



Nacimiento Dam Hydroelectric Power Plant Unit 2 Repair Update

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Discussion

- ❑ On February 19, 2024, the Unit 2 generator failed. Cost estimates were solicited to repair the generator. TCB Industrial, Inc., was selected to complete the repairs based on cost and experience.

- ❑ To reduce project expenses and interruptions to power plant operations, the refurbishment of the turbine was combined with the repair of the generator since the turbine had signs of wear and impacting performance. Note: Prior overhaul of the generator and turbine was completed in 2003.

- ❑ The project's scope of work was phased out over two fiscal years to spread the repair costs (Total Cost = \$337,000).
 - Phase 1: Included mobilization, dismantling, transportation, and generator overhaul.

 - Phase 2: Included turbine overhaul, installation and commissioning.

Discussion (Cont.)

TCB Dismantling Generator and Turbine for Repair (Phase 1).



Discussion (Cont.)

Transport of Generator and Turbine to Repair Shop (Phase 1).



Discussion (Cont.)

Before Turbine Repair (Phase 2).



Turbine Column Housing



Turbine Drive Shaft



Discussion (Cont.)

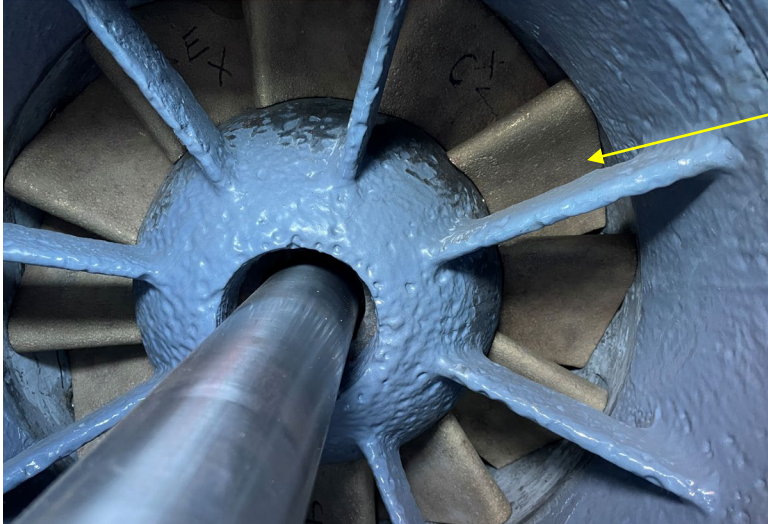
Before Turbine Repair (Phase 2).



Corroded Wicket Gates

Discussion (Cont.)

Refurbished Turbine (Phase 2).



Cleaned and repaired wicket gates vanes/stems.



