



Drilling and production platform Mittelplate (Source: DEA)

ACR CHILLER RENT PROJECT DEUTSCHE ERDÖL AG (DEA)

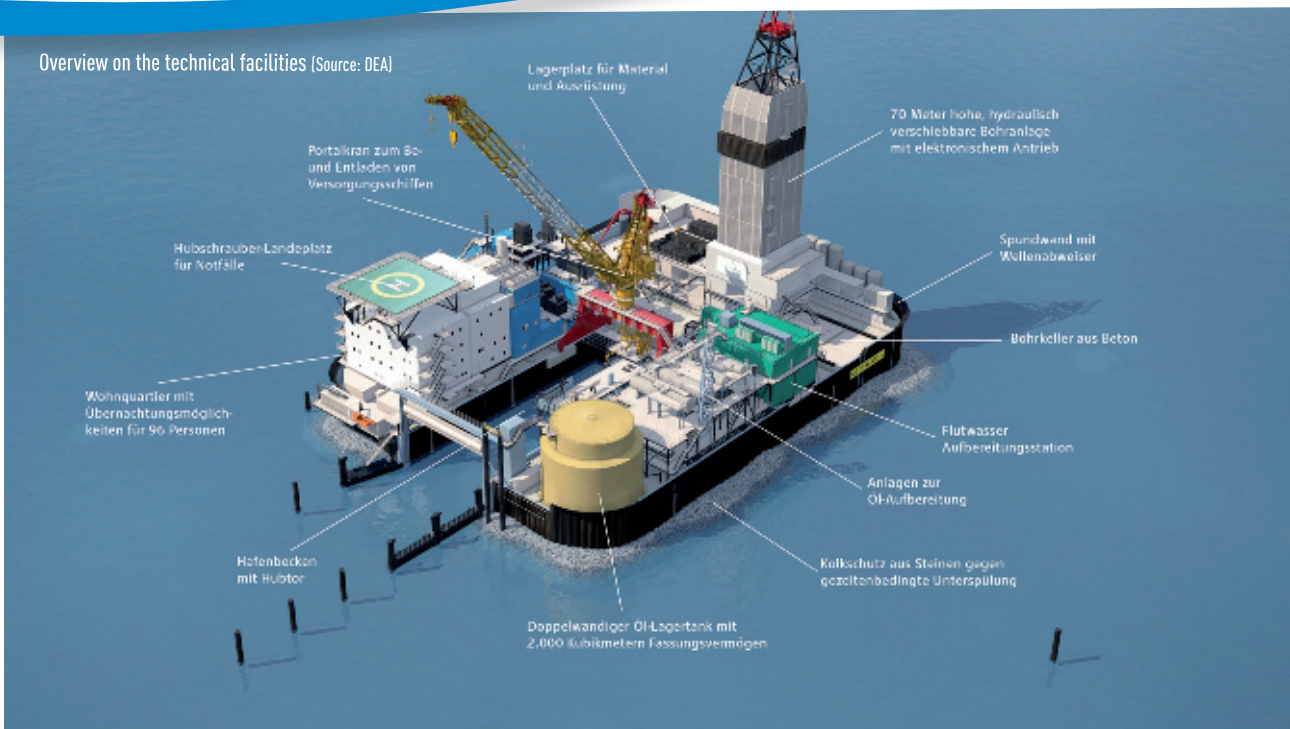
## Rental cooling on a high-tech oil platform

**Germany's largest known offshore oil deposit, the field Mittelplate, is promoted smoothly and in accord with strict environmental protection standards to a depth of up to 3,000 meters since 1987. An acr chiller rent air-cooled chiller was delivered during a maintenance period on the high-tech oil rig to provide for turbine cooling.**

