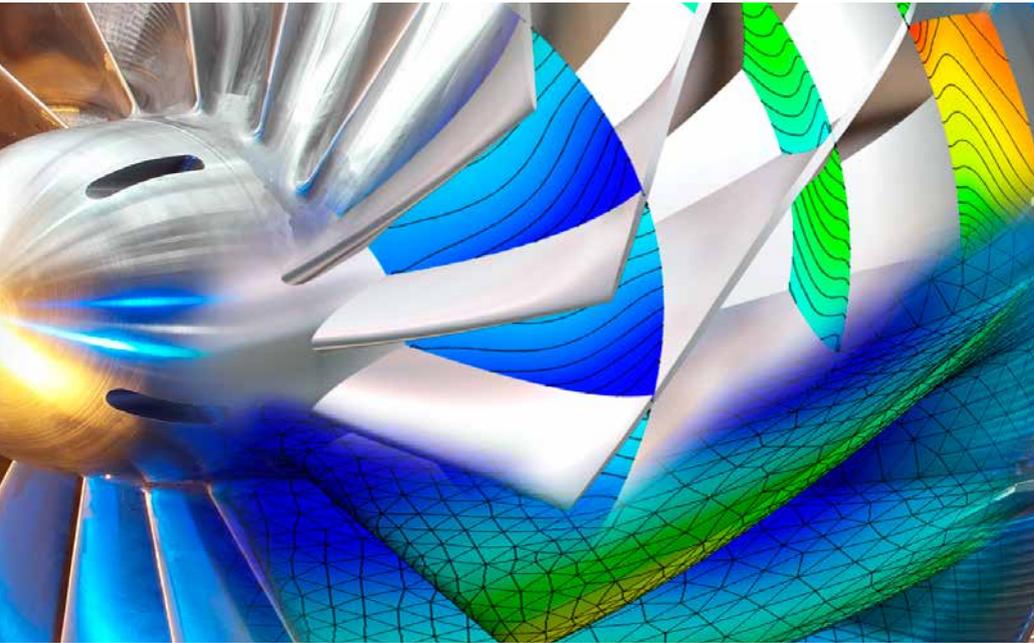


RIKT 2nd Generation

Isothermal Turbocompressor



In 2001, MAN introduced the 1st generation high-performance RIKT compressor with a high-efficiency overhung first stage impeller. Up to date, over 200 units have been sold. The 2nd generation RIKT, introduced in 2014, features further increased efficiency, optimized for a wide operating range. Further, the robustness against adverse operating conditions was improved.

The most important features

Enhanced stage families

Based on the successful experience with our first generation stages, three new families were developed with focus on high-efficiency in a wide operating range and mechanical robustness for severe ambient conditions. State-of-the-art computation fluid dynamics were used to optimize impeller and diffuser flow path, considering

latest aerodynamic developments and incorporating our extensive experience with isothermal turbomachines. The integrated mechanical design using most modern methods leads to an optimized result. The final design was confirmed during extensive testing in our dedicated test rigs.

Technology Update



MAN Diesel & Turbo

RIKT 2nd Generation

Isothermal Turbocompressor

High-performance coolers

In isothermal turbomachines, the coolers are of crucial importance for the overall performance. The coolers were optimized in terms of heat transfer and pressure drop. Only the right combination leads to the overall optimal performance. The design was conducted with our experienced and technologically leading partners, using highly sophisticated design and verification methods. This enhancement is fully backward compatible and is available as an upgrade for all MAN isothermal turbomachines, the RIK's and RIKT's.

Water separator

In order to ensure long-time efficient operation of the isothermal compressor, an efficient condensate removal system is required. The water separators, mounted directly at the cooler outlet, were thus modified to enhance long-time robustness in severe atmospheric conditions. A marine-type aluminum alloy was selected for



the vane material and the assembly procedure was adjusted to avoid welding. The moisture removal efficiency remains unchanged. This enhancement is fully backward compatible and available as an upgrade for all RIK's and RIKT's.

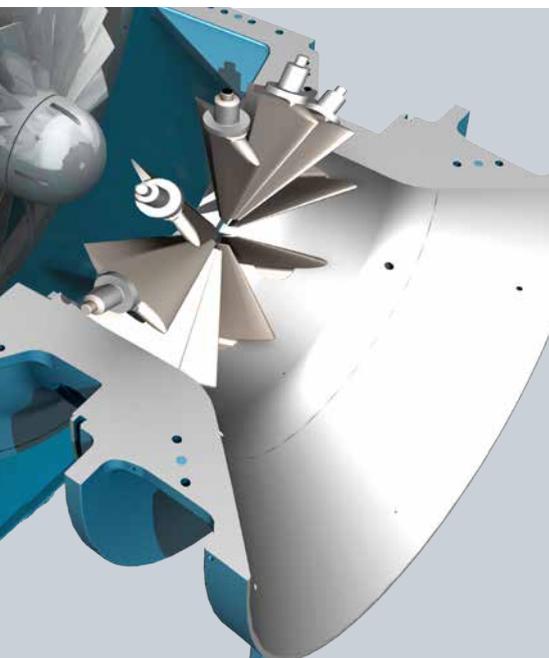
Casing

Further enhancements comprise modifications to the inlet guide vanes and an improved flow measurement at the suction nozzle.

Also, an innovative suction flange connection was chosen which greatly simplifies the connection to the customer's inlet piping. Additionally, the axial bearing bracket bolting was redesigned for easier maintenance. Finally, the optional possibility of 2-out-of-3 axial displacement measurement was created.

MAN is committed to build the best possible equipment for the benefit for our customers. We are convinced that, after almost 100 years of isothermal compressors, the 2nd generation RIKT will consolidate our leading technology position and is fit for the future.

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