

YOUR PROFESSIONAL PARTNER

Get an overview of the services we offer. We specialise in comprehensive solutions for industrial plant engineering, with high quality and safety standards. From planning and project management to the commissioning of plants, we produce first-rate results, even under difficult conditions. RAK Industrial Consulting stands for on-time processing, smooth procedures and safety of the highest standard, at home or abroad.

Our mission is industrial field engineering and commissioning, targeted consulting, professional service and customer-oriented training included. Our customers choose us because of our accessibility, quick response times, and excellent on site expertise. We treat our customers and partners with respect and appreciation, always searching for the optimum solution that promises lasting success. We convince customers (also in the long term) with our strong commitment and absolute reliability.

CRYOGENIC SERVICE & FIELD ENGINEERING

For years RAK Industrial Consulting has focussed on international field engineering and service, construction and commissioning management of cryogenic plants for helium, neon and hydrogen. Our expert customer service with its wide range of repair, maintenance and servicing specialties makes us the ideal partner for successful and efficient cryogenic plant operation with 24-hour standby availability for malfunctions and emergencies.



Our services for cryogenic service & field engineering are:

- RAK troubleshooting and error diagnostics in cryogenic plants

RAK offers you professional error diagnostics support in your cryogenic plant. For anything from loss of power to a total breakdown, we provide comprehensive assistance in the analysis and rectification of the error/ malfunction and offer you the entire range of error diagnostics for all components:

- error diagnostics in processing cold compressors
- sensors and actuators
- vessels and heat exchangers
- and control components

Our approach when searching for errors is systematically analytical and structured.

The following always precede the taking of any action:

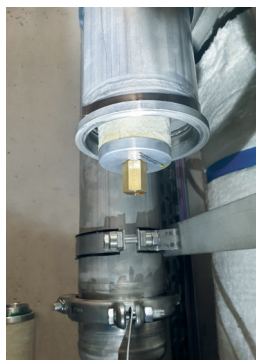
- plant data (trend charts, operating manuals) is collected to obtain data;
- an advance error analysis and preparation of a repair concept
- coordination with the client regarding work on location, implementation, required materials and spare parts
- performance of error diagnostics and repairs at the customer location
- and re-commissioning of the plant

Comprehensive mechanical supervision, construction and commissioning management

- Installation sequence & scheduling with MS Project
- interface between the parties involved in the project, maintenance, operation, and construction as well as the hired external companies/ contractors
- support in compliance with and the implementation of deadlines, construction and project meetings

- construction & installation management
- piping inspections according to PID
- supervision and implementation of pressure & leak tests
- process room conditioning, removal of foreign gases
- functionality tests and test runs
- Commissioning and re-commissioning of cryogenic plants
- working through commissioning checklists including loopcheck and the testing of hard-wired safety shutdown systems
- recording and documentation of operating data, speed, pressure, temperature, current, etc.
- adjustment of operating parameters
- client training,
- performance tests and acceptance procedures





Pipe inspection technology and removal of oil contamination for cryogenic plants

- Performance of pipe inspections using endoscopy in cases of unexpected pressure loss or unusual plant behaviour
- summary of the actual condition for the process room for documentation purposes
- utilisation of state-of-the-art inspection technology
- endoscopy of pipelines up to 50m including high-resolution photo or video recordings
- inspection of component interiors, valves, filters, vessels, etc.
- determination of the extent of oil contamination, preparation of a repair concept
- performance of the pipe and component cleaning work utilising state-of-the-art technology

Cryogenic maintenance and repair work

- Support in carrying out maintenance work on your refrigeration plant
- replacement and changeover of adsorption and filter materials
- replacement of sealing kits
- inspection of rotating parts
- preparation of technical reports
- materials and wear parts
- performance of various repairs on refrigeration plants, ranging from the replacement of an IO module on PLCs, to the replacement of a heat exchanger
- removal of impurities from the process room

Professional support for modifications and retrofitting

- Preparation of concepts for modernisation and performance enhancement in existing plants
- supervision of the implementation
- migration of the S7-300 and S7-400 PLCs to the new S7-1500 PLC
- migration of hardware and software
- competent and reliable and all from one provider
- optional: modernisation of control systems including wear components
- replacement of electrical cabinets, sensors, actuators, field wiring

Support for cryogenic operations

- Operational support and optimisation of process engineering plants
- assistance with stable plant operation
- adaptation of operating parameters for cleaning and experimental operation
- remote service support

Technical training, technical support, training sessions and courses for:

- pressurised tanks and fittings that maintain pressure
- mechanical and electrical components
- compressing machinery
- expansion turbines
- cold compressors and pumps
- pressure checks and leak detection
- cryogenics, cryogenic and liquefied gasses
- commissioning of industrial and research plants
- auxiliary devices: compressed air, cooling water, and others

Construction management
and commissioning of

CRYOGENICS, OIL, GAS & CHEMICAL

We prepare concepts for industrial plants precisely according to the respective specifications. If desired we can also employ prefabricated, highly modular units, which can be easily integrated into existing or planned industrial plants.

RAK Industrial Consulting embodies the latest in industry specific know how and know-do, and our employees and partners are trained regularly look forward to flawless, problem-free project handling all from one provider. Our mission is industrial plant engineering and commissioning, targeted consulting, professional service and customer-oriented training included.

Our services for construction management und commissioning are:

- Construction and construction site management for cryogenics, oil, gas, and chemicals
- specialised construction management for technical building equipment, refrigeration & climate technology and general mechanical supervisor
- coordination of construction site resources
- coordination of overhaul and turnaround projects
- coordination and planning of installation sequences for reactors and columns, including equipment, instruments, machines, vessels, etc.
- preparation of schedules, construction site organisation plans, and site and installation sequence plans
- conducting coordination and construction meetings
- documentation/presentation of project/construction site progress, accident days, lost days, man-hours
- cost and deadline controls
- complaints/claims management
- client representation
- monitoring/guaranteeing work safety on construction sites according to occupational safety rules on construction sites (SIGEKO, RAB 30)



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