

# Workshops of the Paulista Company in Jundiaí, São Paulo: A Threatened Railway Heritage

Antonio Soukef Júnior

*Master Program in Design, Production and Management of the Urban Space, FIAM-FAAM University Center, São Paulo, SP 01503-001, Brazil*

**Abstract:** The workshops built by the *Companhia Paulista de Estradas de Ferro* in Jundiaí can be considered among the most significant Brazilian railway assets, both for their aesthetic and deployment qualities, and for the industrial activities carried out on the premises, since their spaces preserve the memory of the work of generations of railway personnel who performed their various functions there between 1893—the year they opened, and 1990 when they were permanently decommissioned. This complex, during its almost 100 years of operation, has undergone significant modifications and enhancements mainly due to technological changes driven by the replacement of steam traction by electric traction, and then by diesel-electric traction. Despite this, the complex maintained an impressive architectural consistency. Unfortunately, most of the buildings of this complex are unused and in disrepair, being the target of invasions, vandalism and theft of materials that if not stopped will cause irreparable damage to its structure and to the local ambience. The question that appears most urgent, therefore, is to seek ways to repossess this group of workshops in order to meet the current demands of urban development without losing the characteristics which form its architectural and urban identity in a city in accelerated mutation.

**Key words:** Railway heritage, urban development, preservation.

## 1. Introduction

The railroads in São Paulo were of paramount importance for the development and occupation of the territory during the coffee cycle (1850~1930). São Paulo had remained isolated from the rest of the country during most of the colonial period, with many difficulties of communication with the coast and consequently, with other regions and with Portugal. This problem was only solved in 1867 with the opening of the SPR (São Paulo Railway), linking the Port of Santos to Village of Jundiaí (Fig. 1). The construction of this line was critical to the expansion of coffee production in the state, making the Port of Santos the busiest in the country. Jundiaí, as the railway terminal point, would grow significantly, becoming a proletarian city thanks to the factories and industries

that were installed next to the railway bed.

Realizing that it would not need to extend its tracks, since the monopoly of access to the port had been established, the SPR led the way for other railroads to make the necessary connections to meet the interests of coffee growers of different production zones. Thus, starting from Jundiaí, a rail network would be constituted that would connect the whole State of São Paulo. In 1868, it came the first railroad created on the initiative of coffee farmers, the PC (Paulista Company) of Railways and Waterways.

Funded by capital from the most traditional families of coffee growers from São Paulo, Paulista Company, after the inauguration of Jundiaí Campinas Section (1872) extended their lines quickly in order to meet the strong demand. In 1892, it reached the mark of 279 km of railroads deployed, and now controls a rich portion of the state limited by the Mogi-Guaçu and Peixe Rivers. In the early 20th century, it began a series of improvements in its facilities, expanding or constructing

---

**Corresponding author:** Antonio Soukef Júnior, post-doctorate, master in design, production and management of the urban space, research fields: industrial heritage and urban management.



**Fig. 1** 1908 postcard showing the Paulista Company's workshops in Jundiaí, note their size in relation to the city.  
Source: collection of Historical Museum of Jundiaí.

new buildings. In the early 1920s, it acquired the first trains with electric traction in South America and introduced steel passenger cars, in addition to the famous Pullman cars.

In the 1930s, its tracks ranged over 1,400 km, reaching the boundaries of the States of Mato Grosso do Sul and Goiás.

During most of its existence, the company boasted a model railroad image thanks to its organization and efficiency. As standard of reference among Brazilian railways, it survived until 1961 when it was nationalized. It was one of the few Brazilian railroads that generated income and guaranteed dividends to its shareholders for most of its existence.

## 2. The Decline of the National Railway System

The rail transportation started its decline in São Paulo (and the rest of the country) from the 1940s due to several factors, including that of having been built primarily to serve as a vehicle for the flow of

coffee and by the fact that the companies were unable to adapt to the diversification of the economic framework of the postwar period. The federal government's incentives for road transport also contributed significantly to the decline of the sector.

