

Repeated Blade Failure in the same row

INTRODUCTION

We have come across several instances of repeated failures of specific row of blade on turbine rotor of various makes and various clients in India and abroad.

CHALLENGE

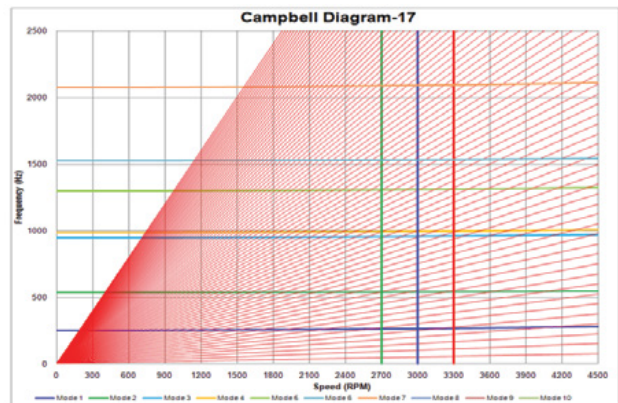
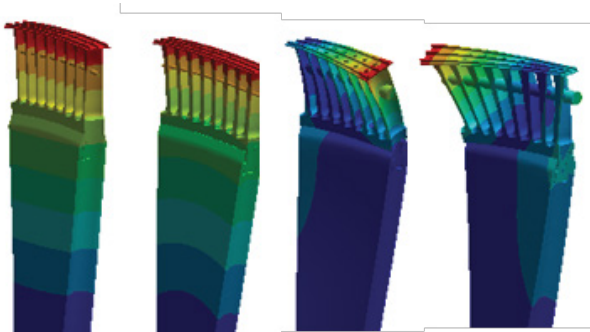
The challenge was to identify the root cause of failures on the specific row of blade, take up necessary design up gradation & incorporate the same during manufacturing of new blades.

SOLUTION

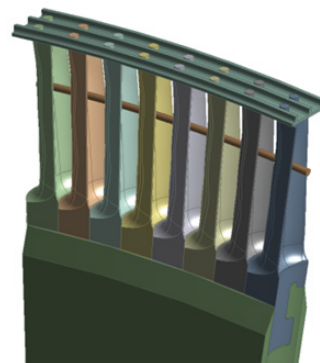
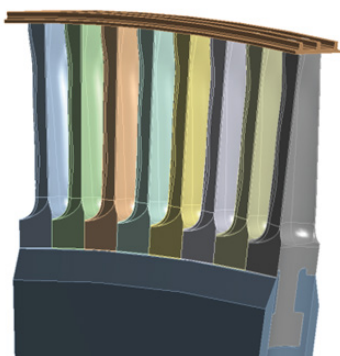
Existing blade root, profile and nozzles design were analysed individually and together. This is done by analysing LCF, HCF and other analysis as required using the latest software. This enables us to decide the necessary improvements in design to be made whether on root, profile or nozzles to achieve the operating parameters and boundary conditions without undue stresses

We have corrected a large number of rotors with such issues which need more than just reverse engineering.

In one Example - Post analysis we decided to include lacing wire as a damping arrangement



Campbell diagram



SCAN FOR
ENQUIRY



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