

PROJECT:
PRESTRESSING OF RADIAL GATE ANCHORS AT
OMKARESHWAR DAM



THE FREYSSINET PRESTRESSED CONCRETE COMPANY LTD.

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PROJECT DETAILS

- **Location Of Job: Omkareshwar, Khandwa (Madhya Pradesh)**
- **Nature Of Job: Pre-Stressing Of Radial Gate Anchors**
- **Client : Narmada Hydroelectric Development Corporation Limited.**
- **Design Consultant For Hydro-Mechanical Works : M/S Alstom Projects Ltd,
Germany**
- **Main Contractor : M/S Jaiprakash Associates Ltd (Delhi)**
- **PT Contractor :- The Freyssinet Prestressed Concrete Company
Ltd (Mumbai)**

TECHNICAL DETAILS

- **Number of Piers: 22 Intermediate & 2 End Piers.**
- **Total Number of Trunion Girders:-24 Nos.**
- **Prestressed Concrete Trunion Girder**
- **Total No Of Longitudinal Cables Per Pier: 20 Nos In Intermediate Pier & 15 No's In End Pier.**
- **Total No of Transverse Cables: 06 No's at Intermediate & End Pier each.**
- **520 Mw Electricity Generation.**
- **Total No of Gates : 23 No's**
- **Size Of Gates : 20m X 18m**
- **Total No of Turbines: 08 No's.**
- **Capacity of Electricity Generation per Turbine: 65 Mw.**
- **Time Span of Project: One Year.**
- **System Used: 27K15 Unbonded Tendons.**
- **Sheathing Used: Cold Rolled Cold Annealed Galvanized Sheathing (ID155mm).**
- **27K15 Guides In Shaft For Anchoring At The Dead End On Downstream Side.**
- **27K15 Guides In Trunion Girder For Anchoring At The Live End On Downstream Side.**
- **Individual HDPE Pipe Over Each Strand & Annular Space Between Strand & HDPE Filled With Grease.**

SPECIAL FEATURES

- **Unbonded Tendons were used for prestressing.**
- **K-700 Multipull Jack Used For Prestressing.**
- **Load In Each Cable In End Pier: 427 MT.**
- **Load In Each Cable In Intermediate Pier: 535 MT.**
- **Grouting Was Done After Prestressing of Cables.**
- **Grease Caps Of 750mm Length & 300mm dia were used For Corrosion Protection of Strands Left uncut For Future Prestressing.**