However, having participated in the socio-economic life of so many cities for several decades, the railways have left an important cultural legacy through their buildings, witnesses of a building art that used new techniques that introduced hitherto unknown aesthetic standards. This legacy in many cases is in serious danger of disappearing due to the lack of a public policy effectively guaranteeing its preservation. This is the case with the Paulista Company's workshops in Jundiaí.

## 3. Paulista Company's Workshops in Jundiaí

The railway workshops made up an architectural type, which showed considerable development during the 19th and early 20th century, due to the expansion of

lines and increased rolling stock required to deal with the movement of passengers and cargo. Depending on the importance and intensity of traffic of the line, they could be workshops of small dimensions, almost craft shops, or real plants, where the rationalization in the distribution of spaces for specific destinations and the division of labour was needed. For this reason, this issue was examined in the rail treaties (*traité des chemins de fer*) and technical manuals that had arisen in the 19th century in order to guide the organization of the railways [1].

These treaties were quite detailed and therefore extensively used by the technicians responsible for the implementation or expansion of railways in several countries, including Brazil, where this material was part of the curricula of polytechnics.

However, despite these manuals allowing the full application of the solutions presented, in many cases, it turns out that there was not only the appropriation of the models, but a readjustment to the reality of the different railways. Such adaptation is clear in Jundiaí workshops, where they set up a genuine industrial production, with assembly line and improved working conditions and maximized productivity; features that required deep typological research aiming to define the most appropriate solution. This is the case, for example, of the finished brickwork and the metal structures which, if on one hand, met the programmatic prerequisites, lowering costs and reducing the construction time, they also received a finer aesthetic treatment especially in the administrative areas.

Such care was maintained in all the phases of expansion that the complex underwent over the years. Regarding the drive system, for example, the PC went through three phases, with its locomotives running in steam-powered, electric and diesel-electric modes. These changes are responsible for the main architectural modifications in the workshops, as each system has specific characteristics that require new spatial arrangements.

#### 4. Phase of Steam Locomotives (1868~1922)

In 1890, the Paulista Company decided to deploy its new maintenance workshops in Jundiaí due to the low cost of land, the serious epidemics of yellow fever and smallpox occurring in Campinas, the location of the corporate headquarters and the proximity to the line of the SPR. The final inauguration took place in 1896 [2-5].

From the beginning, its scale was impressive, with repercussions on the urban structure of the city. The group consisted of offices, mechanical workshops, body-working, boiler-making, locomotive repair, carpentry and lathes, which allowed the simultaneous achievement of the various stages of the maintenance services of wagons and locomotives [6]. There were, among others, specific areas for the following activities: repair and painting of railcars and wagons, foundry, carpentry and mechanics, as well as a compartment for stationary machines and deposits of materials and for the storage of lumber (Fig. 2).

As for the finishing, in all units basically the same style predominated:

