



OIL CONSOLE

Lube-, Seal-, & Control Oil Systems

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OELTECHNIK

Oil Console Introduction

OELTECHNIK has designed, engineered, tested and continuously improved its oil system product in response to the needs of the turbo machinery equipment manufacture. In-house testing facilities allow customers to witness oil system tests according to API 614 and other customer specified requirements.

OELTECHNIK's oil consoles are special engineered systems designed to perform an exceptional job in:

- + Coding of oil in a controlled manner
- + Filtering of all abrasives from bearings and other sources
- + Degasing the oil coming into the system

OELTECHNIK has supplied lube, seal and control oil system to the international market for over 35 years. Oil systems designed and manufactured in accordance to API Standard 614 is a daily routine.

OELTECHNIK's oil systems are in use worldwide. Our design and manufacturing capabilities cover all international design codes and national regulations. Since oil coolers, filters, accumulators, and occasionally also oil reservoirs are considered pressure vessels, they have to be built according to codes and regulation of the country of installation. With us you can establish a world wide standard of your product since we have the knowledge, capabilities and certified authority to build pressure vessels to all international design codes and national regulations.

Typical Applications:

Centrifugal Compressors Systems
Off Gas Expander
Lube oil systems for process pumps
Steam turbines

Capabilities/Range of Application:

Maximum Flow Rate for lube oil systems:	[up to 2200] l/min	[up to 582] GPM
Design Pressure:	[1.5] bar	[22] psi
Maximum Flow Rate for seal oil systems:	[up to 250] l/min	[up to 66] GPM
Design Pressure:	[150] bar	

Material of Construction:

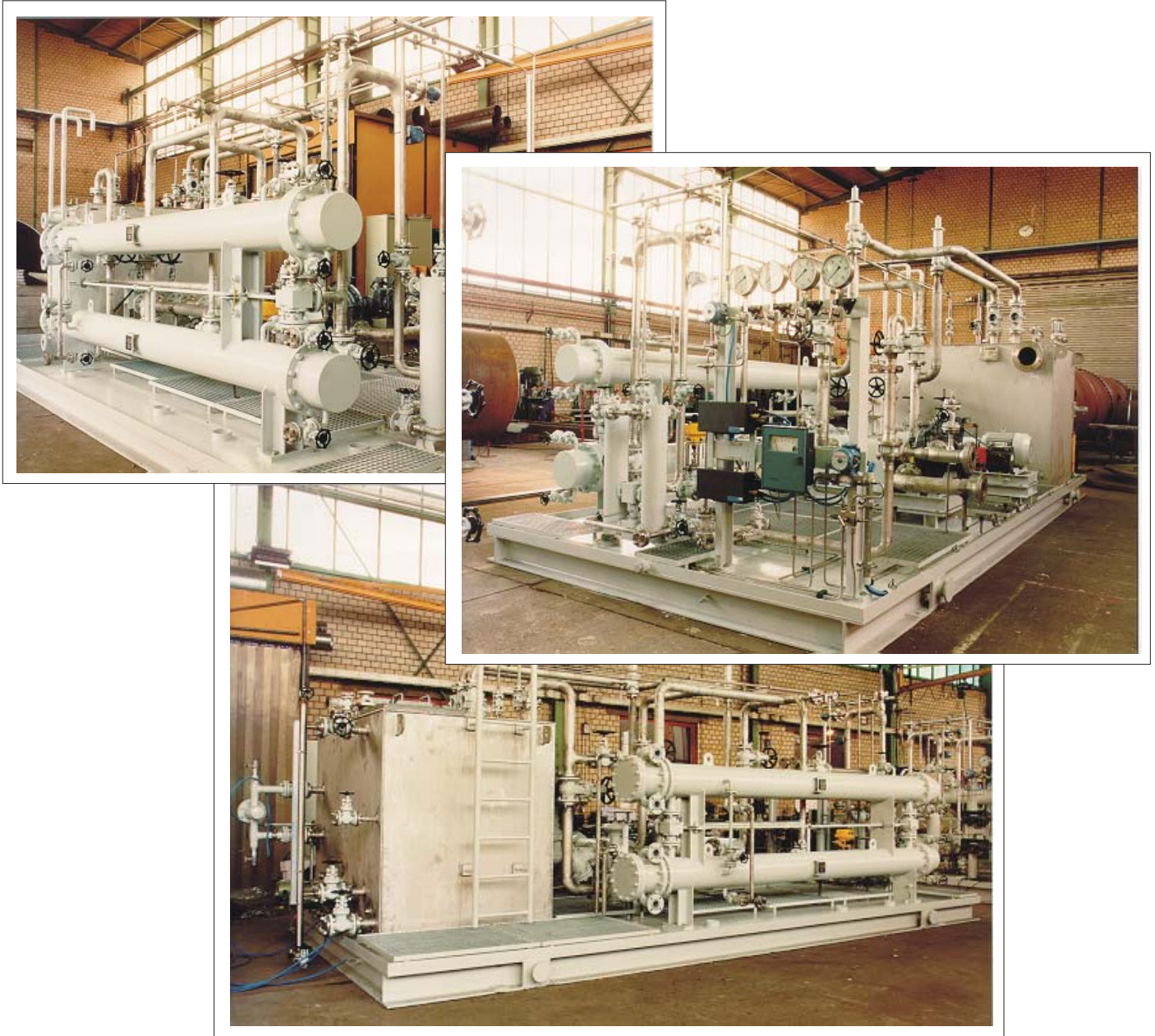
Reservoir, Piping:	Stainless steel, carbon steel
Pumps:	Carbon steel
Instrumentation:	Stainless steel
Filter:	Stainless steel, carbon steel
Accumulator:	Stainless steel, carbon steel
Oil cooler:	Carbon steel, stainless steel shell; tubes according to water quality.

