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TECHNICAL VISIT AT KAKRAPAR WEIR AND CANAL NETWORK

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Kakrapar weir and canal network has many hydraulics structures such as weir, regulators, (Cross regulator and Head Regulator), Aqueduct, feeder canal, main canal gate (Rataniya Regulator) at Rataniya village.

On 24th of August, 7th Semester Civil Engineering students visited Kakrapar weir and its surrounding as a part of technical visit.

Students visited following structures:

- Weir
- Feeder Canal
- Regulator
- Main Canal Gate
- Aqueduct
- Escape

WEIR:

Kakrapar is made with Rubble Masonry with bucket provided. The weir is constructed across river to rise water and divert raise water into canal and this rising of water is mostly done by crest wall constructed across river and very small part by shutter. Depth of weir is 160 ft. and high flood level is 185.70 ft. Other general information is tabulated below.

Information	
Location	Vill.:Kakrapar, Tal.:Mandvi, Dist.:Surat
Purpose	Irrigation
River	Tapi
Area of catchment	59904 km^2
Mean annual runoff in the catchment	-
Mean annual rainfall	786 mm
Year of commencement of construction work	1950
Year of completion	1954

Figure 1: General Information of Kakrapar Weir

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Figure 2: Kakrapar Weir

FEEDER CANAL:

This type of canal is constructed with purpose of supply of water to main canal or another canal. Length of this feeder canal is approximately 10 km from Kakrapar weir.

MAIN CANAL:

It is large capacity canal getting water directly from Kakrapar reservoir. Left canal extended to Vapi and right canal is extended to Ankleshwar.

Figure 3: Kakrapar Main Canal

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CANAL HEAD REGULATOR:

Canal head regulator is provided at head of tracking canal. Purpose is to control discharge in main canal. It regulates supply of water entering in canal and prevents river flood from entering canal.

Figure 4: Head Regulator (Rataniya Regulator)

AQUEDUCT:

It is irrigation structure constructed for passing canal water over natural drain. Aqueduct is consists of masonry or concrete through rectangle section supported on abutment pear and stream flows below the trough through abutment and piers.

Figure 5 Aqueduct on Mindhola River

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ESCAPE:

It is a structure constructed on an irrigation canal to dispose of surplus water from the canal it is called escape. Here, on Kakrapar canal network Escape is provided at Moticher village.

Figure 6: Escape at Moticher

We would also like to thanks to Executive Engineer, Er. R. D. Vaghela of Irrigation Department who has recommended us and arrange Sr. Engineers to guide us throughout the visit.

Figure 7: Engineer from Irrigation Department to guide