distributing & controlling
system solutions
In many sectors of industry, inflammable substances such as gases, vapours or mists escape during manufacture, processing, transport and storage. Inflammable dusts are produced in some processes. These inflammable gases, vapours, mists and dusts can form a potentially explosive atmosphere with the oxygen in the air. If this atmosphere ignites, explosions occur that can cause serious injuries and damage. We are uncompromising in the effective prevention of this situation occurring, as your safety is what we do best. Components and systems from R.STAHL are based on decades of experience and our comprehensive know-how. Without problems they ensure work processes in potentially explosive atmospheres are one hundred percent safe. We provide custom, technically advanced solutions for every application in potentially explosive atmospheres, as well as comprehensive services related to the explosion protection sector. From oil platforms to chemical plant, from grain silo to pharmaceutical, environmental and foodstuff installations, R.STAHL is your partner on who you can rely without reservation.
competence where safety is uncompromising

the most important types of protection

hundred percent quality tested

together customer-specific system solutions

from identifying the solution to the finished product

certified worldwide approvals

safety guaranteed with label and manual

without borders for every application
Parts that could ignite a potentially explosive atmosphere are fitted in an enclosure that will withstand the pressure of an explosion inside it and prevent the transfer of the explosion to the surroundings. This type of protection is called intrinsic safety (Ex i). The type of protection Ex d is used in areas with an inflammable dust. The entry of the dust is prevented by the sealing of the enclosure. The equipment used in the potentially explosive atmosphere contains only explosion-protected components. The type of protection Ex e is used in areas with an inflammable gas. The type of protection Ex p is used in areas with an inflammable gas or dust. The entry of the gas or dust is prevented by the sealing of the enclosure. The equipment used in the potentially explosive atmosphere contains only explosion-protected components.
Worldwide R.STAHL is a pioneer in the explosion protection sector. The development and production of electrical components and systems for potentially explosive atmospheres is rigorously advanced. Spectacular new developments and innovative products are the consequence. In parallel, the specialists at R.STAHL work together with national and international committees to define new principles and continually improve safety regulations. For us safety standards are not barriers, but challenges. We not only comply with all standards, we are involved in their definition and we set new standards. We are the only organisation worldwide to cover all types of protection. We are therefore able to design and implement for every market in exact accordance with local regulations and requirements. Our know-how also covers related areas of safety technology such as SIL and FDA.

> All types of protection covered
> Over 3000 certifications for explosion protection worldwide
> Over 70 active patents
> Numerous publications in the international technical press
> Member of many international standardisation committees, technical committees and working groups (Profibus, HART Foundation fieldbus, etc.)
> Ex-Magazine
> Brochures on basic principles (explosion protection, dust Ex, obligations and tasks)
> Contributions to various specialist books
> Product-neutral seminars
Systems and plants for potentially explosive atmospheres are subject to strict safety regulations. R.STAHL provides custom, technically advanced solutions including all the related advice and service. In our laboratory, accredited by independent test centres and continually checked by the Physikalisch-Technische Bundesanstalt (the national standards laboratory of Germany), all the important tests can be performed directly at any time. During the entire development and production phase, the quality management at R.STAHL safeguards the high quality of the products. Function tests, endurance and safety tests in accordance with the latest directives and standards are a matter of course. The competent staff at R.STAHL are conscious of their responsibility and of quality at every stage of production. More than 3500 regularly calibrated, mechanical and electrical instruments, computer-based 3D measuring methods as well as modern workplaces safeguard and guarantee the accuracy of the tests.
The rapid rate of change in research, development and the regulatory framework, as well as the continuous structural change of recent years require versatile, committed customer support. R.STAHL is tackling this challenge. We offer our customers constructive advice and support. It is not always easy to find the right, economic solutions in the explosion protection sector. With our many years of experience and our international contacts, we are able to develop a safe, tailor-made system solution together with the customer. Here our knowledge and support range beyond our own product portfolio and also include the organisation of the necessary services from other specialist areas. During this collaboration we are in continuous contact. Project management and production work together closely in modern competence centres. Whenever our customers want to know something about their project, experienced contacts of R.STAHL will provide information at any time.
solution identification