Oil Console Overview

Beneficial Features of **OELTECHNIK**'s Oil Systems:

- + Consoles are designed and engineered for smooth operation and long service life of the equipment due to optimised sizing and rating practice.
- + Service life of 20 years and at least 3 years of uninterrupted operations are achieved and exceeded.
- + Equipment components are very carefully selected and only products of approved suppliers are chosen to be included in our consoles.
- + Design experience, selective component implementation and a well implemented Quality Insurance Program guarantee an excellent oil system, operating stable without vibrations.
- + Smart console design and arrangement allow for easy access to all system components. All valve handles can be operated easily. Motors and pumps can be changed or aligned without problems.
- + All instrumentation, electrical lines and sensitive equipment are installed in a safe and protected way so that it cannot be destroyed during maintenance work.
- + Selection of materials per API 614 or as per customer requirements.
- + In-house rated and designed heat exchangers ensure sufficient heat transfer surface for the shell and tube heat exchangers and optimised arrangement of the cooler. Technical know how and experience in this area are melting together and customers profit from synergetic effects.
- + Capability to build according to well known customer specifications: SHELL DEP, ARAMCO, DOW, Exxon BP,.....
- + Efficient and fast contract handling through our high experienced project managers, who will be responsible for your oil system from the proposal stage to shipment. Professional contract handling with high responsiveness to customer's concern is guaranteed.
- + Delivery times are mainly determined by selection and availability of main components.
- + Operations manual and oil console documentation is made available on CD and in additional languages if required.
- + P&I Diagrams can be supplied by **OELTECHNIK** or customer depending on your preferences.
- + It has always been **OELTECHNIK**'s practice to use state of the art components.

Oil Console Lube & Control Oil

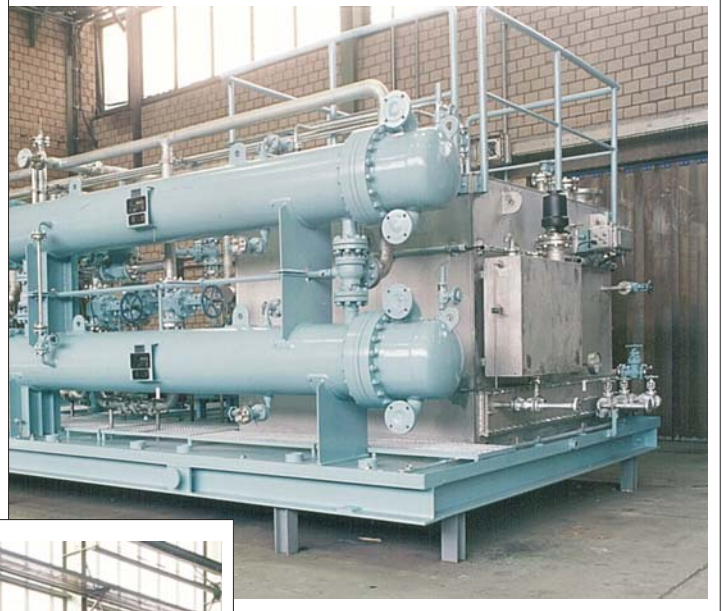


OELTECHNIK's oil systems are designed according to API 614 and built as a console. All major components (pumps, filters, coolers, reservoir, instrumentation panel) are directly mounted on one base plate.

A well sealed stainless steel oil reservoir equipped with level switches, oil supply and return connections, level glass and level switch device to control the oil level in the reservoir, serves to settle the moisture and foreign matter adequately. The arrangement of return line and pump suction line, the location and dimensions of the reservoir internals, and the capacity of the reservoir itself, guaranties sufficient time for air and gas disengagement.

