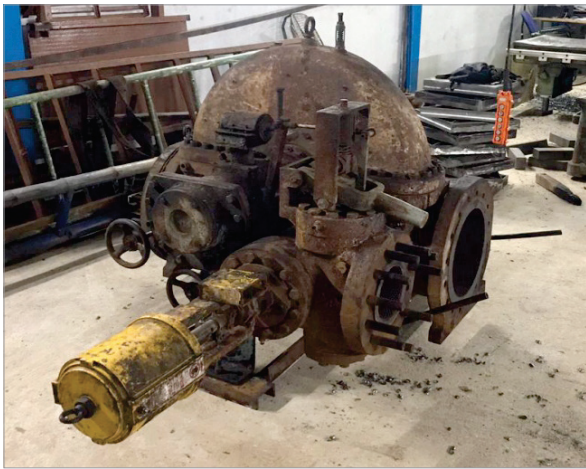


## CASE STUDY

### ARRESTING CASING STEAM LEAKAGE

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Ensurge Energy Solutions was approached by one of its customers to assist in arresting casing horizontal joint line steam leakage.



The turbine unit was received at our works for a full detailed inspection.

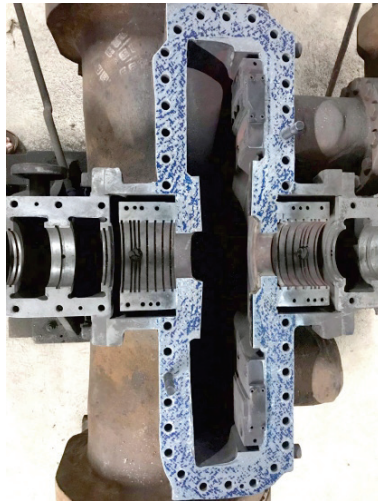
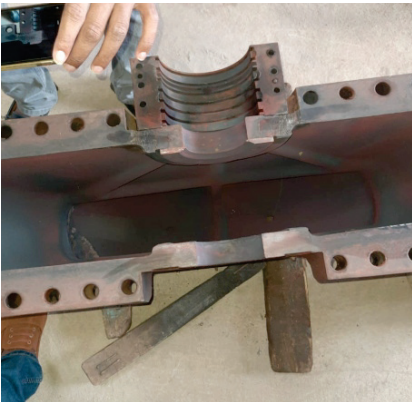
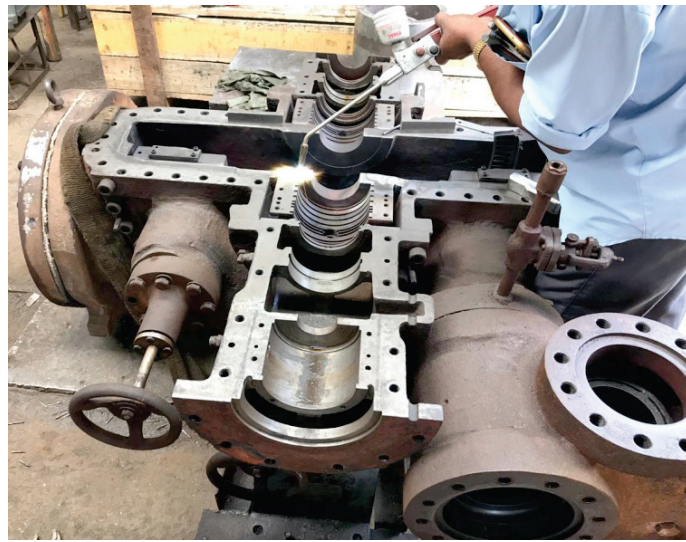
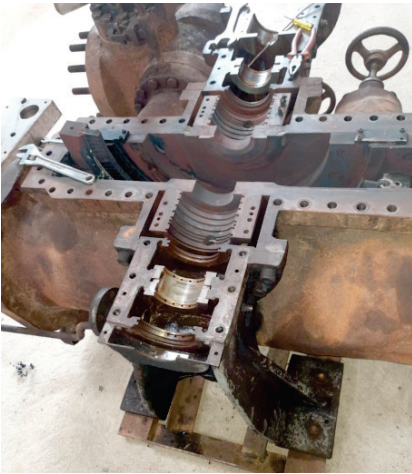
Upon receipt and inspection, casing joint line area closer to the glands were found eroded leaving a deep groove resulting in steam leakage. Further study revealed that the landing area near the glands was narrow and also the horizontal casing joint line were bolted with allen screws which might not have given sufficient holding strength.



Our inspection finding detailing components and repair required were presented to the customer. Following approval to proceed, we began our work and came out with a solution to increase the landing area near the glands and also replace the complete casing joint line allen screws with studs and cap nuts.

The eroded area was cleaned, metal spray welding technique was employed to fill the groove and finally the top and bottom casing were scrapped for more than 90% blue contact which established good surface contact between top and bottom casing.

We carried out hydro test at 1.8 times the operating pressure and found no leakage at casing horizontal joint line.



In addition, complete overhauling of Steam path components and sub-assemblies like Throttle valve assembly, Emergency Stop valve assembly, Overload valve assembly were carried out. Rotor unbalance was also corrected as per ISO 1940 grade G2.5.

Unit was finally painted with heat resistant paint and shipped to site for Steam and load trials .

Ensurge's methodical innovative approach combined with years of experience and domain expertise helped the customer to run their distillery optimally.

For further information or enquiries please contact us on

santosh@ensurge.in | +91 9663559812 | satish@ensurge.in | +91 9902630456 | manjunath@ensurge.in | +91 9731134254

**EES** 

Ensurge Energy Solutions

# 9, 'Santhrupthi', Nanjappa Layout,  
Yelchenahalli, Bengaluru - 560 062.

[www.ensurgesolutions.com](http://www.ensurgesolutions.com)

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