The promotion of oil on the high seas has a critical reputation since spectacular accidents have occurred on oil rigs. But it can also be done differently: Seven kilometers off the Schleswig-Holstein North Sea coast, on the edge of the National Park Wadden Sea, the largest German oil field Mittelplate has been uneventfully and environmentally friendly in operation since 1987. The DEA (Deutsche Erdoel AG) has promoted over 30 million tons of the precious raw resource in the ecologically sensitive

area in cooperation with Wintershall Holding GmbH. With ever more efficient drilling and production techniques, especially horizontal drilling, even the remote portions of the Mittelplate deposits in the onshore/offshore composite can be promoted. The T-150, one of the most modern drilling rigs in Europe, was put into operation in 2005 on the drilling and production platform Mittelplate. The electric, emission-free, 10,000 horsepower system enables highly efficient, single borehole "multilateral holes" with branched strands of production up to eight kilometers in length. The offshore extracted crude oil flows via a pipeline to the land station.

In the ecologically ambitious high-tech environment, an acr rental cooling solution was added perfectly: During the 5 week maintenance work on the wells, an aggregate type ACR-M-850/P supplied the drilling platform with cooling.



The additional cooling capacity was needed to cool the turbine during the well regeneration phase. The methane gas released during the oil recovery process is burned and used to generate energy. The use of methane as an eco-friendly additional energy source plays a particularly important role in the demanding environmental concept of Mittelplate.

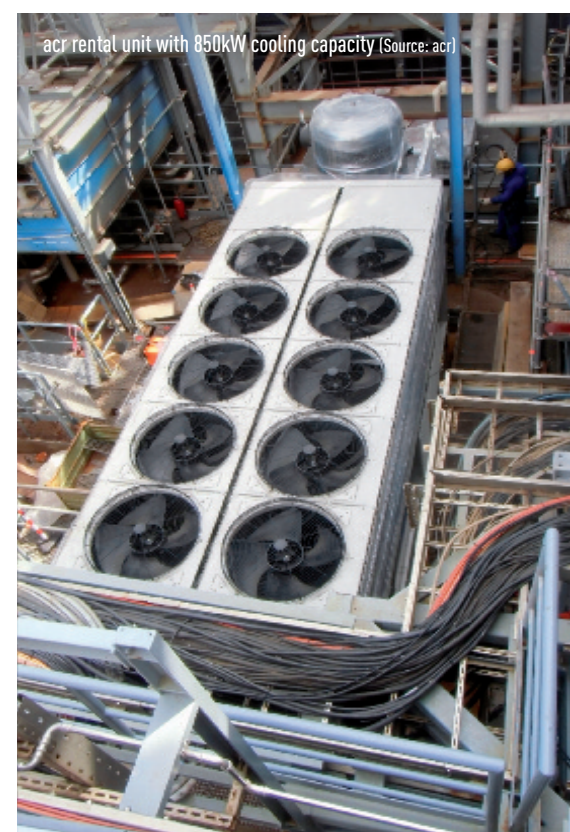
Due to the limited space on the rig, the air cooled chiller which is only 6.2 meters long and has a capacity of 859 kW, proved to be the best solution, since this machine offers the shortest dimensions at a high cooling capacity in this category. The requirements posed by the rig operator allow fluctuating temperatures between 17 and 28 degrees in the return line, and 12 degrees should be maintained in the feed line. Two high pressure pump modules with frequency converter and an expansion tank, a 2,000 l buffer storage, as well as a plate heat exchanger for system separation were

included. The air cooled liquid cooler has two circuits with smooth running screw compressors and serves the mechanical cold water/liquid cooling. The integrated Siemens MicroTec III controller provides for control of the system. The integrated twin pump additionally assures for uninterrupted service.

Not only the ratio of maximum cooling capacity to minimum space requirements, favored the acr solution on the Mittelplate oil rig. Also the extensive and high-quality accessories (such as the high pressure pump with frequency converter, buffer storage, plate heat exchanger), which were necessary for the adaptation to the given conditions and the requirements listed in the specification, was convincing and was available at short notice "from one source".

In the elaborate preparation and preplanning phase, the acr team was always present as a competent partner. All system

components of the cooling solution were thoroughly tested on the acr owned test stand before delivery to Cuxhaven and further shipment to the oil rig. The installation of the system on the remote location took place on purpose-built carrier and stage constructions.



