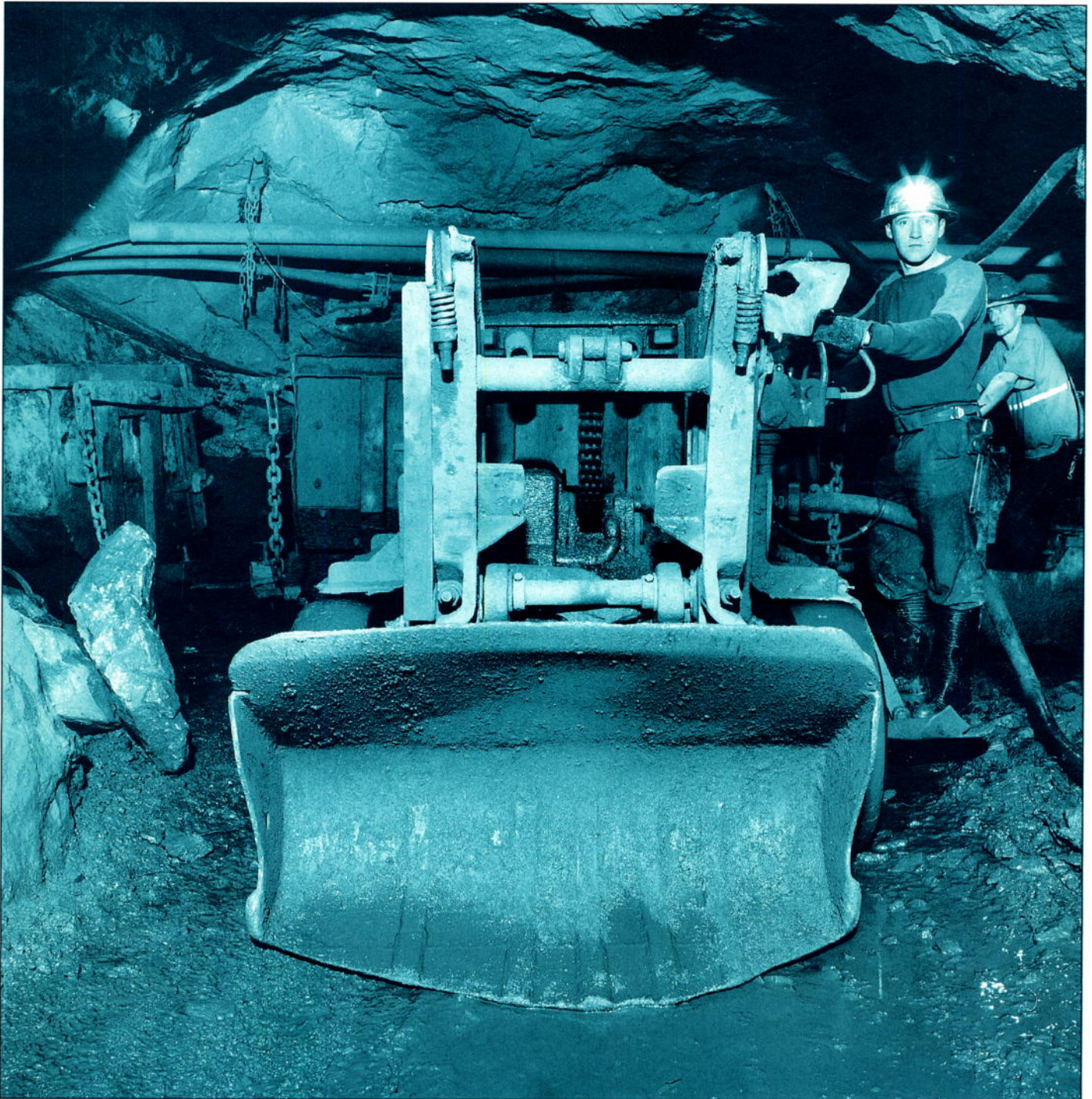


# INDUSTRIAL ARCHAEOLOGY NEWS

**106**  
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## COVER PICTURE

Underground recording by RCHME at South Crofty came  
just in time before the tin mine's closure (see page 6)  
Photo: RCHME © Crown Copyright

## Developments in Portuguese Industrial Archaeology

José Manuel Lopes Cordeiro

*This article presents a brief survey of the rise and development of industrial archaeology in Portugal since the late 1970s, the recording of its industrial heritage, the range of survivals, achievements in conservation, the work of museums and universities, and some of the growing volume of relevant literature. The author is Editor of Arqueologia Industrial, the national journal on the subject.*

