

## **SLEW BEARING REPLACEMENT - A CASE STUDY**

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NTPC, the largest Power Utility of the country with total installed capacity of 48028 MW is contributing nearly 24 % of country's generation. NTPC Singrauli being mother power plant and first super thermal power station is the oldest plant of our company. In a thermal power station coal handling plant (CHP) is complex and vital bulk material handling system. Stacker-cum-Reclaimer (S/R) is a vital equipment of CHP for bunkering & rake-unloading. In case of no bunkering requirement, S/R is run in its stacking mode for stacking the crushed coal in yard to enable rake unloading. While in its reclaiming mode, it is used to feed coal to the bunkers when coal supply from coal mines is not sufficient. In reclamation process healthiness of slew bearing is very vital in general and particular in rainy season. There are 57 numbers of slew bearings are in service in NTPC. These bearings are having certain life(15 to 20 years) as per their manufacturer and hence they are at different stages of life. The cost of these bearings runs in crore. Replacement of these bearings is a technically challenging particularly because most of the people who were in erection and commissioning team of these S/R get superannuated or transferred. Commercial aspect of the replacement process is also vital because service cost when it gets executed by OEM of S/R is more than twice with respect to a third party contract. But our technical competency becomes critical when replacement is being done by third party. At NTPC-Singrauli two number of slew bearing has been replaced. We faced a lot many problems like deformation of main structure during uplifting of upper carriage, eccentricity of upper carriage with respect to lower carriage, damage of bearing seating area etc. Even OEM were not in position provide a concrete solution. Using our experience very innovatively we have overcome these problems. In future our different stations will be required to replace slew bearings. Through this technical paper it is our a sincere effort to provide insight of the slew bearing replacement process which will be useful in deciding activities of pre and post replacement work and navigate through the technical problems may arise in the process.

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