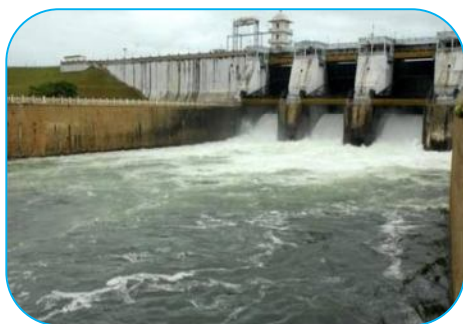




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CAUVERY-METTUR DAM AND ITS ECONOMIC PHASE

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ABSTRACT:

The Third Major Project taken up in the British period is the Cauvery Mettur Project. This project was in the thinking stage for nearly 80 years since the days of Sir Arthur Cotton , who expressed the need for a storage reservoir at a higher elevation to give regulated supplies to the Cauvery delta. Finally there was a dispute between Mysore Durbar and the Madras Presidency regarding size of reservoirs to be built in the two regions. Ultimately the dispute resolved on account of the tactful handling of the issues by C.P.Ramaswamy Ayyar , who became the member in charge of Irrigation in the Governor's Executive Council in the year 1923. He had the full

support of the Governor , Lord Wellington. He could speed up the negotiation between the two parties and an Agreement was signed on 18th February 1924 at the Secretariat Building in the Fort St.George at Madras. C.P.Ramaswamy Ayyar got all the credit for this achievement on account of which Mettur Dam was constructed in Madras Presidency, creating the Stanley Reservoir and Kannambadi Dam was built in Mysore State creating the Krishna Raja Sagar. It signalled a epoch making achievement for the two states.

KEYWORDS: *Mettur Dam, Cauvery River ,Electricity, Power , Tamil Nadu .*

INTRODUCTION :

The Mettur dam was constructed across the river Cauvery. It is one of the largest masonry structures of its kind in the world. It was constructed during the regime of Stanley who was the Governor of Madras Presidency of British India. Mettur dam is located in the heart of the Cauvery.¹ It is to protect the delta from the fluctuating supplies; the Cauvery Mettur project was executed. The chief aim of this project is to remedy this state of affairs, by storing the waters of the surplus

floods during the south-west monsoon and distributing them evenly in the succeeding period.²

METTUR DAM

The Mettur dam was constructed in a gorge, where the river enters the plains. The work was commenced in 1926 and completed in 1934. Post-war conditions necessitated an increase in the estimated cost of the project. In 1928, the project estimate was revised to Rs.7.37 crores including direct and indirect charges. The dam site was shifted to its present location, mile north of the one proposed by Col.Ellis, partly in order to secure extra surplus

capacity over the right flank of the new alignment. Some changes in the canal system including the re-alignment of the main canal, were also made. Provision was also made for a hydro-electric installation of the dam and the extra outlay incurred by the project on the installation of pipes, valves, etc. was borne by the Electricity Department. The system was inaugurated on 21st August 1934.³

STRUCTURE OF THE METTUR DAM

The Stanley dam, which is 214 feet the greatest high, contains about 95.660 million c.ft of masonry and is one of the largest of its

kinds in the world. The area of the water spread of the Stanly reservoir is 59.25 square miles. The reservoir backs up 33 miles to the foot of the 70 feet high Hogenakal falls, which are partly submerged. At full reservoir level, it backs up three miles along the river from its confluence with the Cauvery. It has submerged 26 villages on either bank including part of Kaveripuram, and does not submerge any area south of Thoppur.⁴

Technical Information	About the Dam
Date of commencement	20.07.1925
Date of Completion	21.08.1934
Length of Dam	5,300 feet
Greatest Height of dam	214 feet
Length of drainage gallery	4,400 feet
Maximum width of dam	171 feet
Catchment area	16,300 sq. miles
Water spread area	59.25 sq. miles
Capacity of reservoir (Gross)	95,660 million c.ft.
Capacity of reservoir	93.470 million c.tt.
Width of dam at top	20.5 ft.
Top level of dam	+801 ft.
Maximum water level	+796 ft.
Full reservoir level	+790 ft.
Sill level of dam	+670 ft. ⁵

GENERATING ELECTRICITY

Though the storage is primarily for irrigation a portion of the water let down is utilized for generating electricity, 4 pipes 8 1/2 ft. in diameter, have been built in the structure of the dam equipped with necessary screens, gates and valves. These pipes lead the water from the reservoir to the turbines in the power-house at the toe of the dam and they provide not less than 10,000 h.p of electricity. Power generated is stepped up for transmission to distant centres in Tiruchirappalli, Salem, North Arcot, South Arcot and part of Coimbatore.⁶

