Central Eléctrica

For some reason Cuevas council makes no mention on its information boards of the ruins of the magnificent 1902 power station situated between the old Guardia barracks at Blanquizares and the ruins of the headquarters of the Argentífera company.

The power station in its heyday. *Anon*.

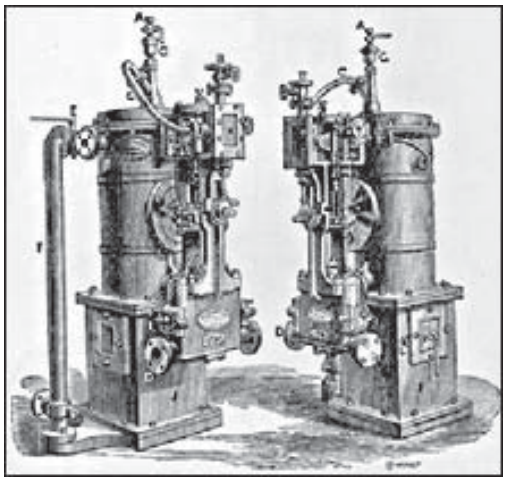
When the Argentífera greatly expanded its activities in the Sierra Almagrera most of the extraction gear in the mines, whether steam or animal traction, was coming to the end of its life. The cost of installing new steam-powered winding gear in multiple mines and, in those mines still using animal traction, water storage cisterns together with the cost of transporting the necessary water and fuel would have been huge. It was far more economic to build and operate a coal-fired power station capable of generating sufficient electricity to power all of their mine machinery, inclined planes and aero-cables. Building it by the sea made perfect sense. With coal for the boilers shipped in from Britain and coked at the Palomares San Andrés foundry, and an abundance of water to hand, their savings on transportation costs were enormous.

Three high tension lines carried the current to transformers situated in the Jaroso. Pinalvo and Francés Barrancos, from there if was transmitted to the electric motors in the mines which the company exploited. In order to offset some of their operating costs, and recoup some of their capital, they contracted to supply electricity for 8 hours a day to Cuevas, Palomares, Garrucha and Vera at a price of 0.27 pesetas per kilovolt.

Following page. Google earth screenshot, showing the lay-out of the plant.

The plant consisted of two main halls, side by side, both 37 metres long and 15 metres wide, with walls two metres high. The landward hall housed three huge Lancashire boilers, which had been floated down from Cartagena, and a water cistern. It's not clear whether the water cistern held make-up water for the boilers, or acted as the surface condenser for the steam engines. The feed water for the boilers and the surface condenser was sea water piped to a shaft in which two duplex pumps were situated. Whether these pumps were evaporator pumps, capable of desalinating the water is unknown, but, at some point the water would have been desalinated to render it suitable as boiler feed. Equipment to do so, such as Normandy's or Chaplin's, condensate pumps, of the type used in steam ships, were already in use in the area.

The feed water shaft in which the pumps were installed.



A Chaplin's sea water distilling apparatus.

en.acadeic.com

It is possible that the condensate pumps were situated in the boiler hall, next to the water cistern. The outfall from the desalination process is the brick pipe leading out to the sea on the beach below the plant.

The water cistern in the landward hall.

The rapidly deteriorating outfall pipe on the beach.

The boilers were connected to an underground flue leading to a magnificent chimney which had an internal diameter of 2.30 metres and was a staggering 46 metres tall. All that remains today is the flue entrance and a pile of bricks.

Lancashire boilers in Rothbury colliery NSW.

Newcastle.edu.com

All that remains of the chimney.

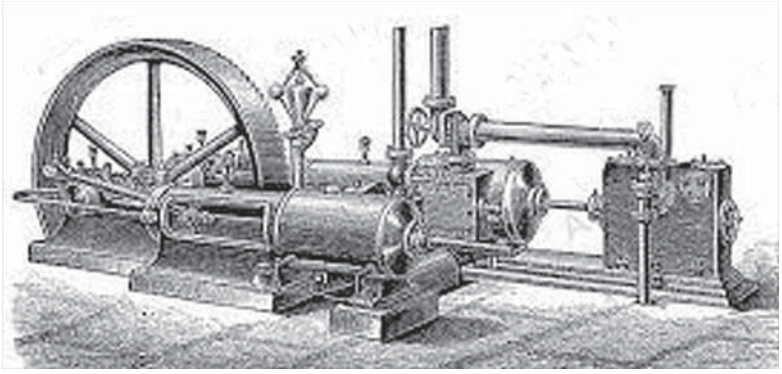
Pedro Perales Larios

At the eastern end of the boiler hall there is a considerable amount of fallen masonry, indicating that there were a series of rooms. These would have been stores and workshops, with possibly some accommodation, while the administration offices occupied the annex seen at the end of the other main hall.

The rubble of the storerooms and workshops next to the cistern.

Pedro Perales Larios.

The seaward hall was the generating hall, where three Swiderski 200 horsepower, compound steam engines drove three Schuckert alternating current, three-phase dynamos. I think that the pipes, seen in the picture as coming out through the roof of the building, are the exhaust flues from the steam engines.



A Swiderski steam engine.

