

CASE STUDY

Efficiency Improvement of a 6MW Turbine

INTRODUCTION

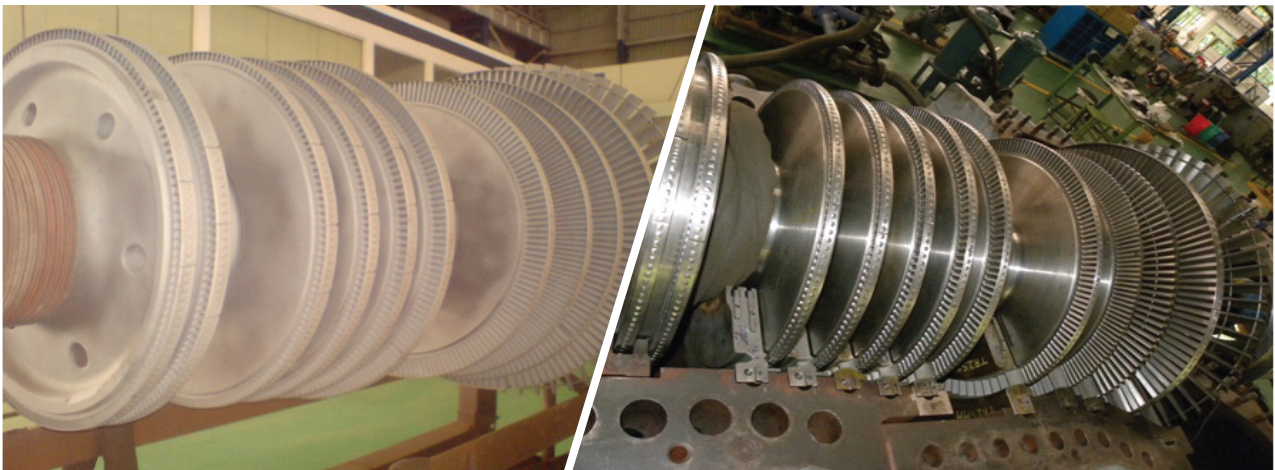
The customer is a large player in the **steel PCG** space in **India**. They imported an old plant manufactured in the year **1972** from **Germany** and wanted the same to be put back in operations with an improved efficiency of **4.8 kg/kw hr to 4.4 kg/kw hr**.

SOLUTION

Triveni Turbines took up the challenge and decided to map the existing steam path and interpose on it the new Triveni Turbines design to review if it will work. The new design was a feasible option and would require a full steam path change including introduction of a new row of blades and a new diaphragm.

CHALLENGE

The challenge was to establish the new steam path in the absence of any manufacturing data and to be able to give the customer a solution for the turbine to operate at better efficiencies than the original.



Based on this a **10 stage** rotor was redesigned to a **11 stage** rotor.

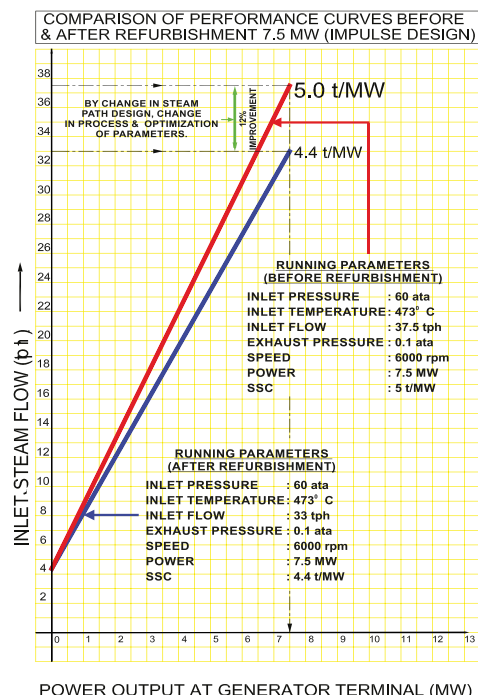
We needed to manufacture new blades and found that the old design of root was no longer used and a decision was taken after consulting the customer to replace the same with our new design.

The rotor was rebuilt and assembled in the turbine. The turbine is on full power for over 2 years with no issues since.

On start up achieved a efficiency improvement of **8%**. The turbine with these changes is operational for the past 2 years now and meeting the efficiency requirement of the customer.

CUSTOMER SPEAK

“Triveni Turbines has displayed strong engineering skills to translate our requirement to operational reality. We recommend them to all customers.”



SCAN FOR ENQUIRY



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