New Turbine Drive Shaft

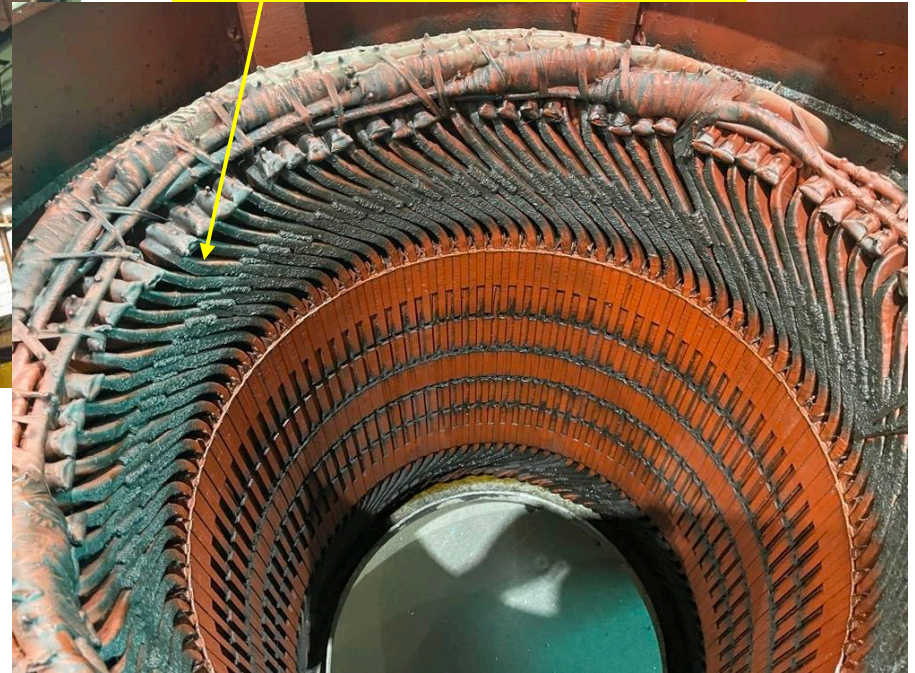


Discussion (Cont.)

Before Generator Repair (Phase 2).



Oil/Junk on stator windings



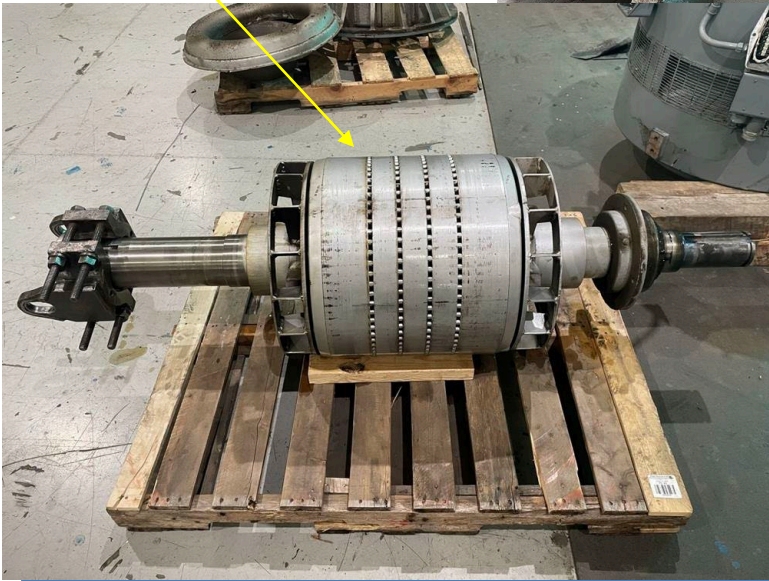
Discussion (Cont.)

After Generator Repair (Phase 2).

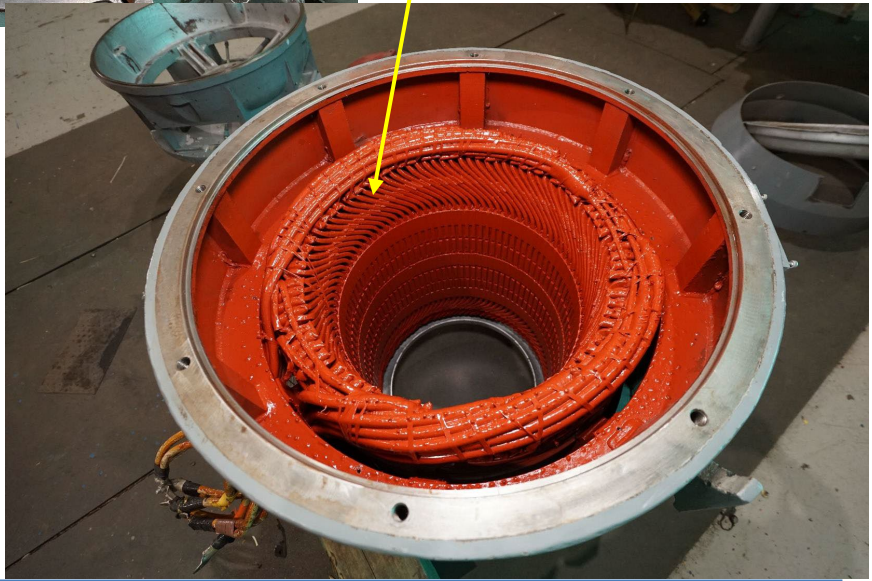


New Bearings

Rotor Cleaned



Stator cleaned and baked.



Discussion (Cont.)

Unit 2 Installation (Phase 2).