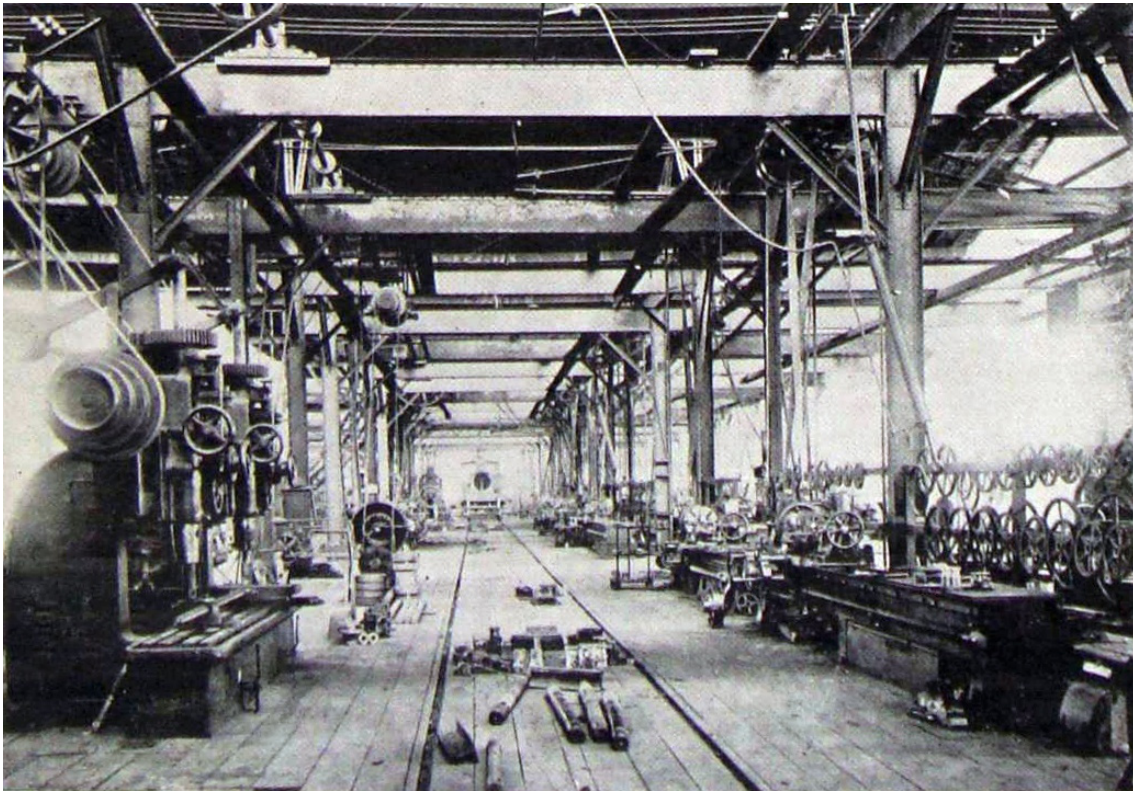
- redbrick walls with large glass areas;
- the columns and trusses in steel;
- the roofing with plain tiles, gutters of copper and cast iron downpipes [7].

In locations intended for accounts and inspection, the finishing is more elaborate, moving away from the recommendations of the treaties, especially in the composition of the facades in which are used ornamental elements originating from the classical vocabulary in addition to Masonic symbols (Figs. 3 and 4).

#### 5. Phase of Electric Locomotives (1922~1945)

In the 1920s, the PC diversified its operations, transforming into a large agro-industrial complex which included tree nurseries, providing wood for sleepers and construction of wagons. Workshops was equipped to provide rolling stock, to maintain the material used on the railway, as well as for the construction of railcars and refrigerator cars, paper





**Fig. 2** Blacksmithing section of Jundiaí workshops in 1911.

Source: *Magazine Brazil Ferrocarril* No. 20, August 1911. Collection of Mario de Andrade Library.



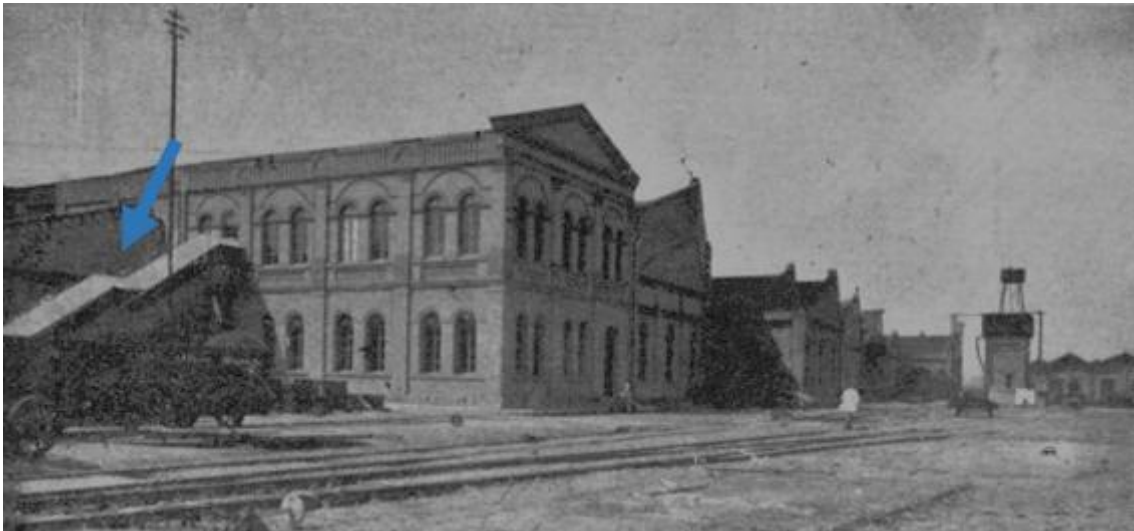
**Fig. 3** View of Jundiaí workshops from the railway line. The red arrow indicates where the Inspection Department of the company worked. The green arrow shows the original features of the workshops before the expansion taking place in the 1950s.

