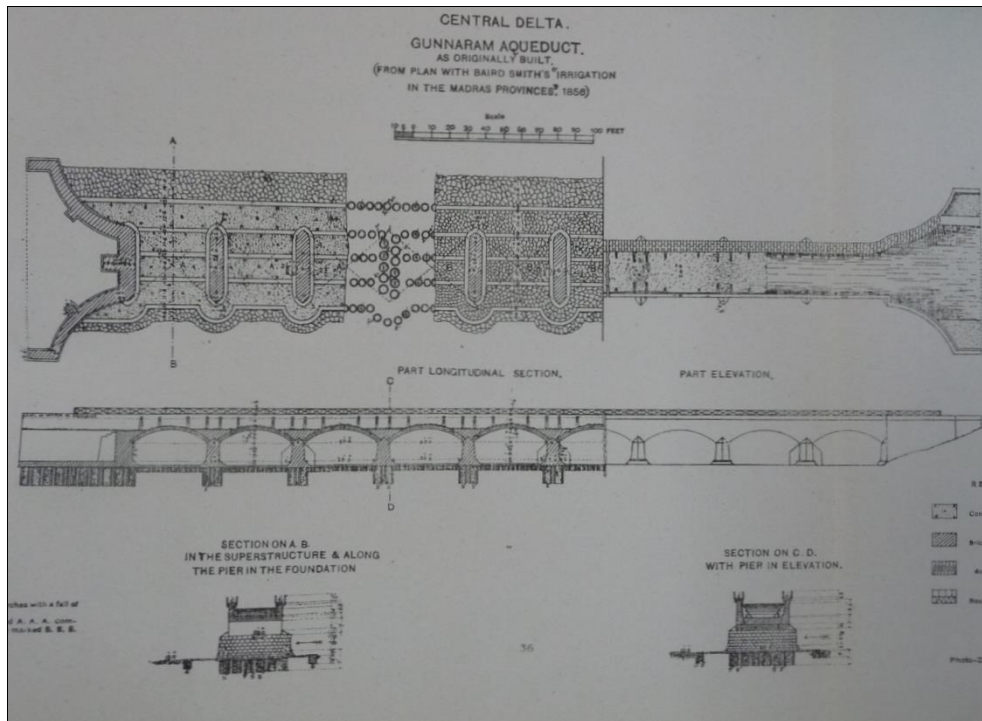


# GANNAVARAM AQUEDUCT

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This canal-bridge belongs to the network of irrigation canals of the Godavari and Krishna deltas, created by Sir Arthur Cotton, who is still revered as a demigod by the population, who dedicated several hundred statues to him.

It was built around 1850, to serve an island in this delta, and according to Google Earth it has a length between abutments of 687 m. There are in fact 2 canal bridges side by side, the old one, abandoned but still standing, and a new one, built less than 15 years ago, which is also navigable.



The plan above, which dates from 1896, attests that this "aqueduct" existed in 1856. Its navigable character is not apparent on the drawing, but the passage without obstruction and the fact that it is located between two locks proves it.

It is abandoned, as we can see. Probably, he was leaking too much. It is backed by a disused road bridge, combined with a covered aqueduct whose opening on the left can be seen, which dates from 1948.



We can see the new canal bridge on the right, which also includes a road bridge.

This bridge dates from the year 2000, and although navigation is almost extinct on this irrigation canal, it is perfectly navigable, equipped with two miter gates, one on each side, whose location can clearly be seen on Google Earth.

Above all, nothing impedes the passage of the boats, the bridges are more than 3.60 m high, often more, like the gangways at each end of the bridge.



This is clearly visible in this view of the left bank head.



Notice in the foreground the chameleon watching over the canal bridge !

In the network of canals of the Godavari and Krishna delta, there are 2 other canal bridges of some importance, but they are not navigable.

The Annampalli canal bridge is in the Central Delta network of the Godavari, and serves an island in front of Yanaon. Its length is around 300 m. It is not navigable, because one of its ends is closed by a very low bridge, but apart from that it has all the characteristics.







It is all the more unfortunate because it is a branch of a canal which is itself navigable. But none of the canals of the island it serves has locks. It is being replaced by a covered aqueduct, which can be seen on the left. Note that these two aqueducts prohibit navigation on this arm of the river, because they are too low.

