



Investigations/Repair Advisory Services/Life Cycle Costing/Technically Led Project Management

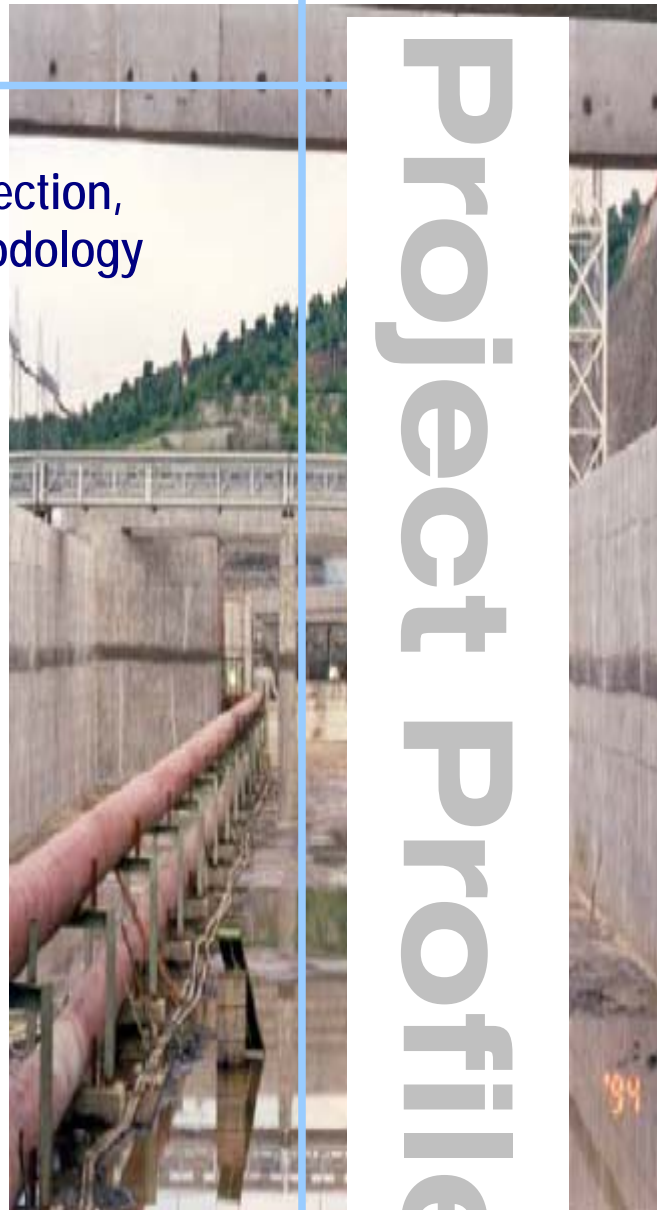
## Concrete Construction Defects, Repair Methods and Management

### Paiton Power Project Phase 1 – Inspection, Durability Assessment, Repair Methodology

We were engaged by NPB Consortium Contractor to provide specialist materials investigation, assessment of potential defects on the construction joints of newly constructed reinforced concrete civil works at the Paiton Private Power Project Phase 1 in Indonesia. Visual defects were observed on the concrete surface, and the extent and significance of these defects throughout the Inlet and Discharge canals was unknown. Immediate action was required to resolve this issue so that a repair programme could continue with confidence in respect with the concrete durability. The scope of work included a site visit to visually scan the structures, carry out extensive photographic record of the construction joints, review concrete core samples obtained randomly on defective and defect free areas, review suitable option of repairs, review investigation work already completed, assess the present and future condition of the structures, and advise on suitable repair action taking into account the owners' professional engineers' recommendations. We issued the findings in a report, including meeting the owners' PE to discuss and agree on an acceptable monitoring results. We represented NPB at meetings held with the owner to discuss this matter. We assisted NPB in getting all project parties to agree to a repair procedure and method statement for the canal construction joints.

#### Outcome

Our report was used by all the Employer, Consultant and Contractor as an independent basis to overcome the issue on how to proceed with the honeycomb defects. We were retained as an independent party to witness the effectiveness of the repair carried out by the Contractor.



Project Profile