The term 'industrial archaeology' first appeared in print in Portuguese in 1896, by Francisco Sousa Viterbo, but it was not until the late 1970s that there was a marked surge of interest in the industrial heritage. In his pioneer article 'Portuguese industrial archaeology - the mills', published in the August-September issue of 1896 of *O Archeologo Português* (The Portuguese Archaeologist), the most important archaeological review of that epoch, presently published by the National Museum of Archaeology of Lisbon. Sousa Viterbo not only laid the foundations to a new study area but showed how research and interpretation of the physical remains of past manufacturing activities, and peoples' memories of their operation, could be of relevance to understanding the modern world.

A background account of Portuguese industrial history cannot avoid stressing that the country was a latecomer. In fact, throughout most of its history, Portugal was a country where activities connected with agriculture, fishing and trade were more relevant than industry. Only after World War II did Portugal develop systematically and its economy start becoming thus a modern one.

In spite of this backwardness Portugal soon

witnessed traces of the modern industry. Even in the eighteenth century, the country tried to keep pace with industrialisation elsewhere in Europe. The Royal Silk Twisting Mill of Chacim, at Trás-os-Montes, established in 1778, introduced the round silk twisting mill technology into the Iberian Peninsula from Piedmont in Italy, remains of which still exist. Also at that date the first modern cotton spinning mills were set up. Among them the Royal Spinning Mill of Tomar, the first British-type factory, established in 1789 by the French-Portuguese merchants J. Ratton and T. Lecussan Verdier, which also still exists, having operated until quite recently. The effort to industrialise reached the colonies too and, in 1767, the Nova Oeiras Ironworks was founded in Angola. Its remains were preserved and classified as an historic monument by the colonial authorities and the Portuguese government as early as 28 May 1925.

The Napoleonic Invasions (1807-1811) and their economic implications, namely the possibility of setting up factories in Brazil and the ability of this Portuguese colony to establish free trade with foreign countries, were among the main causes which destroyed the precarious industrial structure in Portugal of that epoch. Constitutional struggles in 1820-34 and further political instability delayed industrial development. The steam engine only arrived in Portugal in 1819, although some had been operating in Brazil since 1811. Nevertheless, before and after that period, water was an important power source of the Portuguese industry, mainly in the inland areas. Between 1850 and 1914 the pace of industrial development was fairly steady, accelerating after 1870.

Portugal has a great variety of metallic ores, but they are generally of low quality and a lot of mines have been exhausted. Tin and tungsten are



Beira Interior University Wool Museum, with eighteenth-century Dornas dyeworks

Photo: © CREA-CEPP/Museu de Lanifícios da UBI





Corroios tide mill, Seixal. Industrial Heritage Nucleus of the Municipal Museum

Photo: Nelson Cruz

found at Panasqueira and Fundão in the centre of the country. The Torre de Moncorvo area has important deposits of iron ore although they are not currently exploited. Iron and copper pyrites are found around São Domingos and Aljustrel, and there are uranium deposits at Urgeiriça in the central area. Coal is little exploited, the main beds being situated in Cape Mondego, São Pedro da Cova and Pejão. Quarrying of limestone, marble, granite and china clay is still important. However, the total number of mines in operation has decreased rapidly, mainly because of an inability to compete in international markets. Preservation is now urgent as most disused mines have been left to fall into ruins or, even, completely destroyed.

The fishing industry exists along the whole coastline, and is one of Portugal's traditional resources, contributing substantially to the feeding of the population as well as supplying the canning industry.

Many survivals of traditional manufacturing activities have disappeared in recent years, but some remains of the shipbuilding tradition can be seen at places like Vila do Conde. In the seventeenth and eighteenth centuries many decorative tiles were used in both religious and secular buildings, and subsequently railway stations were decorated with glazed tile panels with regional motifs.

Coastal shipping and inland navigation provided the basic means of transport before railways and the development of an adequate road system in the nineteenth century. In 1821, a regular steamship connection was established between Lisbon and Oporto. Stage coaches began to operate between the two cities only in 1855, along a macadamised road. Road building continued on a considerable scale throughout the second half of the century. The first railway was opened in 1856 and by 1932 a network of 2,144 miles (3,450 km) had been constructed. The main commercial ports are located on the estuaries of the principal rivers: Lisbon on the Tagus, Setúbal on the Sado, and Leixões near Oporto on the Leça, the last an

artificial harbour of 1886-1892.