Source: Illustrated album of railroads of Companhia Paulista: published on the 50th anniversary of its founding. São Paulo, 1918. Collection: Antonio Soukef Junior.

industry, colonization programs and road transport companies, among other activities [8].

To deal with such a large operation, various administrative and operational changes were effected

to meet the transport needs with the reduction of expenditure. This action provided for the execution of a vast program of improvements that included the extension of the railroad, the modification of routes, the



**Fig. 4** Former Accounts Department. The blue arrow shows where the stockrooms used to be. Note that the building had only one floor and had sawtooth finishing, as did the other sectors of the workshops. There would later be added a second floor for use as offices. At the front, one can see the covered stairway that led to the reception. This stretch is one of those that suffered the most profound changes of the whole group, compared with the Figs. 5 and 6.

Source: Illustrated album of railroads of Companhia Paulista: published on the 50th anniversary of its founding. São Paulo, 1918. Collection: Antonio Soukef Junior.

expansion of buildings and shunting yards, the acquisition and installation of rolling stock, new telegraph and telephone communications, and finally, the expansion of the electrification of its two trunk lines—Jundiaí-Bauru and Itirapina-Rincão [9].

## 6. Electrification of the Trunklines

With the onset of First World War, coal importation was drastically reduced, forcing the PC to opt for the electrification of its lines. The work started in 1919 and the inauguration of the first segment, Jundiaí-Campinas, took place three years later. Fifteen electrical substations are built along the lines [10].

The change in the operating system, even though was not integral, required the upgrading of spaces of the workshops, since the technical needs of an electric locomotive are different from those of a steam locomotive [11]. Changes were made in the main building with the rearrangement of the layout of the sections, purchase of equipment and the provision of areas for the storage of the parts of the new machines, because the steam service was not yet interrupted [12].

Among the changes due to the reform of the

administrative organization of the company, the main one was the construction of the building where the headquarters of the retirement cash and pensions employees of PC operated, completed in the late 1920s or early 1930s.<sup>1</sup> At that time, a new area was also provided for technical staff training. In 1942, the employees' cafeteria was opened and two rooms alongside the inspectorate gained a second floor [13].

In 1954, the Paulista Company reached the maximum length of electrified lines when reaching the Town of Cabrália Paulista. From that point, the program was suspended. The economic crisis that started after the crash of the New York Stock Exchange, exacerbated by World War II, and the government option for road transport in the 1950s can be pinpointed as factors that discouraged the continuation of this project. Another factor that decreed the end of the electrification was the arrival of the first diesel-electric

<sup>1</sup>The Retirement and Pensions Fund for the employees of the Paulista Company was established by Federal Law 4682 of January 24, 1923, and its installation in Jundiaí occurred on June 23 of that year. We cannot affirm that its final site was ready at that time, but the information obtained in plans and reports make us assume that already in the 1920s or at the latest at the beginning of the 1930s, the building already existed.

machines in 1951 that gradually replaced the electric locomotives, despite showing lower yields.<sup>2</sup> It is in this new stage that the workshops suffered their greatest changes.

