

RULE OF THUMB - STEAM TURBINE GENERATOR PACKAGE

By Neal Wikert



Maintenance Program

The steam turbine is a rugged machine that will provide years of trouble free operation. However, trouble free operation cannot be expected if proper maintenance is postponed or neglected. Follow instructions given in the steam turbine instruction manual. Again, make sure personnel review, understand and follow these procedures during periodic maintenance inspections. Below is a typical maintenance checklist, which should be performed regularly.

Checklist

1. Check over-speed protection devices.
2. Follow manufacturers recommendation for checks on the Trip & Throttle Valve.
3. Grease valve rack fittings to insure smooth operation.
4. Verify that the lube oil console is kept clean and fully supplied with proper type and viscosity of oil. A reliable lube oil system is essential.
5. Maintain, test and regularly service all protective devices at manufacturers specified intervals.
6. Verify that all bearing temperatures are within

established limits.

7. Verify that all vibration readings and axial positions are within established limits.
8. Verify no unusual noise exists.
9. Check alignment.
10. Check for proper lubrication.
11. Replace Filters in lube oil.

The following spare parts should be available at all times to assure availability when needed:

Recommended Maintenance Spares

- Active thrust pads
- Inactive thrust pads
- Inter-stage seals
- HP & LP end seals
- Plain end bearing cartridge
- Thrust end bearing cartridge

Generator

The generator is designed to give many years of reliable service with a minimum of attention. Trouble-free operation cannot be expected if proper maintenance is postponed or neglected. Provide proper maintenance on the equipment. Follow instructions given in the generator instruction manual. Be certain personnel review, understand and follow these procedures during periodic maintenance inspections. Below is a typical maintenance checklist, which should be performed regularly.

Checklist

1. Verify that the generator is clean and verify that stator and rotor ventilation passages are unobstructed.
2. Check for excessive loading or service factor.
3. Verify winding temperature rise is not in excess of rated value.
4. Verify insulation resistance is above recommended minimum.
5. Verify voltage and frequency variation.
6. Check air gap
7. Verify that bearing temperatures are within limits and lubricant is clean and proper level maintained.
8. Verify no unusual vibration or noise exists.
9. Check alignment.
10. Check for proper lubrication.

The following spare parts should be available at all times to assure availability when needed:

Recommended Maintenance Spares

- Spare split sleeve bearings for each end
- Several sets of galvanized steel filters

For more information:

RMS

Email: RMS@rotatingmachinery.com

Tel: 484-821-0702

Headquarters

2760 Baglyos Cir.
Bethlehem, PA 18020

Houston Office

16676 Northchase Dr., Ste 400
Houston, TX 77060



rotatingmachinery.com

Tel: 484-821-0702

Parts: rms@rotatingmachinery.com

Rotating Machinery Services, Inc. | 2760 Baglyos Circle, Bethlehem, PA 18020 | Tel: 484-821-0702