Instrumentation, electric wiring and sensing line are arranged in a neat and orderly way, using only oil and temperature resistant material for fastening, on the instrument gauge board.

Oil Console Lube & Control Oil

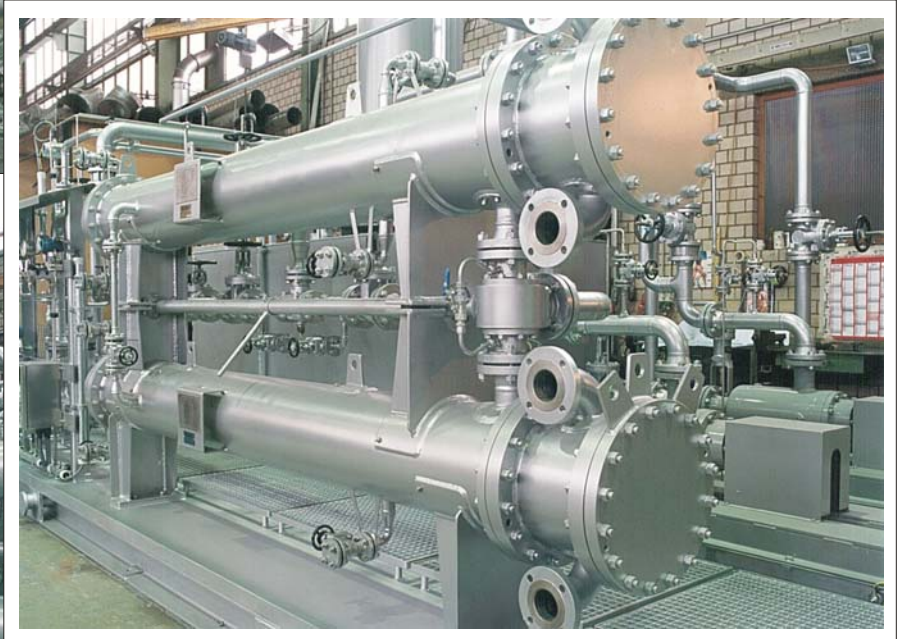
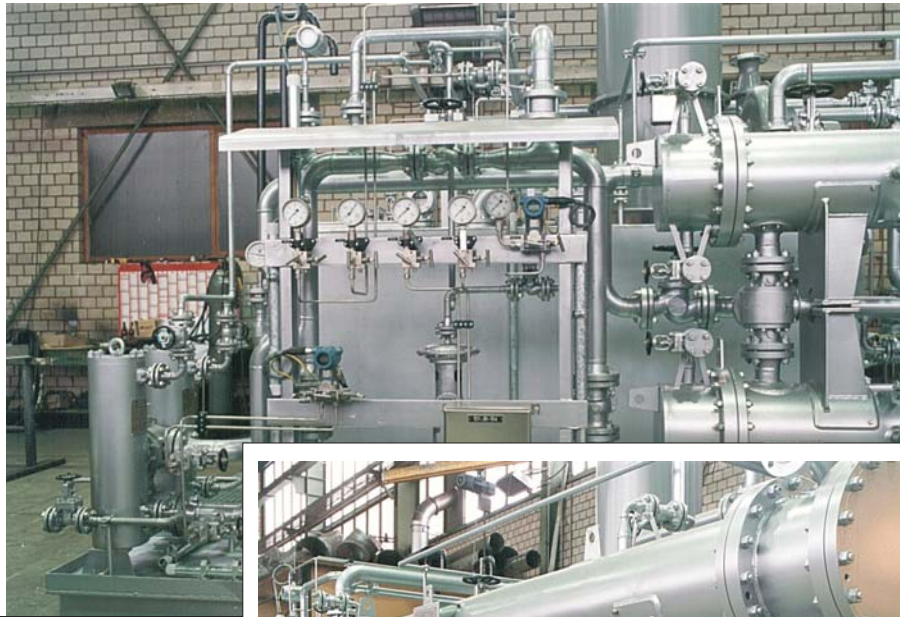


OELTECHNIK designs and fabricates oil systems according to customer's specification. The combined lube and control oil unit for a centrifugal compressor shows a special anchoring system under the base plate for installation in seismic zones. The rigid base plate shows lifting lugs to ease handling of the console.

The twin full-flow filters installed downstream of the oil cooler are available in welded, machined, and casted design as per customer's request. Continuous-flow-transfer valves allow to switch the flow from one filter to the other without impacting flow rate or operating pressure downstream of the filter unit. Replaceable elements or cartridges can be changed readily for maintenance during operation.

The removable steam heating element in the bottom of the oil reservoir heats the charge capacity of the oil prior to start-up in cold weather within 12 hours per API requirement. An equalization reservoir for the heater oil is attached to the lube oil reservoir.