The other canal bridge is that of Pulligada, about 380m long, which belongs to the Western Delta Krishna network. It is not at all navigable, being 2/3 covered. It also impedes the flow of the river and was completely submerged during a flood in 2009.



Photos by : Tandavakrishna Tungala. All other pictures of this document are by JM Deplaix.



The Gannavaram canal bridge remained for 150 years the longest canal bridge in the world, because it is a few tens of meters longer than the Briare canal bridge. The latter was only the longest metal canal bridge in the world for a hundred years. The new one is still a little longer, beyond 700 m.

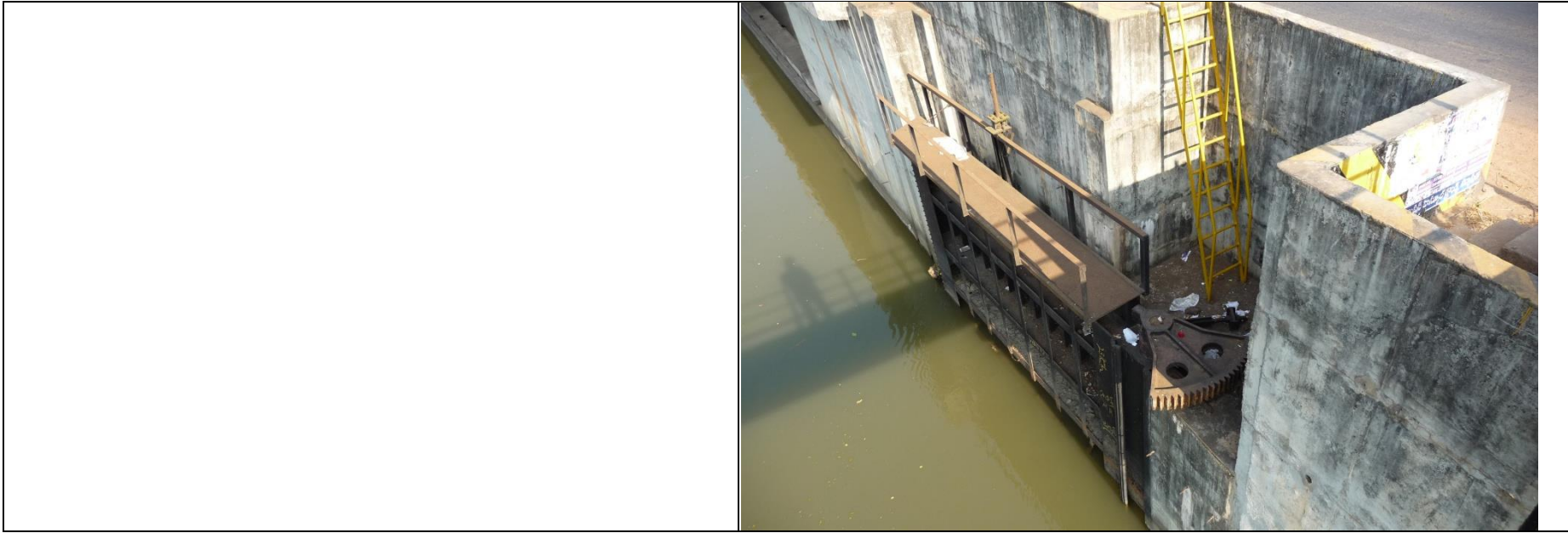
The following photos show details of these two bridges, the old and the new.



It seems that there are sealing plates, shattered, and curious obstacles whose role is not obvious, perhaps a sorm gates?

Here, we see the mitre gates on the right bank, and the alignment of the canal.





This photo shows the left bank mitre gate. Note that the two doors point towards the canal bridge, probably to prevent the bridge from being empty, which could pose structural problems if the structure were of low quality.





According to Google Earth, between the 2 door chambers the new bridge is 705 m, and 695 m between abutments. For its part, the old one recorded 687 m between abutments, about forty more than that of Briare, which is 648 m according to the same sources and the same criteria.

The gauge of this canal is smaller than the Freycinet gauge. The locks are 14' wide, or 4.57 m. Their theoretical length is 100', or 30.48 m. The depth is approximately 2.40 m.

