

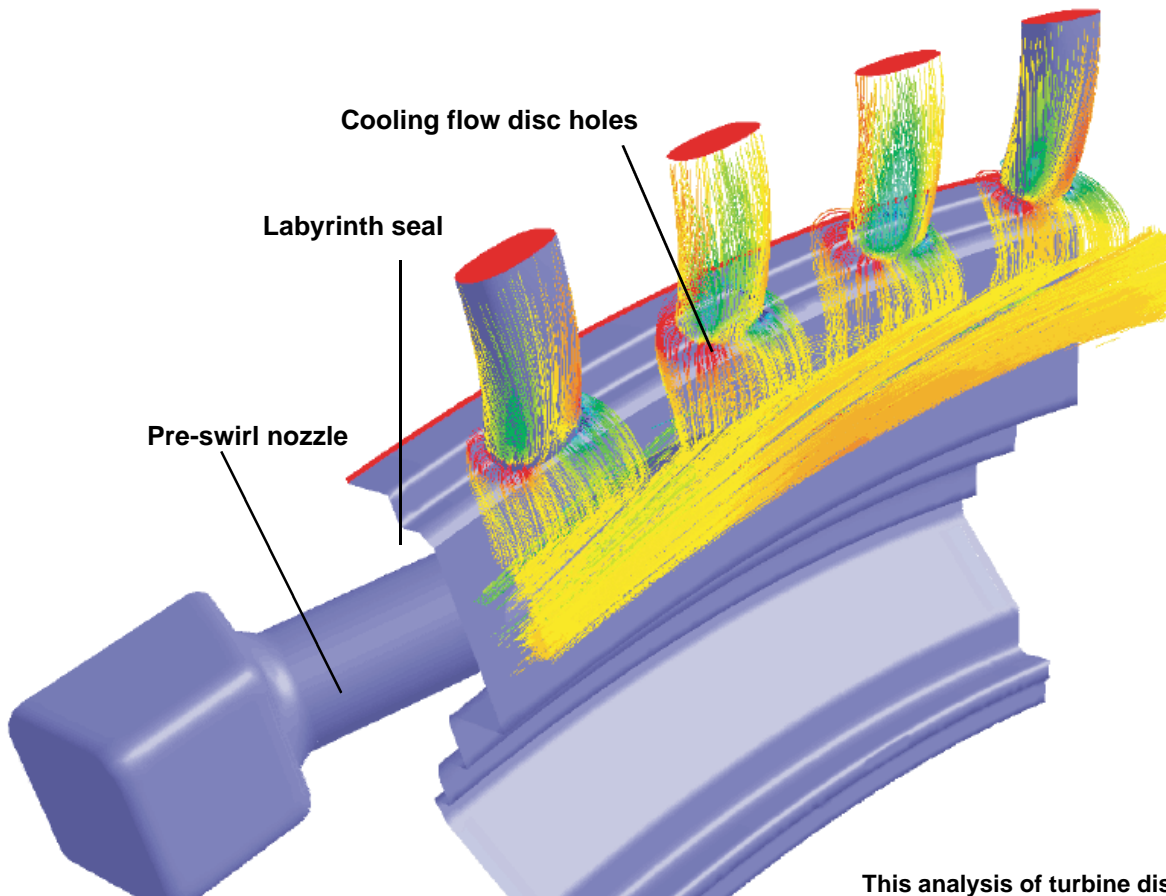
FALL, 1998

Turbomachinery Design

BMW Rolls Royce

The integration of CFD into the turbomachinery design process was the topic of a paper by BMW Rolls-Royce at the German UGM. Rather than developing an in-house code, BMW Rolls-Royce decided to use Fluent software as the building blocks in their turbomachinery design process. This allowed them to concentrate on improvements to the data interfaces and data

management. BMW Rolls-Royce used PATRAN and TGrid as the tools to generate unstructured surface grids, while FLUENT/UNS and RAMPANT were chosen as the central CFD solvers. Both tools offered an open data interface, such that integration into an existing environment could be carried out seamlessly. Additionally, PATRAN provided a direct link to the geometry kernels of various CAD systems.



This analysis of turbine disk cooling is one example of BMW Rolls-Royce's successful integration of Fluent codes with PATRAN for CAD compatibility