

# **COWA Handels GmbH**



## **INTRODUCTION :**

As a special welding shop with a production area of 4,200 m<sup>2</sup>, COWA GERMANY GmbH is equipped with modern machinery and persuasive know-how in the areas of apparatus, pressure tank, vessel and pipeline engineering as well as the planning of integrated, innovative solutions.

Thanks to diversified accreditations, testing facilities, quality assurance systems, services (inspection and monitoring of the welding products by European weld metal testing engineers and certified welding engineers) and application processes, COWA Germany GmbH is the ideal partner for manufacturing and services; its products are not only distinctive in terms of their shape and size but also satisfy the most stringent qualitative demands and customer requirements.

## **CORE CAPABILITIES:**

For over 40 years we offer our customers everything from one source. We produce innovative complete building solutions for use worldwide; systems and products with the highest-quality, functional and welding technology demands.

Producing excellent products and achieving this in the form of customer-specific and cost-optimised solutions is our goal. Our solutions start with internal or external engineering and manufacture, including the assembly, commissioning and service of new and existing systems, plants.

Our areas of activity extend from industrial plant engineering to the construction of pre-finished units for energy / power plant construction, hydraulic steel, tank, vessel and apparatus engineering, engineering for pipe construction, the food industry, refineries and chemical plants, nuclear plants.

In the environmental technology area, our strengths lie in communal and industrial waste water cleaning, industrial composting systems for bio and residual waste and in thermal waste treatment, energy recovery and remote heating.

## **CONTACT DETAILS :**

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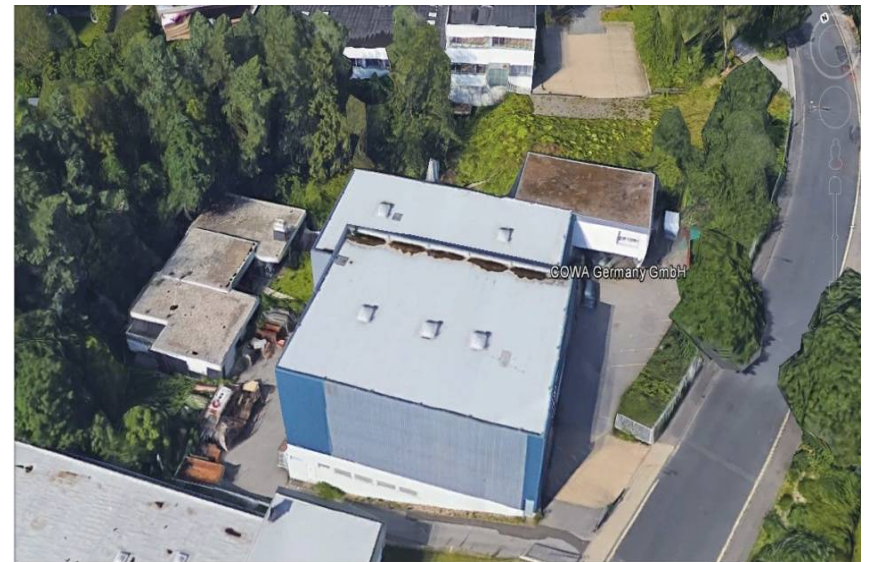
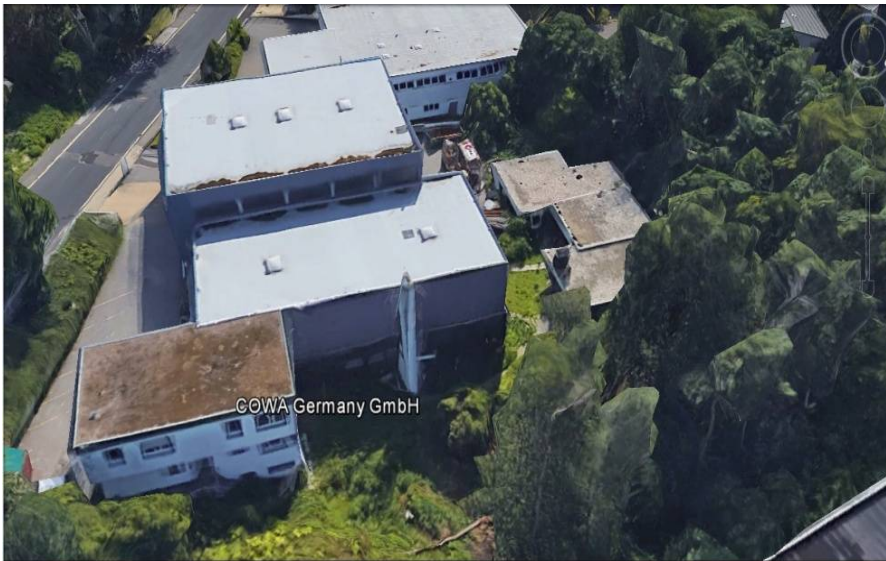
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# Property Views



