

Cooling of high pressure air with surrounding air as cooling medium

The problem

In a gas turbine is the so called buffer air compressed and heated in several steps. An engine working at excessively high gas temperatures can be subject to engine failure due to damaged lubrication or gaskets.

In marine turbine applications are normally heat exchangers in titanium with salt water as cooling medium used. This is not only expensive but also critical. A salt water leakage to the turbine can in worst cases destroy the whole turbine.



The solution – AirCross with air as cooling medium eliminates the risk and cost less than a third

Ulstein Turbine / Rolls Royce, Marine Division was elected to deliver two turbines type G01-KF11 to the most spectacularly luxury yacht ever built.

With AirCross exceptional large heat transfer surface did Rolls Royce choose AirCross 21-80/C complete with housing and cooling fan.

The buffer air in each turbine is cooled in one heat exchanger with surrounding air.

The two heat exchangers are working perfectly. Except the high performance and the low cost and low weight is the simplicity appreciated.