



BALANCING FACILITY

At Turbomachinery, latest state-of-the-Art facility for Dynamic Balancing is established to take care of variety of customer needs.....

A. OPERATING SPEED DYNAMIC BALANCING:

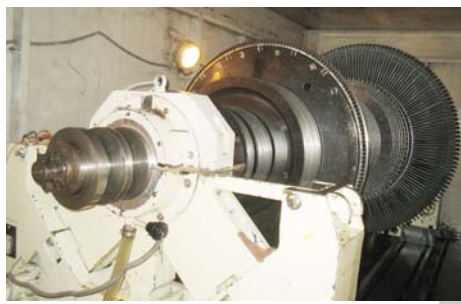
Operating Speed Balancing will increase reliability of Rotors and enables precise measurement of the Rotor dynamics. Balancing at lower speeds can not offer the same accuracy as it cannot account for shaft deflections at operating speed.

This facility also depicts the actual operating conditions at site by using the actual bearings, exact lube oil system and other operating parameters.

Operating speed balancing of Rotor will prevent time consuming field trials, especially on flexible Rotors.

Overspeed trip mechanism can also be tested and calibrated in the tunnel to avoid costly field trials.

At Turbomachinery we have executed Rated Speed Balancing, for hundreds of Rotors of Turbines, Compressors, Blowers and Generators as per international standards API 612, API 617, ISO 5406, ISO 5343. Rotor weights varying from 63 kgs. to 12500 kgs and Lengths varying from 450mm to 5500mm were successfully balanced.



Turbine Rotor in Balancing Tunnel.



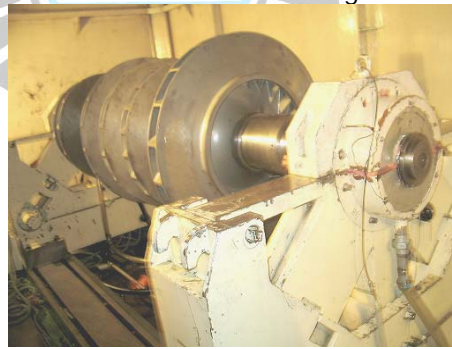
Generator Rotor in Balancing Tunnel.



Blower Rotor in Balancing Tunnel



Axial Compressor Rotor in Balancing Tunnel.



Centrifugal Compressor Rotor in Balancing Tunnel.



Control Panel

SPECIFICATIONS OF BALANCING MACHINE

Max. Speed : 18,000RPM, Max. weight : 15000 KG, Max. job length : 6000mm,
Max. job dia. : 2500mm, Accuracy : 0.2 gm.mm/Kg, Balancing stands : API 612,617, ISO 5406, 5343

In the past, as this facility was not available everywhere most of the Rotors were balanced only at low speed. Because of aging, due to no. of years of operation, no. of shutdowns, cyclic loads, abnormal change in operation parameters and long storage, the soundness of Rotors get affected. Hence we recommend **Rated Speed Balancing of Rotors for Healthy and reliable operation, even though they are not balanced originally at rated speeds.**

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B. LOW SPEED BALANCING :

Wherever the operating speeds are lower or Rotors are Rigid or stage-wise Balancing is envisaged or where ever Rotors can not be shifted to R & M facility, Low speed Dynamic Balancing can be considered.

SPECIFICATIONS :

Max. Speed : 2500RPM, Max. weight : 30,000 KG, Max. job length : 7500 mm, Max .job dia. : 2700mm.
Accuracy : 0.2gm-mm/Kg, Balancing standards : ISO 1940 /1 , API 612, API 617.



Expander Rotor



Compressor Rotor



Screw Compressor Rotor

C. MOBILE DYNAMIC BALANCING FACILITY:

We at Turbomachinery are equipped with latest, mobile Balancing facility to undertake Dynamic Balancing of Rotors at customer's site.

We have executed site balancing of several Rotors at different sites including 250 MW Turbine Rotors at M/s NTPC Ramagundam and 500 MW Turbine Rotors at NTPC- Simhadri.

SPECIFICATIONS :

Max. Speed : 2500RPM, Max. weight: 30,000 KG, Max. job length : 7500 mm, Max. job dia. : 2700mm.
Accuracy : 0.5gm-mm/Kg, Balancing standards : ISO 1940 /1 , API 612, API 617.



25 MW Turbine Rotor



500 MW Turbine Rotor



ID Fan Rotor