## CORE CAPABILITIES

- Lube Oil Module L
- Lube Oil Module S
- Oil module steam
- Lubricating oil skids
- Compressor skid
- Drainage skid
- Tank and vessel engineering
- Diphyl boilers
- Separator
- Welding technology
- Peerless tank
- Gearbox-oil package
- Blow-off piping rack
- Pump stations for snow system
- Gland steam condenser
- Hydraulic Package
- Compensators
- Pipeline manufacture
- Pre-reactor R-2000. Reactor R3000



## LUBE OIL MODULE L

### SCOPE OF SERVICES / TECHNICAL FEATURES

Engineering including calculations and manufacturing documents. The Irsching4 unit is a test bench for new turbine types for Siemens. Therefore the unit is designed to be somewhat larger and can meet various requirements. An additional jack oil pump is also mounted.

### KEY SPECIFICATIONS:

Lube Oil module with 63,000 liter capacity. Operating unit 42,000 liters

Length 10.5 meters, width 3.0 meters and height 4.8 meters with a weight of 25 To 2x100% pipe bundle coolers, length 3.2 meters, width 3.2 meters, height 6.8 meters weight 15.0 Ton.

The cooler pipes are rust-free and ensure long-term use.



## LUBE OIL MODULE S

### SCOPE OF SERVICES / TECHNICAL FEATURES

The unit is designed and manufactured by COWA for earthquake calculation and the creation of all required production and detail diagrams.

The oil module is constructed and built in two parts. It is disassembled and reassembled at the destination.

### SPECIFICATIONS:

Lube Oil module, length 5.0 meters, width 3.5 meters, height 3.5 meters, weight without oil 10.5 To. Operating temperature 80°C. Lubricating oil 10 bar jacking oil 160 bar. The tank has a capacity of 16,000 liters of oil.

Cooler module, length 3.5 meters, width 2.5 meters, height 3.2 meters, weight 3.5 Tons.



## OIL MODULE STEAM

### SCOPE OF SERVICES / TECHNICAL FEATURES

The base frame of this unit as designed to be an extinguisher water catch basin and is statically carried jointly.





## LUBRICATING OIL SKIDS

### SCOPE OF SERVICES / TECHNICAL FEATURES

#### **A lubricating oil supply unit consists of the following components**

1. Reserve tank to capture lubricating oil back flow with the following functions: Baffle plates prevent foaming of the lubricating oil and create the required dwell time in the tank; level monitoring via liquid level indicator and view glass; tank heating at low external temperatures.
2. Redundant screw-shaped rotor pumps (or gearwheel pumps for booster & primary) convey the lubricating oil from the reserve tank at 9 bar feed pressure.
3. An overflow valve limits the feed pressure at maximum 9 bar and releases back to the reserve tank when the pressure is exceeded. Additional security is offered for safety valves to the pumps which feed the lubricating oil from the pressure side to the suction side of the pumps at approx. 10 bar feed pressure.
4. A mix valve for temperature adjustment guides the lubricating oil via a pipe bundle cooler if necessary or directly to the double filter.
5. The pipe bundle cooler has been designed and manufactured according to the code ASME VIII/1. To protect from corrosion from the cooling water, the pipe bundle consists of brass pipes and the water valves of the cooler are coated internally with Rilsan. The tube bundle can be removed for cleaning purposes.
6. The oil pressure in the cooler should always be greater than the cooling water pressure to prevent water from penetrating into the oil cycle in the event of a possible leak. That is why a minimum-pressure-controlled pressure reduction valve reduces the lubricating oil pressure from 9 bar to approx. 5 bar behind the temperature adjustment valve. With this pressure, the lubricating oil flows through an oil filter (mesh width 25 µm) and is available on the lead support of the lubricating supply unit with 4.5 bar and 45°C.
7. Instruments: The fill level monitoring of the reserve tank, the temperature control of tank heating and differential pressure gauge to monitor the double filter are wired to a terminal box to transmit measurement signals to the central control room.
8. All components are mounted on a base frame which simultaneously acts as a catch bath for leaks. The lubrication oil supply units at the COWA plant are subjected to a test under customer supervision of the end customer to review and confirm the unit performance. As a result, the activation pressures of all safety and overflow valves are reviewed as are the set points of the temperature adjustment valves, the function of the double filters and the performance data of the lubricating oil pumps (hydraulically and electrically).