## 7. The Phase of Diesel-Electric Locomotives

Interestingly, in the decade that emphasized the decline in Brazilian railroads, motivated by the factors listed above, the PC carried out its greatest changes in the Jundiaí workshops, considerably expanding its service area, which would read about 30,000 m<sup>2</sup>. The two main changes are:

(1) expansion of area for administration with the creation of a second floor next to the Accounts Department;

(2) construction of a new locomotive maintenance sector more suited to new machines and equipment.

In the early 1950s, the workshop facilities, built more than 50 years earlier, proved to be inadequate both for the performance of the administrative and for the technical activities as a result of profound technological changes in the industry, demanding a different type of physical layout of the equipment.

In the existing part, the entire stretch following the Accounts Department (Fig. 7) was modified with the space where the stockroom functioned being transformed into offices. Outside, the sawtooth profiles were eliminated for the construction of a second floor that would follow the same architectural pattern as the remainder. The new configuration would take the form of an U, involving the Retirements and Pensions Fund building, being finished off with a similar construction to the Accounts Department. The area on the ground floor, comprising the inspector's offices (beside the

line) and the Accounts Department (on the town side), started to be used in administrative activities.

Even today, the changes made can be detected by observing the difference between the bricks of the earlier setup and the new. The bricklaying, even though it was carefully performed by skilled workmen, shows the differences in composition and colouring of the material. Another detail that differentiates the time of construction is the foundations in mortar in the older buildings and masonry in the more recent.

In the extension of this second building, at the end of the stretch in U, we have three more modules with sawtooth finishing, probably built during the same period. There are, however, differences in the finish (an oculus in the centre of the first gable, for example). The frames, apparently of the same design as the remainder, were at some point replaced by others of a distinct modulation (Figs. 5, 6, 8, 9).

Next were built new facilities for the maintenance of the electric and diesel-electric locomotives. The new building, although it had sidewalls in visible brickwork, did not follow the typology of the previous buildings, being constructed in concrete and steel, because of the increased weight of the new compositions (Figs. 10 and 11).

## 8. Decommissioning the Jundiaí Workshops

In the early 1960s, the PC started to lose revenue to the bus companies and suffered losses caused by the accelerating inflation, a fact that led to relying systematically on state subventions in order to maintain their operations.

The situation reached such a point that in June 1961, the state government took over the company claiming the need to maintain the essential services provided by it. However, this action further accelerated its decline since the state did not maintain the same discipline and rigidity that marked its private administration. So the crisis, which had been circumstantial, became structural. Gradually, branches and stations were extinguished and the Jundiaí and Rio Claro workshops had their traffic and activities reduced.

---

<sup>2</sup> The advantages of electric locomotives compared to steam-powered were blatant. However, a comparison of electric with diesel was no longer so favourable to them. A diesel locomotive does not have as efficient performance as an electric, but they are mechanically advanced and do not require the infrastructure of overhead lines and substations needed for electrical locomotives. Their power was lower than the more modern electrics, but this drawback could be overcome by using double traction.