## Conclusion:

The customer was very satisfied with the course of the project, in particular in the difficult early phase, as well as with the planning and realization. ACR assisted the contracting authority during the well supply shut-down phase competently and without interruption. The rental components functioned during the entire rental period to the full satisfaction of the customer.



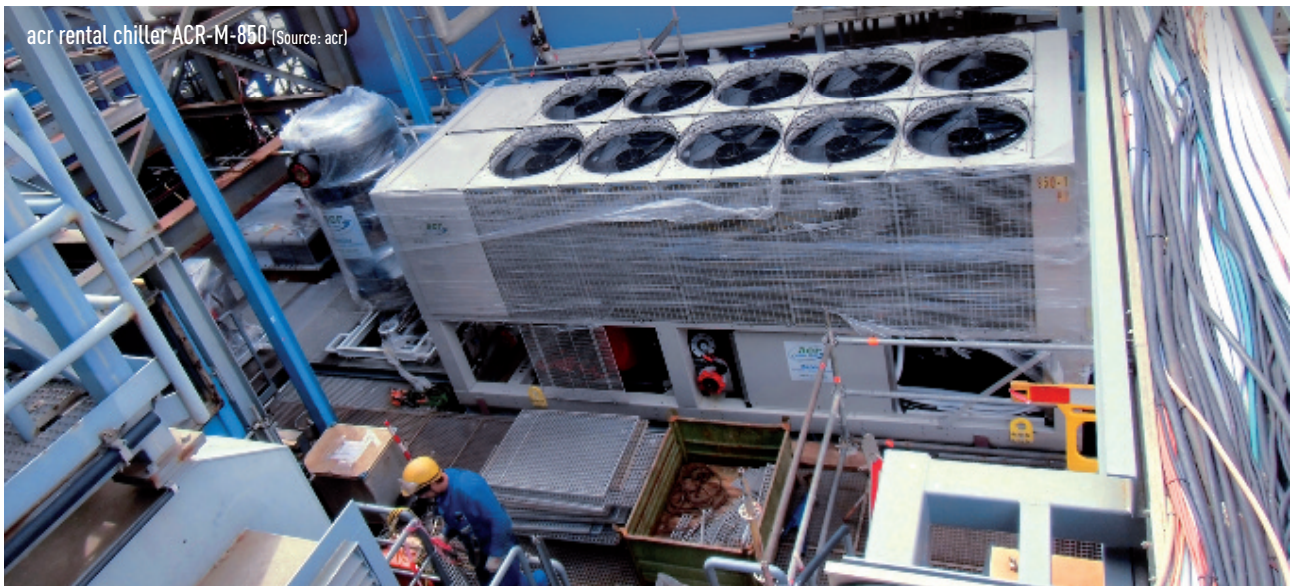
acr rental accessoires (Source: acr)

## Why rent?

Machines and accessories can be hired immediately and for a period as short as only one week from acr chiller rent. Temporary demand peaks or the failure of on-site cold generation make rental

solutions cost-effective for various reasons: The production of a plant can be secured by rented cooling even under difficult conditions. At the same time, the financial flexibility as well as liquidity reserves will be preserved. Also fixed

rental rates and predictable payment processes guarantee full planning security. And last but not least, a machine park modernized with rental equipment increases competitiveness and productivity.



acr rental chiller ACR-M-850 (Source: acr)

## About acr chiller rent

The acr chiller rent GmbH from Munich rents chillers and accessories throughout Germany as well as in Switzerland, Austria and Hungary. The leader in this market segment has leased machines up to 4.5 MW nominal cooling capacity and can provide the right solution for every specific requirement of the industry. In the modern range of machines from acr

chiller rent there is air/ water cooled water chillers, heat pumps, coolers, recirculation coolers, cooling towers, deep chilling units and installation accessories. In consulting, installation and commissioning, the constantly trained acr team supports customers during the entire rental period without interruption.

For more information about acr chiller rent GmbH and the topic of rental cooling can be found on our Internet site at [www.ac-rent.de](http://www.ac-rent.de)