MOM held between BHEL and Bannari Amman Sugars Ltd. on 13 Feb 2001 after descaling of Turbine Blading and restart of 1 x 16 MW Steam Turbine.

M/s. BHEL	M/s. BASL
Shri. K.Raghuraman	1. Sh. Era. Tharumarasan 2. Sh. BA Ram 3. Sh. BS Chamarthy

The Steam Turbine was rolled and synchronized on Feb 11, 2001 early morning after completing the necessary protections and governing checks.. The Turbine & Generator overhaul was carried out under the supervision of BHEL Hyderabad (External Service), (Mr. B.V. Ramanjaneyulu & Mr. K.S.N. Raju). The Gear box works were supervised by M/s. WIL team. The jobs undertaken during the shut down for cleaning the salt deposits are as below:

1. Oil leakages from Gear Box sump and LS output shaft were arrested.
2. 1 No. GBHS bearing on turbine coupling side which was replaced on 29 Dec 2000 was reused. Other three were replaced during this shut down with new one.
3. Generator rear bearing oil gland leakage – exciter side was arrested.
4. New MW meter supplied was installed and found working satisfactorily.
5. Exciter pedestal was adjusted to correct the misalignment in the stator rotor assembly observed during realignment of the rotor system. The pedestal was dowelled after final alignment. Air gap values after corrections are recorded in the Annexure – I.
6. PMG was aligned with the exciter rotor and dowelled. 4 nos. coupling bushes were replaced with new ones.
7. Gear Box was dowelled after replacement of all bearings and alignment .
8. Bearing inspection of steam turbine (all bearings) and generator front bearing was done. All these bearings were found normal.
9. During reassembly, after removing salt deposits from the blades on the turbine, the Balancing Piston gland top half was observed to be not fitting on rotor. This was taken to BHEL Hyderabad works and rectified and fitted back in position.
10. The alignment readings are annexed in Annexure I.

After restart of the turbine on 11 Feb 2001 the turbine has been running on load and the performance has been under observation on different loads. The turbine was run continuously at 14-16 MW on 12/13 Feb 2001. The parameters and performance data are annexed for information (Annexure II).

It is observed that:

1. Wheel Chamber pressure is now as per design at different loads .
2. The repaired Frequency meter is still behaving erratically and needs to be repaired / replaced.
3. Gear Box HS side bearing is maintaining around 92 deg.C at 16 MW load. At lower loads the value is observed to reduce to about 89 deg.C .
4. Gear Box HS & LS vibrations are within limits during steady load but HS side vibrations are observed to rise above alarm values during rapid load reductions and islanding. At steady loads the values again come within limits.

All parameters are observed to be normal except for the GBHS bearing (on turning gear motor side) which is more than 90 deg.C.
BASL requested BHEL to thoroughly analyse and find a permanent solution to this bearing problem at the earliest.

BHEL and BASL feel that the turbine is now ready for PG test. BHEL is to plan for undertaking PG test after taking their decision on the above request of BASL regarding GBHS bearing temperature..

Since there was abnormal delay in opening of the PP studs BASL requested BHEL to supply bolt heating equipment and insulated washers for future use.

BHEL **BASL**

K. Raghuraman

13/2/01