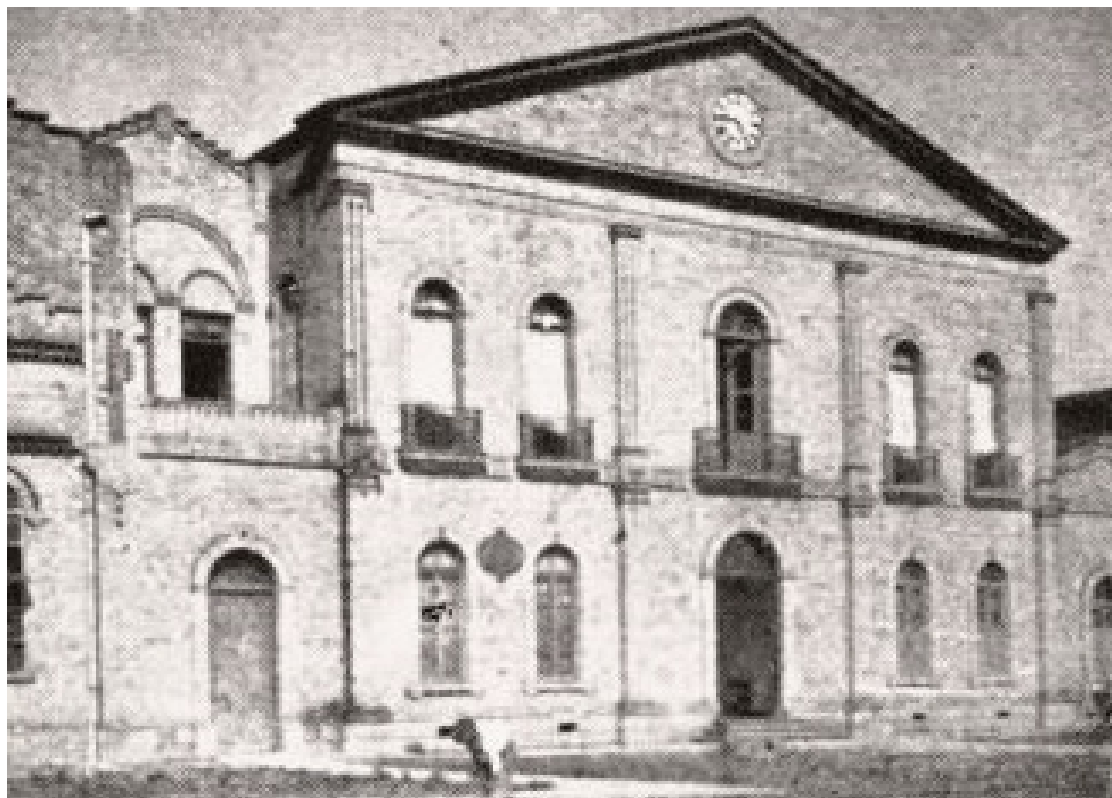




Fig. 5 The blue arrow indicates the stretch where the stockroom stood that was expanded in the 1950s. The red arrow indicates the location of stairs to the second floor, compared with Fig. 4.

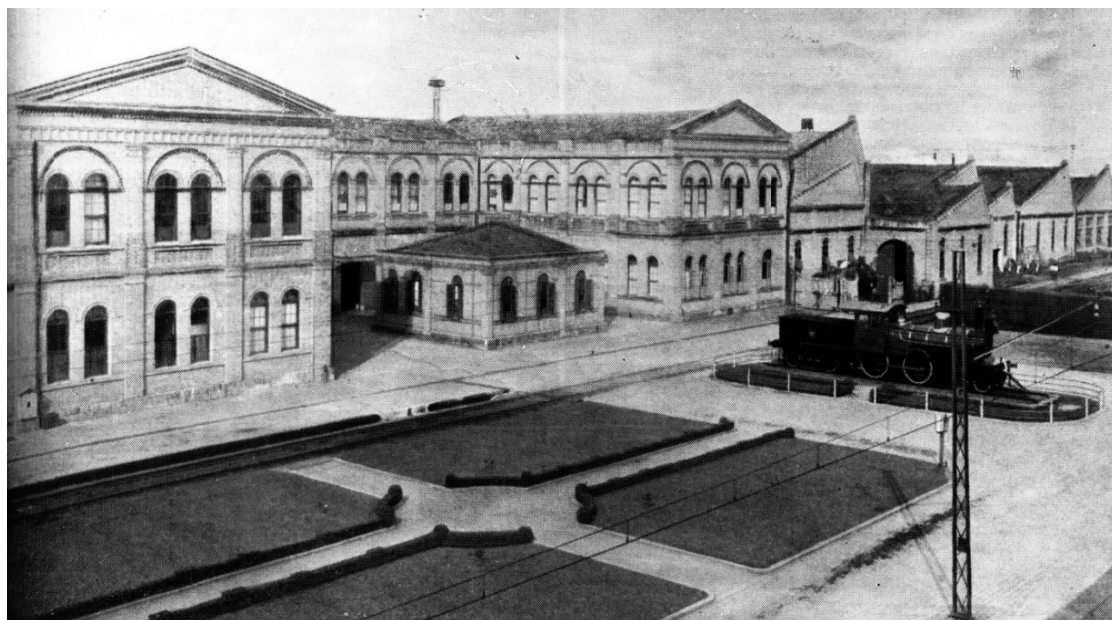


Fig. 6 Continuation of the stretch extended in the 1950s. Note the mark of the extension from the difference of the colour of the bricks (red arrow). The green arrow indicates the beginning of last segment that ends the stretch extended in the 1950s. Note the mark of the expansion in the bricks above the introduced girder.