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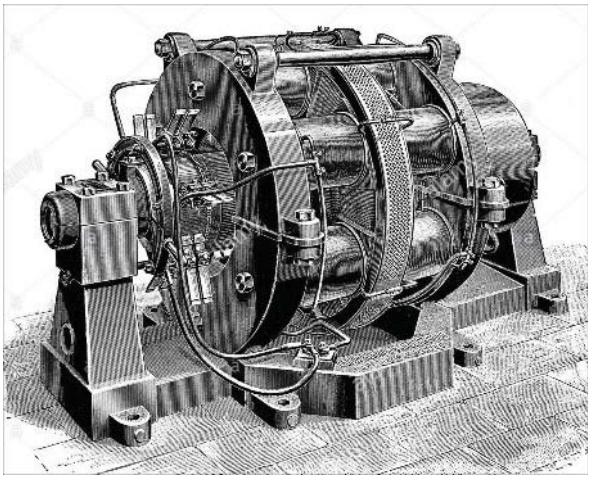
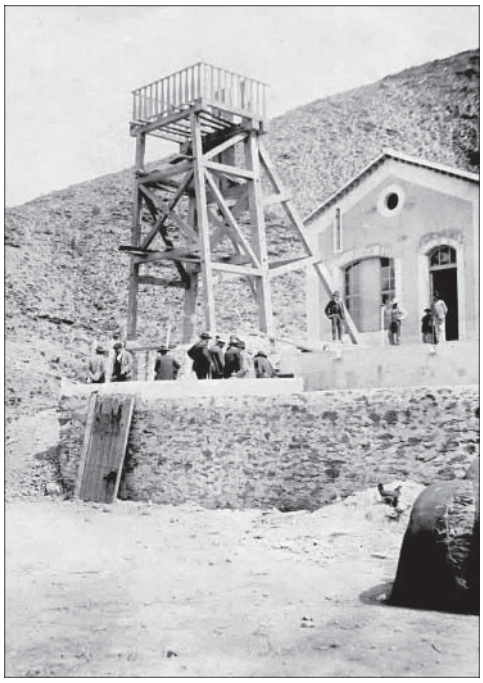


An early Schuckert dynamo.

alamy

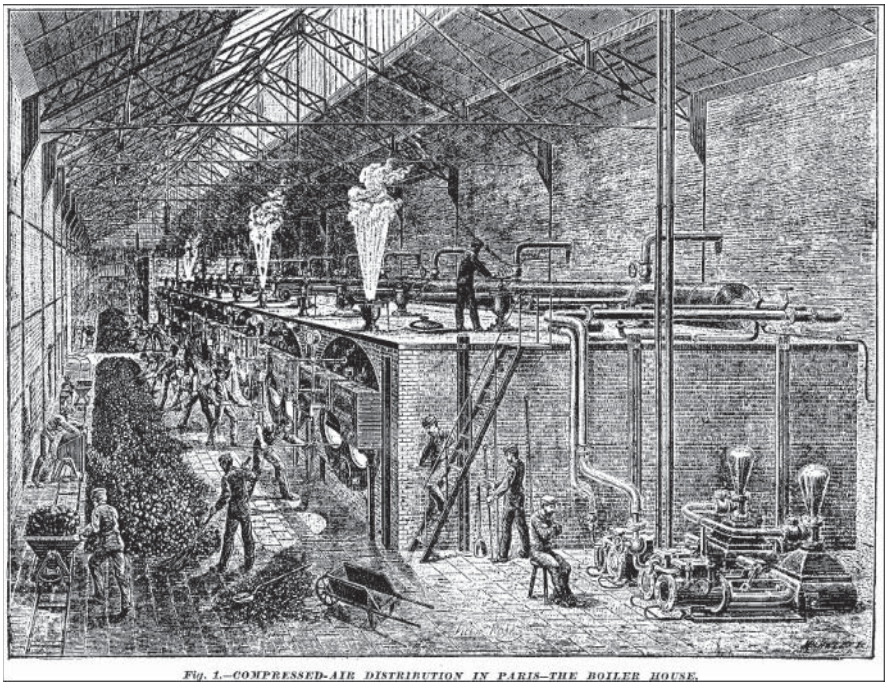
The ruins of the Jaroso substation are still standing. Sited above and behind the ruins of M.A.S.A.'s 1940's transformer in the vicinity of the mine Jacoba, the first mine to be fitted with electric winding gear. The Argentífera had taken the lease of this mine shortly before the construction of the power plant and had been obliged to install steam powered winding gear by the mine owners as a condition of the lease.