Interest in Portuguese industrial archaeology began in the late 1970s, included in a wider movement to protect the national cultural heritage which gave rise to many initiatives aiming at preservation demanded by better informed public opinion.

The main initiatives which developed for the industrial heritage took place in the 1980s. Among them the first great exhibition, organised in 1985 in Lisbon, in a former thermo-electric power plant (Central Tejo) which for decades had supplied the capital with electricity. This exhibition, called 'Industrial Archaeology, a world to know, a world to preserve', was organised by the Heritage Institute of the Ministry of Culture. In the following year the First National Meeting on the Industrial Heritage took place. Over 200 people participated, showing the interest in industrial archaeology. The strong impact on public opinion of both these events led to the setting up in 1989 of an exhibition on the archaeology of the fish canning industry at Matosinhos, near Oporto.

The 1990s brought a wider diversification and sounder foundation of some existing projects. On the other hand, the founding of new IA societies slackened, although there are symptoms at present of a change. An important feature concerns the media, mainly print, which has devoted some space to the industrial heritage since the late 1970s. As regards current projects they are chiefly connected with the foundation of industrial museums, of which there are few in the country. Industrial archaeology have been included in different subject curricula at the Coimbra and Minho universities. At the former, Professor Amado Mendes gave lectures and supervised seminars on industrial heritage. At the latter, a research programme on industrial archaeology was established and the university publishes the national journal on the subject.

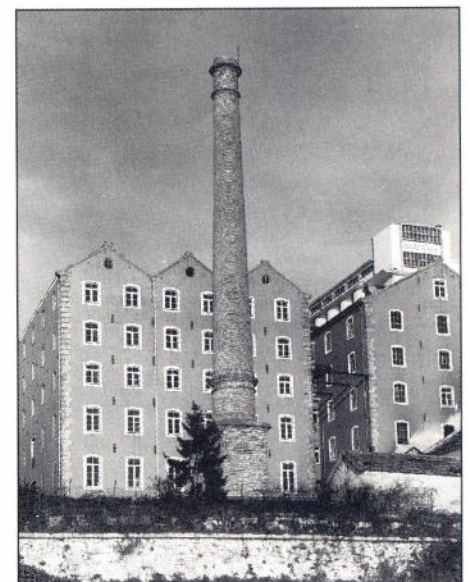
Recent changes in the government policy for the cultural heritage, namely the foundation of an Institute of Archaeology, will probably bring about

proposals to preserve the industrial heritage. In a period when the Portuguese economy is undergoing a deep change - many firms are being shut down, some of them over 100 years old - and when, chiefly in urban areas, building development pressures threaten old industrial plants, some of them no longer active, it is urgent to start the systematic survey of the industrial heritage. This demands sufficient funding, so that we will be able to safeguard industrial structures, record the most outstanding architectural features and, when advisable, propose the listing of sites or structures.

The concern of some councils with recording the industrial heritage has had positive aspects and some surveys have been started (such as in Oporto, Amadora and Vila Franca de Xira). These examples are, however, rare and surveys of mines about to stop production, and closed narrow gauge railways, should be started before it is too late. In fact, the current situation of the railway heritage is cause for worry because the regional narrow gauge network was recently closed and the fates of station buildings and equipment, including some of the small museums already existing, are unknown.

In Leixões harbour, just north of Oporto, two 50-tonne Titan steam cranes remain. They were built in 1888 by the French Compagnie Fives-Lille, and were used to lay the foundations of the harbour piers. There is also a similar 90-tonne crane, but operated by electricity, built in 1924 by the Wergust Sriedam Company.

Few plants and structures have been classified. Among the most important is the set of furnaces of former dyeworks of the Royal Cloth Factory of Covilhã, which was classified in 1982. They are now at display in the Beira Interior University Wool Museum. Lisbon has the largest set of classified sites, among them the Rossio Railway Station, the Viúva Lamego Ceramic Factory, the Bairro Grandela (one of the working-class dwellings built at the turn of the century with a façade having an unusual triangular pediment supported by six columns) and the Auto-Palace Garage. In Oporto, the most



Harmonia Flour Mill (1890), where the Oporto Museum of Science and Industry will be located

Photo: J M Lopes Cordeiro