## COMPRESSOR SKID

### SCOPE OF SERVICES / TECHNICAL FEATURES

Production of base frames and pipelines

Complete installation including the delivered components such as the compressor, main motor, damper, heat exchanger and fittings

Electrical cabling

Skid is subdivided into three different systems, process gas (N<sub>2</sub>), lubricating oil and cooling water

### KEY SPECIFICATIONS

Weight: 23,000 kg, dimensions LxWxH 7000x3750x3000 Gas system: Pipes to 8", pressure to 60 barg, test pressure 90 barg, Temperature to 180°C

Lubricating oil system: Pipe to 3", pressure to 25 barg temperature to 75°C

Cool water system: Pipes to 3", pressure to 10 barg, temperature to 60°C





## DRAINAGE SKID



## TANK AND VESSEL ENGINEERING

A wide and extensive range of accreditations to manufacturer standards from throughout the world allows us to construct pressure and atmospheric containers as well as tanks of all kinds, such as: heat exchangers, pressure tanks, boilers, reactors, rectifying columns and standing tanks.

Our expert engineering and flexible production are established guarantees that our customers' needs will be realised.



## DIPHYL BOILERS

### SCOPE OF SERVICES / TECHNICAL FEATURES

The tanks consist of a powder-coated C-steel, the seams are partially back-welded and are partially back-welded with UT, RT or PT. The heating element consists of an electrical heating element with a controller and from the heating rods cast in plastic.

### KEY SPECIFICATIONS:

Material of the Vessels: Boiler plate 10 mm

Diameters: From 400 mm to 600 mm

Length: From 1000 mm to 1700 mm

Heat capacity: From 15 kw to 30 kw





## SEPARATOR

### SCOPE OF SERVICES / TECHNICAL FEATURES

Separator system with 3 centrifugal separators to separate oil from impurities and water. The systems are used, for example, to clean petroleum in exploration. The fluids are cleaned and separated using centrifugal force. Forwarding pump skid with 2 circuit pumps to distribute liquid media such as oil.

### KEY SPECIFICATIONS

Circuit pump: Feed volume = 12 m<sup>3</sup>/h

Feed height = 84 m

Motor: 480V, 60Hz, 15.1 kW

Separator: 15.0 m<sup>3</sup>/h

Motor: 480V, 60Hz, 24 kW

System pressure: 16 bar

Pipelines: Dimensions = DN 15, DN 65, DN 80, DN 100

Material = P235GH-TC1 (oil lines) / 1.4401 (water / air supply lines)



## WELDING TECHNOLOGY

Here we have at our disposal experienced and certified welding specialists (certified welding engineers, welding technologists and welders certified to EN and ASME standards), modern equipment and machinery our expert application of welding technology are among our appealing strengths and our among the most renowned specialist welding companies.

### **Welding procedures 111 (E-Hand)**

141 (WIG)

131 (MIG)

135 (MAG)

Orbital welding

### **Test equipment**

Radiographic test according to EN 1435

Ultrasound test according to EN 1713

Dye penetration test according to EN 1289 Leak test according to DIN EN 473

### **Quality assurance systems**

Quality assurance according to ISO 9001 and EN 729-2

Schweisssprüfung nach EN 287 und ASME

Welding supervision according to EN 719

Welding test acceptance according to TRD 201

### **Services**

Testing and monitoring of welded products by European welded goods testing engineers and specialist welding engineers (EWI and EWE) Qm2



## PEERLESS TANK

### SCOPE OF SERVICES / TECHNICAL FEATURES

Horizontal filter separator (fuel gas filter)  
Vertical swirl separator (Scrubber)  
Horizontal filter separator to separate condensate from natural gas

#### Materials:

Sleeve  $\varnothing$  323.8 x 25.4 mm ASTM SA106B;  
Klopper floor  $\varnothing$  323.8 x 20 mm ASTM SA234WPB  
Welding procedures: WIG / MAG

Vertical ribbed tube separator to separate condensate from natural gas

#### Materials:

Sleeve and Klopper floors  $\varnothing$  1316 x 48 mm ASTM SA516-70 N;  
Welding procedures: WIG / MAG / UP  
Heat post-treatment: Low-voltage annealing 2 hrs. at 610°C +/- 15°C configuration and manufacture according to Pressure Vessel Code ASME Sect. VIII Div.1





## GEARBOX-OIL PACKAGE

### SCOPE OF SERVICES / TECHNICAL FEATURES

Substructure for the Flender gearboxes as an internal tank construction and a double cooler with a register-type construction.

