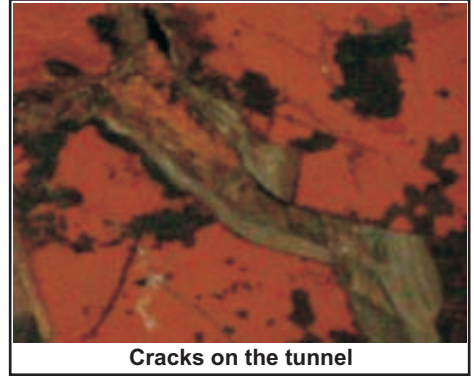


NORTH EASTERN ELECTRIC POWER CORPORATION OF INDIA LIMITED commonly known as **NEEPCO** had some problems in the intake tunnel of their Hydro Electric Power Plant in Kopili. Technician of **CICO** were called upon to provide immediate solutions to these problems. After thorough inspection of the site it was observed that in the ceiling of the intake tunnel at a distance of 1.2 km from the Surge Shaft towards the river, a crack had developed in oval shape, of 16 mt long and 3 mt width, resulting in the ceiling to hang literally from the top. The width of the crack varied from 5 mm to 150 mm. Water was oozing out of the cracks.

During the site investigation, **CICO's** experts have observed voids & honeycomb in the ceiling of the tunnel. Due to sudden decrease in pressure of the tunnel, as a result of emptying for cleaning purpose; the cracks developed.

We decided to take up the matter immediately and went forward with the rehabilitation of the structure on war footing basis as time was the main essence of the Contract.



Firstly wooden props and Bamboos were used to support the Ceiling and prevent it from further coming down during the process of treatment. Then the width of the crack was reduced from 150 mm to 25 mm with cement admixed with quick setting compound. Nozzles of varying depth from 4" to 18" were then fixed in the reduced gap @ 500 mm c/c with Epoxy putty. Water Insensitive Epoxy Grout was then injected through the alternate nozzles under pressure. After the epoxy was set, remaining nozzles were grouted with cement slurry admixed with non shrink Powder.

After the whole operation was over the props were removed and the structure was handed over to the **NEEPCO** authority within a span of 10 days to their satisfaction.