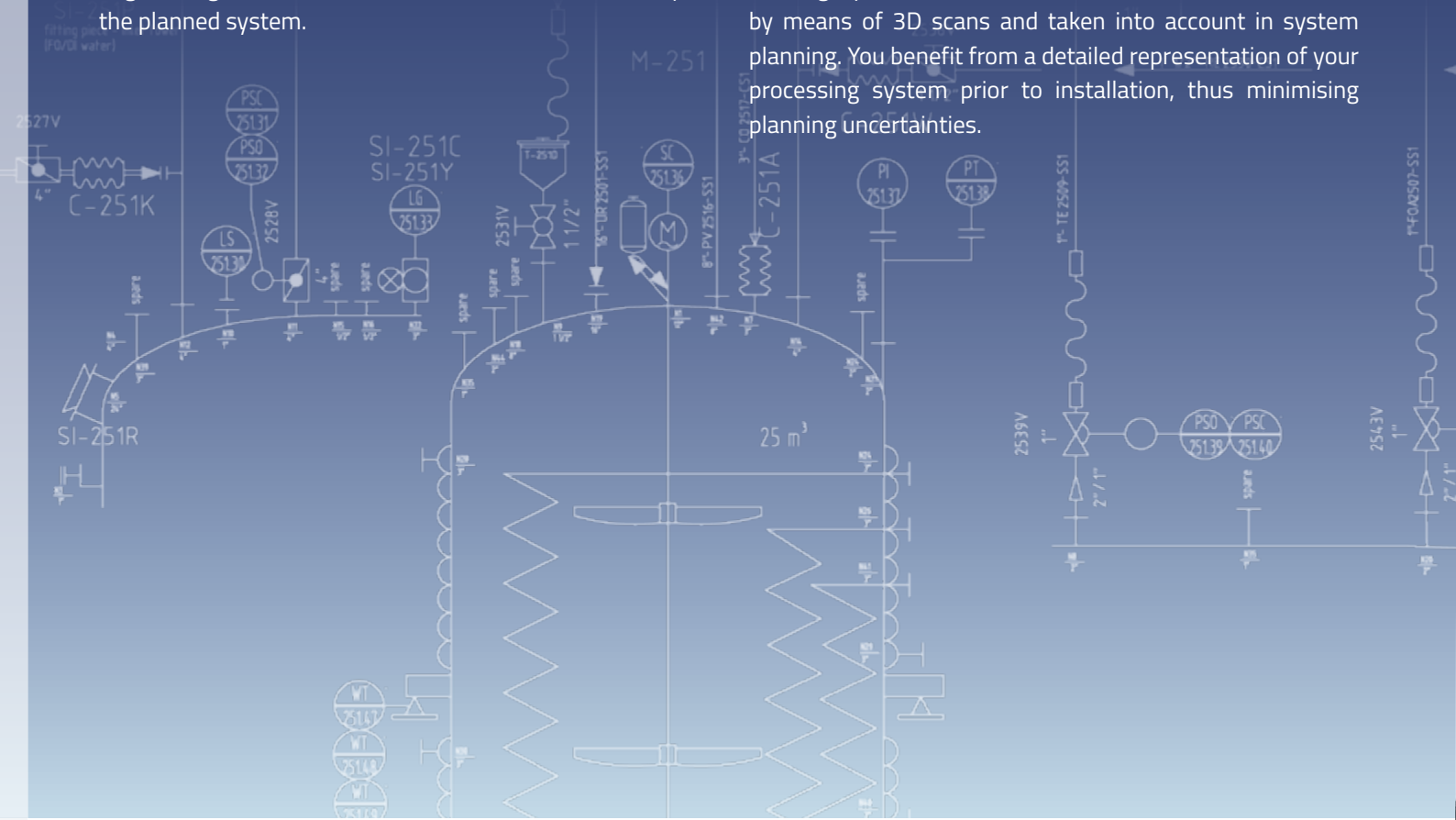
The core business of IFA Technology is the systematic development of processes to ensure the optimal use of systems.

Innovative technologies and specially developed concepts offer our customers important competitive advantages in order to assert themselves on the market.

Already in the development phase we support you in basic engineering in order to calculate the economic efficiency of the planned system.