The Jacoba substation with M.A,S.A's 1950's substation in front of it. *A.G.Jódar.*

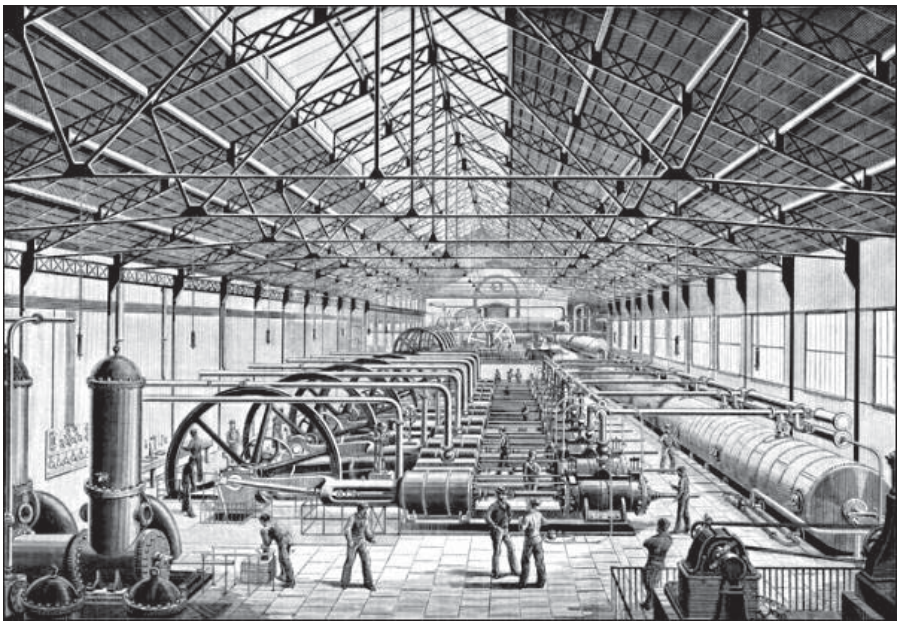


The Jacoba before the winding gear was installed which was to be steam operated for just a year. *Anon*

While I have been able to find images of a Swiderski steam engine and an early Schuckert dynamo I haven't managed to find an illustration of this combination in a power plant because the more usual combination was steam turbines, rather than engines, driving the dynamos. The two engravings of the Saint Fargeau engine house of the Paris compressed air system for distributing power gives some idea, although on a much bigger scale, of what the boiler and generating halls would have looked like. In the picture, the compound steam engines are driving air compressors rather than dynamos.



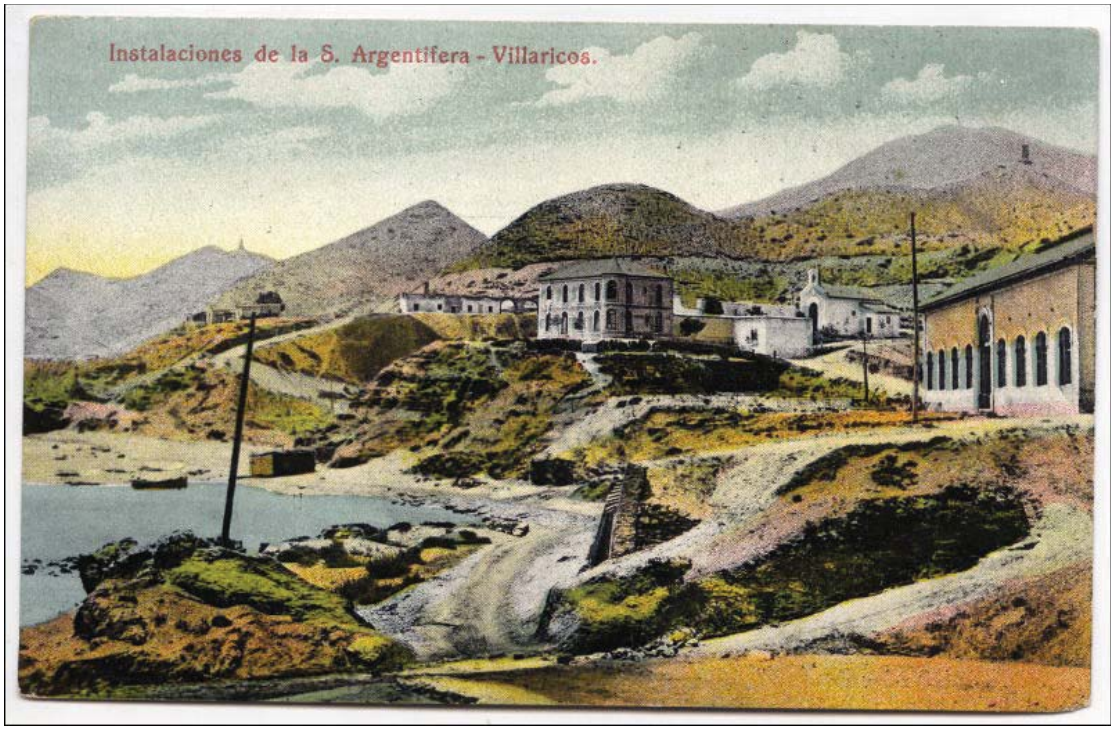
The boiler house of the Fargeau plant of the Paris compressed air system. *Douglas-self.com*



The engine room of the Fargeau plant of the Paris compressed air system

Douglas-self.com

It is to be hoped that the ruins of the Central Eléctrica, and those of the Argentífera's headquarters beyond it, will feature in future information boards and that the importance of the power plant in prolonging the life of the area's mining industry receives the recognition that it deserves.



The Agentífera's headquarters and the generating hall of the power plant in 1912. *F.De Blain*