- Control equipment
- Controls and indicators, equipment for installation in control boxes
- HMI (Human Machine Interfaces)
- Open HMI panels to work directly on a PLC
- Automation products
- Safety barriers INTRINSPAK, remote I/O IS1, Ex i isolators ISpac, fieldbus technology ISbus

production

- Preparation and development of individual solutions together with the customer
- Analysis of customer-specific production processes and requirements
- Engineers and software specialists with international experience
- Comprehensive reference database
- Several production sites worldwide that are always state-of-the-art
- Experienced craftsmen, supervisors and engineers
- Quality management from goods receipt to final acceptance
- ATEX recognition of the quality management system by the PTB
- ISO 9001:2000 certified
- Direct channels, flexible production organisation

acceptance

- FAT in accordance with customer requirements
- Modern inspection and test equipment
- Intensive, specialist support
- Personnel regularly trained

use

- Based on the extensive project documentation
- Modern local logistics centres worldwide
- Comprehensive after-sales service
- International training courses
Machine control system with motor starter

Power distribution

CUBEx control panel

> Combination of a connection chamber with HMI
> 3 mounting levels inside the flameproof housing
> Mounting of electrical equipment in the cover
> The power circuits and the controls, including IS components
> Integration or installation equipment
> Most compact design
R. STAHL is a world leading manufacturer of explosion protected components and systems. We provide our customers all over the world with specific, technically advanced solutions including all the related advice and service. This situation requires international collaboration during the planning, installation and operation of these system solutions. The necessary components must be matched to all conditions approved worldwide and the conditions in the specific case. The specialists at R. STAHL also work together with national and international committees and with their many years of experience are actively involved in the preparation and further development of improved safety regulations. We are therefore able to design, plan and manufacture for every market in exact accordance with local regulations and requirements. International certificates, approvals and patents underline our competence and make it possible to use all R. STAHL products safely and anywhere in the world, even in the harshest conditions. You can rely on us!

Certified manufacturing skills
- Quality management system according to ATEX
- Switch gear, control gear and control equipment
- Control and distribution switch gear
- Plugs and sockets
- Installation equipment, terminal boxes
- Signalling and monitoring equipment
- Components for field bus systems
- Luminaries
- Decisive types of protection (flame-proof enclosure, increased safety, intrinsically safety, encapsulation, powderfilling, pressurised apparatus)

Certified components and systems
- IECEX, NEC, CENELEC
- and many others

Certified according to ISO 9001-2000 in regards to design, manufacture and sale
- Equipment and systems for measurement, control, operating and monitoring, powerdistribution, protection and illumination in hazardous areas
- Explosion proof and industrial control and distribution systems for (petro) chemical industries
Safety in potentially explosive atmospheres can only be ensured by good, close collaboration between all involved. The operating organisation is responsible for the safety of its plant. R.STAHL does everything to support the customer with this responsibility. From the start, from the evaluation of the risks of explosion to initial placing in operation, competent staff are available to help our customers. With our many years of experience and our wide-ranging knowledge, we are able to develop and produce a one hundred percent safe solution for potentially explosive atmospheres that is also simple and economic. As a certified manufacturer of explosion protected components and systems, we ensure that every device matches the tested design. All devices from R.STAHL are marked with type plates that contain the most important technical data. Comprehensive operating instructions are supplied as a standard; detailed documentation for system solutions is provided additionally. This enables the operating organization to set up maintenance schedules for cost effective regular inspections and maintenance. With seminars and information material we help our customers keep up to date in the area of explosion protection.
R. STAHL is at home the world over and we are always somewhere near you. With great commitment, competent teams tackle our customers’ wishes and ensure they comply with national conditions and the conditions in the specific environment. Irrespective of whether hot or cold, whether caustic or subject to abrasion, the system solutions from R. STAHL are always safe and explosion protected. Worldwide these solutions are used in the pharmaceutical industry, in harsh offshore operations, at extreme depths or extremely high temperatures. All standard components comply with ingress protection IP66, suitable for all typical applications. For products that are used offshore, for instance, enclosures are available in high quality aluminium with a copper content of less than 0.5%, high quality stainless steel or salt-water resistant plastic. The formation of condensed water inside the enclosure can be effectively prevented by heating elements or fans. Our concepts have already been successfully tested and used in projects around the world.