**Fig. 7** Entrance to the Inspector's Office. Note the decoration based on classical motifs.

Source: Illustrated album of railroads of Companhia Paulista: published on the 50th anniversary of its founding. São Paulo, 1918.  
Collection: Antonio Soukef Junior.



**Fig. 8** Portions of the workshops where the administrative activities were concentrated after completion of the expansion works. Note the concern of the authors to reproduce in the building on the right, the same details as the existing building. In the center, one can see the building of the former Retirement and Pension Fund, built between 1920 and 1930.

Source: *Journal Railroad* No. 279, year XXIV, from 1958 to 1959.  
Collection: César Sacco.





**Fig. 9** General view of the workshops in the 1950s from the rail bed. In the center, one can see the entrance to the Inspector's Office and in the background right, the workshops for the maintenance of diesel-electric locomotives.

Source: collection of Companhia Paulista Museum, Jundiaí, São Paulo.



**Fig. 10** Aerial view showing the stretch expanded in the 1950s. Note the change in roofing, originally in French tile. Changes like this were probably made during the buildings maintenance work. At the back, the rear view of the workshop built to deal with the diesel-electric units (photo 1999).

Source: collection of preservation of Historical Heritage Unit of CONDEPHAAT (Conselho de Defesa do Patrimônio Histórico, Arqueológico, Artístico e Turístico).





**Fig. 11** Complex of the Jundiaí workshops in 1992.

Source: collection of Companhia Paulista Museum, Jundiaí, São Paulo.



**Fig. 12** Current situation of the old entrance to the Inspector's Office, Companhia Paulista.

Source: photo by Antonio Soukef Júnior, 2015.

Despite the decline in the quality of services provided by PC under state command becoming increasingly evident, there were still some achievements and advances like, for example, the delivery in 1967 of a batch of 10 new electric locomotives produced in General Electric Brazil's factory. Simultaneously, it continued the process of using diesel-electric machines.

In 1971, the Ferrovia Paulista SA—FEPASA was established, a mixed-capital company that absorbed five of São Paulo's railways, including the Paulista Company. Since the beginning of operation of FEPASA, rumours started about the scrapping of the first electric locomotives that had belonged to the PC, at that time nearly half a century old. The oil crisis, however, delayed that decision.

However, the lack of investment in electrification of the state's rail network, the increasingly frequent theft of the copper alloys of the overhead lines, and the scrapping of the old electrical substations, decreed the end of this type of traction and the ultimate option for diesel-electric machines which had been improved over the past decades and featured capacity comparable with the largest electrics still available.

In the 1990s, the process of privatization of Brazilian railways began, including the FEPASA, effective in 1999. This marked the final deactivation of the Paulista Company's workshops in Jundiaí (Fig. 12).

## 9. Conclusions

The workshops of the PC in Jundiaí were among the largest and best-equipped buildings of their kind in the country. Their construction employed various industrialized materials and their consistent design, using modules with unexpected variations in height and volume, a result of successful expansion, led to a well-balanced complex, appropriate to the site where it was deployed. This is an authentic representative of the industrial heritage, prior to the industrialization of the Brazilian economy and which still retains much of its original architecture as well as some of its equipment.

Nearly two decades after its deactivation, the group of buildings acquired by the city of Jundiaí was partially occupied by administrative activities, leaving however, large abandoned areas that are in an accelerated process of deterioration, a fact made worse by constant invasions and depredations. It is therefore urgent to halt this process and perform a thorough industrial archaeological investigation, in order to clarify historical aspects of the building that are still not fully elucidated, addressing their social, economic and cultural aspects as well as their relationship to the history of architecture and technology.