Oil Console Lube & Control Oil



The combined seal and lube oil system is packaged on a common base plate. The twin oil coolers are designed as TEMA type AEW mounted on top of each other. Each cooler is designed for 100 % of the heat load in fouled conditions. Continuous-flow-transfer valves allow to switch the oil flow from one cooler to the other without causing any discontinuity in the flow rate and oil outlet temperature. The oil cooler not in use can then be serviced if required.

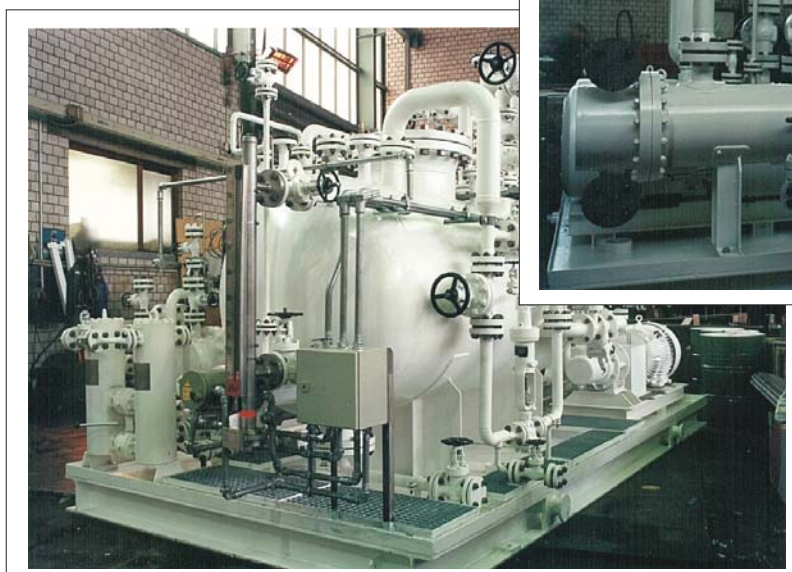
Walkways on the console are of removable drain-gutter type to ensure safe monitoring and inspecting of operating personal. The gutters are hot zinc galvanized and placed into frames welded to the base frame.

The oil system is drained after testing and all openings and customer connections are tightly closed prior to shipment. For on site installation, our customer's scope is limited to connecting supply and discharge oil line, water supply and return, and wiring motor, pump, and instrumentation.

Oil Console Lube & Seal Oil



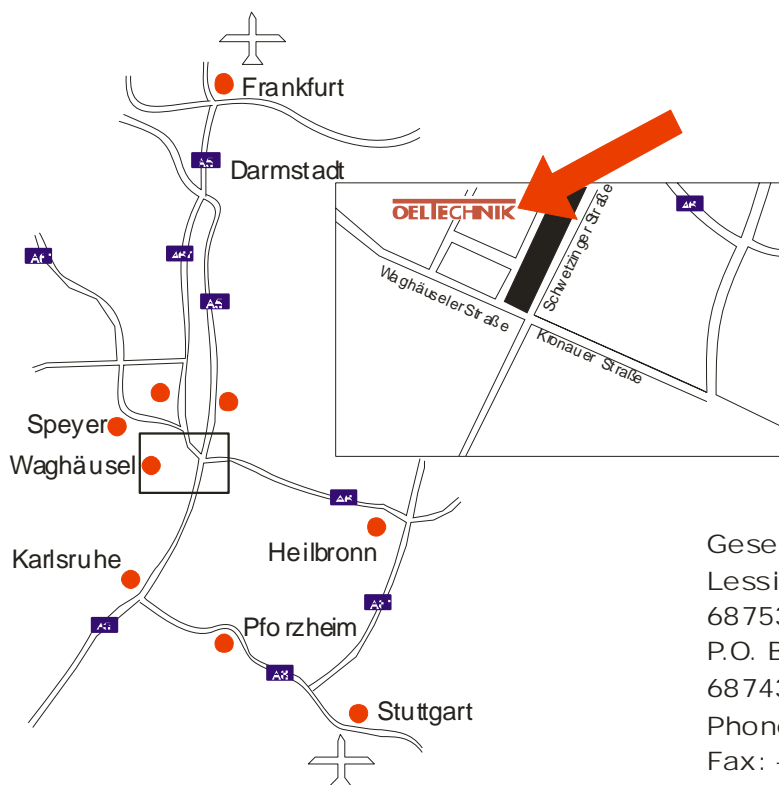
The pictures show a lube oil system on a separate console for a process pump for a major global chemical company. Installations in Argentina, the United States and the Netherlands are successfully operating. Further projects all around the world are planned. **OELTECHNIK** assures that all international and national code regulations are followed.



The seal oil system as the complementary part for the process pump shows the vessel shaped reservoir indicating a higher operating pressure than the lube oil system.

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