Here is the lock closest to the canal bridge. Note that these are irrigation canals, therefore with variable level depending on the flow.



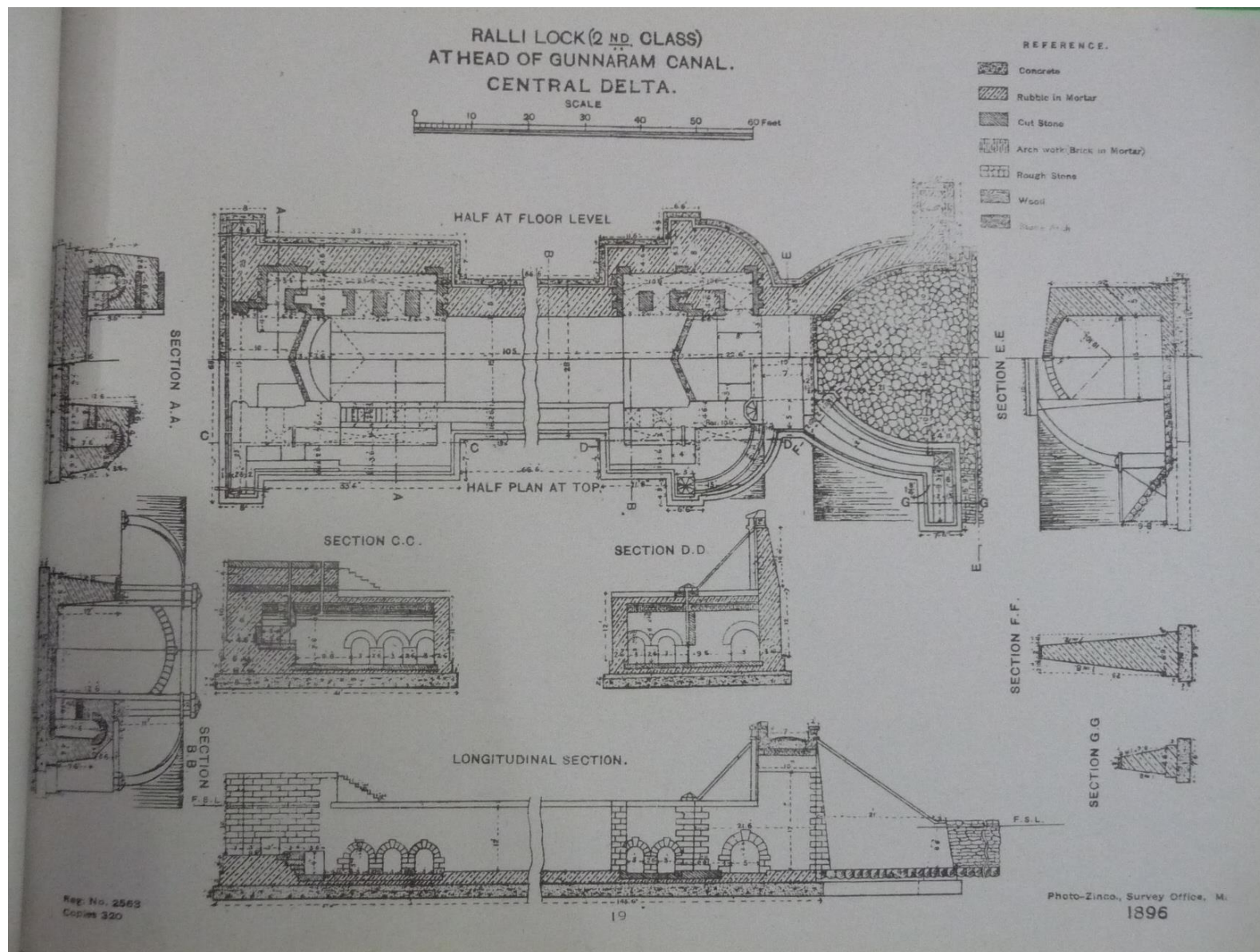






The masonry of these locks, older than our Freycinet locks, is in an astonishing state of conservation, but it must be said that there has been practically no navigation for 30 years.





Here is finally the plan of a lock of this type. There are about a hundred locks in this network, including sixty on the Godavari side. They are mostly 6.09m wide (20').