### KEY SPECIFICATIONS

Dimension: 6130 x 4433 x 3694 mm. Weight: approx. 35 to.



## BLOW-OFF PIPING RACK



## GLAND STEAM CONDENSER





## HYDRAULIC PACKAGE



# COMPENSATORS

## SCOPE OF SERVICES / TECHNICAL FEATURES

Sophisticated welding technology  
Tests: RT, pressure test 30 bar  
Highest purity requirements

## KEY SPECIFICATIONS

44 sets for 5 compensator lines  
15 additional compensators for a second model version of the gas turbines



## PIPELINE MANUFACTURE

### SCOPE OF SERVICES / TECHNICAL FEATURES

Manufacture of piping system including supports  
X-ray test, water pressure test (test pressure 47 bar)  
Mix connections black-white  
High pressure connection requirements for welding technology very challenging  
Meeting high demands placed on bearing tolerance of the flange using gauges

### KEY SPECIFICATIONS

Rust-free pipe line from DN 15 to DN 300  
Pressure from PN 6 to PN 64  
Combination of black pipelines at the site and in pipeline shafts, DN 80 to DN 200, PN 16 to PN 100





## PRE-REACTOR R-2000, REACTOR R3000

### KEY SPECIFICATIONS

	R-2000	R3000
External diameter	2550	2400
Total height	4880	4470
Weight when empty	13.5 to	12.8 to
Material	1.4571	1.4574
Pressure	-1 / 26 bar	-1 / 26 bar
Temperature max.	340 degrees	max. 340 degrees
Surfaces	interior polish, Ra 0.8 $\mu$	



- **CERTIFICATIONS**

- **ISO 9001:2000**  
SQS Certificate, Registration no. 10756-03
- **EN 729-2:1994**  
SQS Certificate, Registration no. 10756-03, comprehensive technical welding quality requirements
- **EN 287**  
Welder with welding identification according to the Norm EN 287
- **ISO 15614 (EN 288)**  
Welding procedure testing according to ISO 15614 (EN 288)
- **EN 473 / ISO 9712**  
Qualification certification no. 767 from the Swiss Association for Non-Destructive Testing according to the EN 473 / ISO 9712 Norm for Radiation Testing RT 2.  
Qualification certification No. 767 from the Swiss Association for Non-Destructive Testing according to the EN 473 / ISO 9712 Norm for Penetration Testing PT Level 1.
- **ASME Code IX**  
Welder with welding identification according to the Norm ASME Code IX  
Welding procedures tests according to the Norm ASME Code IX
- **ASME Code V**  
Certificate of the SWISS Welding Association according to the Norm ASME Code V and SNT-TC-1A, Sec 8.3, 8.4, 8.5 for the colour penetration test (Level I) and radiation test (Level II).
- **SVTI Accreditation**  
Pursuant to the SVTI regulations, code 501 concerning the manufacture and repair of objects requiring approval pursuant to the SVTI regulations, code 201 concerning the transfer of codes for the purpose of the identification of materials on semi-finished products or components.  
Systems for the storage and the handling of liquids hazardous to waters (Technical Tank Regulations, TTV)

- **TÜV Süddeutschland**  
Manufacturer's certificate according to AD 2000 - data sheet HP 0 / TRD 201 A1) of pressure tanks and piping systems according to guideline EN 97/23/EC (additional PED categories up to/subsequent to module G))
- **ERI**  
Swiss Pipe Inspectorate, high-pressure gas lines
- **SIA 263/1**  
Certification of manufacturer qualification H1 according to SN 505 263/1 (manufacture of steel constructions as well as special constructions with fatigue resistance stress and without material and thickness limits)
- **KTA 1401**  
Approval for the manufacturing and repair of key technical objects in nuclear power stations
- **ASME Regulations**  
ASME U/S-Stamp
- **Racolta ISPESEL Italy**  
Manufacture and supply of pressure tanks and pipes
- **Chinese SQL (SELO) regulations**  
Manufacture and supply of pressure tanks and pipes
- **French APAVE Regulations**  
Manufacture and supply of pressure tanks and pipes
- **Russian GHOST regulations**  
Manufacture and supply of pressure tanks and pipes