POWER CAPACITY

The installed generating capacity of the Mettur power house is 40,000 k.w. The maximum power so far generated under full reservoir conditions is 45,000 k.w. in November 1950. The generating capacity at Mettur during the irrigation closure periods is 3,000 k.w. to 20,000 k.w. depending on the reservoir level and discharge permitted.⁷

DEVELOPMENT OF HYDRO-ELECTRIC POWER

The only hydro-electric power station in the district is located at Mettur dam. The power house is located at the foot of the dam and the installed capacity of the power house is 40,000 kilo watts. The Mettur Hydro-electric scheme was planned and executed by Sir Henry Howard, in 1937, the chief Engineer of Electricity, Madras State. Between 1935 and 1937 a power house was built at the foot of the dam after a re arrangement of the turbines with the existing needle valves by adopting a horizontal instead of a vertical shaft to give an expected peak load of over 14,500 kilo watts at a head of 80 feet.

The estimated cost of execution of the scheme was Rs.14,760,100 during the initial and construction stage, rising to Rs.1,92,60,000 by the tenth year of operation. The power house an imposing steel framed structure with three floors, 312 feet 9 inches long and 42 feet wide. The fourth set was however added only in 1946. Power is transmitted from this house to various places are Salem, Coimbatore, North Arcot, Thanjavur and Tiruchirappalli. The generating capacity of the scheme is 40,000 k. w. maximum and 17,000 k.w. minimum. There are now eight sub-stations situated at Mettur under the Mettur Hydro-electric system.⁸

METTUR LOW LEVEL HYDRO-ELECTRIC SCHEME

The proposal is to exploit the entire irrigation flow from the Mettur reservoir during irrigation season and to generate cheap power that could be supplied to the industries. As the power is seasonal, it can be used for seasonal loads as in the case of the Aluminium factory which is proposed to be located at Salem. The estimated cost of the scheme is Rs.1.225 lakhs and it is proposed to be taken up during the Third- five-year plan period. The Mettur Hydro electric power is the major source of power in this district.⁹

FISHERIES

Salem is an inland district and has no marine fisheries. But the inland fisheries and the fish resources of Mettur lake have made good this deficiency. Mettur reservoir and the other inland water sources in the district contribute a total fish production of 19,000 metric tonnes annual.¹⁰ The upper and lower reaches of the dam were declared as fish sanctuaries for a length of 4 and 3 miles respectively. The reservoir which extends over 62 sq. miles and which impounds a volume of 94 million cft of water was intensively stocked with catla, the quickest and largest grown India carps, the Gourami, Etroplus and the Bengal caps, Rohu and Mrigal.¹¹

A fish farm with an induced carp spawning centre has been established at Mettur dam by the state fisheries department for the production and supply of quality fingerlings. The Mettur dam Fishermen Co-operative Marketing Society started in 1956, now helps the fishermen in marketing the catches. The Mettur Dam Fishermen Co-operative Marketing Society Procures about 600 metric tons of fish annually and provide means of marketing.¹²

TOURISM

There is an attractive park in the Mettur dam. Many tourists visit this park everyday from different places of Tamil Nadu and other states also. Snake farm, deer farm, and crocodile farm and also children's park. These are the salient features of this park. These are very much attracted by all the visitors.¹³ In Mettur dam a fish Grotto (a circular glass house enclosing a fountain in a centre with a number of partitions in which different species of fish are let it) has been built, many tourists have been shown keen delight in watching the play of the fishes in the grotto.¹⁴

WATER SUPPLY

In Salem district many of the places such as Salem, Attur Idappadi, Omalur are getting water from the dam. Many of the industries are also getting water supply from this dam especially Mettur Thermal power station.¹⁵

To conclude Mettur dam is one of the important dams in south India. Its water is being distributed to various districts in Tamil Nadu such as, Tiruchirappalli, Thanjavur, Tiruvarur etc. This water is not only used for cultivation but also for drinking purpose. Mettur dam water is supplied to many of the industries in Mettur area. There is variety of fishes in this dam, so the people of this locality are engaged in fishing especially in and around the dam. Mettur dam is producing Hydro-electric power where more employees are working. Mettur dam is one of the picnic spots in Tamil Nadu, so many tourists come from all over Tamil Nadu visiting the dam every day.

END NOTES

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