## ENGINEERING / DETAILED DESIGN

Our process engineers will provide you with intensive support throughout the entire duration of the project. For project implementation we work with state-of-the-art software; calculations are carried out on computer-aided processing systems. In order to visualise your plant in virtual reality, all details are implemented in three-dimensional planning. Existing systems are recorded accurate to the millimetre by means of 3D scans and taken into account in system planning. You benefit from a detailed representation of your processing system prior to installation, thus minimising planning uncertainties.



DEVELOPMENT ▷ PLANNING ▷ AUTOMATION ▷ INSTALLATION ▷ COMMISSIONING ▷ START-UP ▷ SERVICE





# POLYCONDENSATION PLANTS

Tailor-made manufacturing plants for the production of a wide range of resins, glues, additives and emulsions.

## REACTION SYSTEMS FOR ADDED SAFETY AND EFFICIENCY

The manufacture of chemical process reactors requires many years of experience and comprehensive expertise. During production, the reaction vessel is exposed to severe temperature and pressure fluctuations, which must already be taken into account during dimensioning and manufacture.

## SYSTEMS ENGINEERING MADE BY IFA TECHNOLOGY

- Effective agitator design
- Energy-efficient drives
- Reduced temperature control phases
- Online recording of the pH value

## COMPLETE SOLUTIONS FOR ALL REQUIREMENTS

- |  |  |
|--|--|
| <b>Tank farm and pipeline construction</b>     | ▷ Resins, acids, lyes, formaldehyde, diethylene glycol |
| <b>Bulk material handling</b>                  | ▷ Urea, melamine, sugar, powder                        |
| <b>Heating and refrigeration engineering</b>   | ▷ Cooling water, steam, thermal oil                    |
| <b>Energy concepts</b>                         | ▷ Heat recovery  |
| <b>Water treatment, waste water filtration</b> | ▷ Process water, demineralised water                   |
| <b>Exhaust air purification</b>                | ▷ Wet scrubbers  |





# STATE-OF-THE ART AUTOMATION ENGINEERING

In addition to standardised control concepts, IFA Technology also develops customised system controls. Our specialists cover the complete range of automation technology, from in-house switch cabinet construction to professional commissioning.

Aligned with systems from Siemens SIMATIC and Allen Bradley, IFA Technology supplies complex system controls and visualisation solutions that can be flexibly adapted to the needs of system operators. Another focus is on the design and manufacture of control systems for operation with explosive goods and systems with UL approval.

## RELIABLE CONTROL SYSTEMS

Owing to our extensive expertise, we optimise manufacturing processes to keep batch changes and cycle times as short as possible in order to increase the efficiency of your system. At the same time, we ensure that availability and product quality are maintained without impairing system safety.

## INNOVATIVE SYSTEM SOLUTIONS

- Integrated mol/ratio calculators
- High-precision dosing systems
- Consumption volume recording
- Batch logging
- Batch traceability over the entire production cycle

## PROCESS AUTOMATION – SMART IFA

Smart IFA is a holistic system for the fully automatic monitoring and analysis of process data.

- Customised databases for recording production data with interface integration to common MES and ERP systems.
- Smart Network for process monitoring on mobile devices
- Remote maintenance access to the system control according to current safety standards





## SERVICES

Thanks to the individual support of our employees, our customers still benefit from our comprehensive service long after commissioning has been completed. Through competent advice, we support you in the preparation of maintenance plans and maintenance work. Our rapid spare parts processing offers ideal availability of process-relevant components.

## MODERNISATION

The focus of modernisation is on a sustained increase in productivity with the shortest possible downtime of production. Whether revision work, changes of use, conversion or capacity expansion. Our experienced team will assist you with every single step. Thanks to a worldwide network, we have access to country-specific services. In this way, we guarantee an optimal course of modernisation activities and a timely coordination of deliveries.

We combine innovative technologies with modern system engineering and offer the entire range up to the turnkey resin production system.

## SMART IFA



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# EVERYTHING FROM A SINGLE SOURCE

- ▷ MADE IN GERMANY
- ▷ GLOBAL PRESENCE
- ▷ OBSERVATION OF INTERNATIONAL GUIDELINES
- ▷ ON-SITE TRAINING
- ▷ SERVICE AND SUPPORT
- ▷ TURNKEY INSTALLATIONS
- ▷ SMART IFA



CE



OSHA



ERC

## IFA TECHNOLOGY GMBH

Jurastraße 10, 86641 Rain am Lech, Germany  
Tel. +49 9090 70570-0, [info@ifa-technology.de](mailto:info@ifa-technology.de)