

# The preservation of operating industrial sites

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The methods of field work and organized study of industrial sites have been developing along with the discussion on the industrial heritage preservation. Since the mid-twentieth century, the recognition, documentation and dissemination of the industrial heritage have been the issue of many books and conferences worldwide. A lot has already been accomplished, but there is still a lot to be discussed.

One specific topic that calls my attention is the study and documentation of active industrial sites. As the discussions around industrial heritage focus on sites that ceased operations, there is not enough theoretical and methodological apparatus for those who study sites that are antique and recognized as heritage, but still performs its initial activities. But which are in fact the differences between the research of big empty shells and the research of industries that are still in operation?

This paper aims to point out some difficulties that are more evident in operating sites and to open the discussion around these issues. The analysis is developed through Itatinga Hydropower Plant case study<sup>2</sup>.

Itatinga is a “run of the river” hydropower station with a capacity of 15,000 kW. It is located in the Serra do Mar coastal escarpment, São Paulo State, Brazil. The complex spreads through three cities. Its generating system is located in Bertiooga City and the transmission lines crosses the Cities of Bertiga, Guarujá and Santos.

Itatinga was built in the beginning of the 20th Century to provide energy to the Port of Santos. By that time the port was going through a modernization process in order to

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accommodate the increasing coffee exportation. Nowadays, Santos is one of Latin America's busiest port and Itatinga still fulfills 80% of its electrical demand.

The electricity production process starts at a small reservoir in the Itatinga River. A series of canals and tunnels of approximately three kilometers takes the water from the reservoir to the forebay tank. From the forebay tank, the water is brought 640 meters downhill in five penstocks to the powerhouse, where the potential kinetic energy is turned into electricity. The electric power transmission is performed with around 30 kilometers of overhead lines, which connect Itatinga hydropower station with the Port of Santos.

Most part of this system is surrounded by dense vegetation, since it is located in the middle of the Atlantic Forest. As the complex is not connected to the urban fabric, it depends on its own transportation system and support structures. The transportation system is composed by a small port, a seven kilometer railroad and a 1.8 kilometer cable railway. Itatinga also has a company town, where there are workers dwellings, bakery, church, infirmary and recreational club.

Although Itatinga's material structure and dynamics have changed throughout its centennial history, it still preserves a great deal of its beginnings. In the course of time, the changes have been historicized and today we perceive the different phases as one single whole. Despite the appearance of an old ensemble, we have to keep in mind that it is still changing and that this change process has an industrial character. So, aside from tracing the industrial past of the site, we also have to put into perspective its industrial present and its industrial future. Thus the first issue that I would like to point out when dealing with operating industrial heritage is to take into consideration the industrial aspect of the building in all its different temporalities. So, when we think about Itatinga we have to consider the past, the present and the future of electricity generation and transmission.

Beside the different approach to the time frame, the study of operating industrial heritage sites has some practical peculiarities. The available documentation from operating and inoperative sites diverge. Usually, industries that still work have more dense and organized archives. However, those archives tend to be harder to access and contain many classified items. In Itatinga's case the confidentiality of the plans and drawings is very evident when it comes to current works that are being performed by

third-party companies. It is very hard to see these documents and even harder to get permission to copy them.

The relation with the material culture is also different in an operating site. To be able to study the working machinery and to engage with current employers significantly deepens the analysis. The access to the machinery and the employers' knowledge are key elements to the documentation and preservation of these sites. Itatinga's employers have a central role in the understanding of the plant's current operation, as well as in the understanding of previous arrangements and procedures. As a significant number of employers come from families that used to work in this plant, their knowledge goes far back in time and their attachment to the place is very strong.

The access to this rich material - both tangible and intangible - makes us responsible for the documentation of these sites for the future generations. The way we document and study the operating sites impacts in their spaces and their associated activities and memories preservation. Thus, when we discuss our investigative approach, the role of the preservation and documentation should always be kept in mind.