

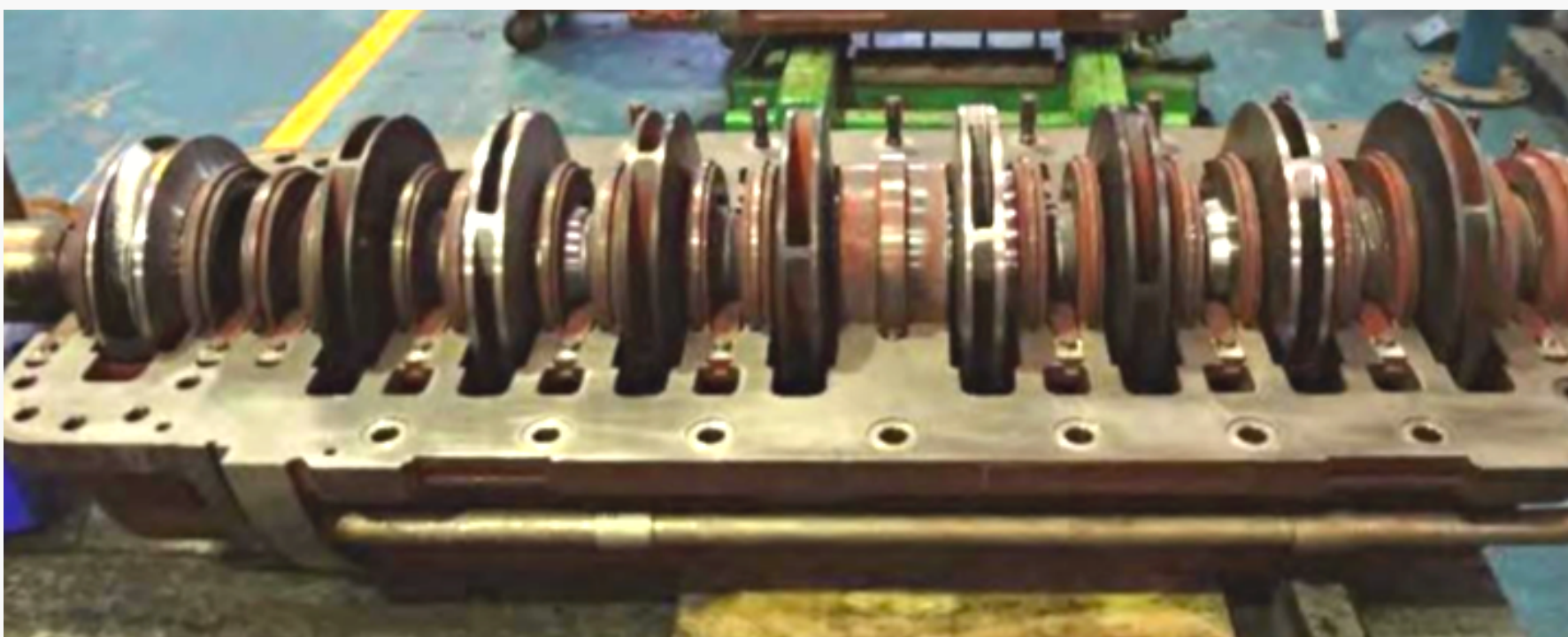
# PSS helps PTT GC Achieve Power Savings with Vespel

## Pump Upgrade

A major unit within PTT GC recently upgraded their Byron Jackson boiler feed pump with Vespel CR6100 non-metallic wear rings. This pump is driven by a single stage steam turbine and customer targeted a reduction in steam consumption as a result of this upgrade.

## Wear Ring

All the wear rings in the 9 stage pump were changed including the the center and throttle bushings. The wear rings were specially designed by our partner company Bouldon. Their patented perforated wear ring design is able to achieve even more efficiency and stability as compared to conventional solid wear rings.



## After the Upgrade

After the upgrade, customer measured steam consumption on the steam turbine assuming the same pump operating conditions as before. The results were the following:

- Total efficiency improvement of nearly 3–5%.
- As customer operates pump for only 140 days per year, actual steam savings is about 840,000 Thai baht (26 kUSD). On an annualized basis, the calculated savings would be 2,190,000 baht (68 kUSD).
- Radial vibration after installation of Vespel wear rings was significantly reduced by nearly 50%.

*Because of the success of this upgrade project, PTT GC is considering upgrading many more high energy pumps.*

***We in PSS are very pleased that we have contributed in energy efficiency improvements and added value to our valued customer.***