The preservation of this important railway industrial building whose value was recognized by preservation agencies of the state and the union depends on the completion of a rigorous study of its spaces, its material evidence and the use and operation of its equipment over time. Only this systematization will ensure the full maintenance worthy of this complex.

As for their conversion to other uses, there is the possibility of promoting the occupation of the complex for educational, cultural or sports activities since the spaces, given their rationality and versatility, would allow it, as long as it were done on the basis of an architectural analysis to assess the compatibility of the new uses. However, with the delay in promoting a comprehensive inventory of the buildings and establishing a coherent conservation policy, the risk is being run of losing not only the buildings themselves but also the traces of the methods of operation and production, as well as the data on the social and spatial relationships with the city considering their quality of implementation and insertion in the urban site.

## References

- [1] Kuhl, B. M. 1997. "Conjunto das Antigas Oficinas da Companhia Paulista de Estradas de Ferro em Jundiaí. Parecer sobre Sua Relevância Arquitetônica." In *Secretaria de Cultura. Processo nº 36.516/97-Conjunto Arquitetônico e Equipamentos das Oficinas da Cia.* São Paulo: CONDEPHAAT (Conselho de Defesa do Patrimônio Histórico, Arqueológico, Artístico e Turístico). (in Portuguese)



- [2] Paulista Company. 1891. *Relatório n.º. 42 da Diretoria da Companhia Paulista de Vias Férreas e Fluviais*. São Paulo: Vanorden. (in Portuguese)
- [3] Paulista Company. 1896. *Relatório n.º. 43 da Diretoria da Companhia Paulista de Vias Férreas e Fluviais*. São Paulo: Vanorden. (in Portuguese)
- [4] Paulista Company. 1895. *Relatório n.º. 46 da Diretoria da Companhia Paulista de Vias Férreas e Fluviais*. São Paulo: Vanorden. (in Portuguese)
- [5] Paulista Company. 1896. *Relatório n.º 47 da Diretoria da Companhia Paulista de Vias Férreas e Fluviais*. São Paulo: Vanorden. (in Portuguese)
- [6] Paulista Company. 1897. *Relatório n.º. 48 da Diretoria da Companhia Paulista de Vias Férreas e Fluviais*. São Paulo: Vanorden. (in Portuguese)
- [7] Pinto, A. A. 1977. *História da Viação Pública em São Paulo*. São Paulo: Governo do Estado de São Paulo. (in Portuguese)
- [8] Paulista Company. 1920. *Relatório n.º. 71 da Diretoria da Companhia Paulista de Estradas de Ferro*. São Paulo: Vanorden. (in Portuguese)
- [9] Garcia, L, B. dos R. 1992. “Rio Claro e as Oficinas da Companhia Paulista de Estradas de Ferro: Trabalho e Vida Operária—1930-1940.” Doctoral thesis, UNICAMP (Universidade Estadual de Campinas). (in Portuguese)
- [10] Gorni, A. A. 2003. “A Eletrificação nas Ferrovias Brasileiras.” Personal homepage of Gorni, A. A. Accessed on April 19, 2015. [www.gorni.eng.br/Gorni\\_ElectroBras\\_2003.pdf](http://www.gorni.eng.br/Gorni_ElectroBras_2003.pdf). (in Portuguese)
- [11] Paulista Company. 1924. *Relatório n.º. 75 da Diretoria da Companhia Paulista de Estradas de Ferro*. São Paulo: Vanorden. (in Portuguese)
- [12] Paulista Company. 1927. *Relatório n.º. 78 da Diretoria da Companhia Paulista de Estradas de Ferro*. São Paulo: Vanorden. (in Portuguese)
- [13] Paulista Company. 1942. *Relatório n.º. 93 da Diretoria da Companhia Paulista de Estradas de Ferro*. São Paulo: Tipografia Siqueira. (in Portuguese)