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THE BRIDGES OF IAȘI AESTHETIC ASPECTS

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Abstract. This paper highlights some aesthetic aspects of bridges from Iasi, with the presentation of technical data and photos.

The main issue is the placement of buildings near the bridge and blocked their view. Thus, the aesthetic character of the bridge, which is of particular importance in certain cases, there is not rendered valuable. The same problem occurs if adjacent locations of several bridges (usually two), they obstruct each other.

Key words: bridges; aesthetics; architecture; architectural value; maintenance; technical condition.

1. Introduction

Iași is the largest city in eastern Romania.

Most bridges in the city cross Bahlui river or other means of communication.

Even if the bridges were not so impressive in Iași, aesthetics should not be neglected, given the city's status as a major cultural center of the country, with many buildings of real architectural value.

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2. Unsightly Aspects of Bridges

Bridges bear the common term of “works of art”, which emphasizes the intrinsic appearance of these buildings. However, this name should force the project engineer and all those who contribute to the achievement of such projects, to pay particular attention in view to obtaining and maintaining the beauty of bridges.



Fig. 1



Fig. 2

Tudor Vladimirescu Bridge of Tudor Vladimirescu Avenue, provides the link between the headquarters and the industrial area (Fig. 1).

Tudor Vladimirescu Bridge was built between 1964 and 1965. The superstructure is made of frames with columns in the "V" system (Morandi) cast prestressed concrete monolith, with a length of 46 m and the normal direction to cross the river Bahlui.

From an aesthetic point of view, this bridge can not be rendered valuable sufficiently due to adjacent buildings. Upstream and downstream, the river is crossed by two pipes for utilities, supported by lattice beams, and they obstruct the bridge as shown in Fig. 2. Fig. 3 shows the closeness between the upstream construction and bridge.



Fig. 3

There are many such situations aesthetically undesirable. Another example is the overpass Socola (Figs. 4 and 5), over the railway Iași – Ungheni, Socola Station area. This passage was built in 1958 and was rehabilitated in 1985. The superstructure is made of 11 openings of beams (strips) with prestressed concrete, and an opening of prestressed concrete beams, simply supported.

Hiding such a pipeline between bridge beams represents sometimes the used solution (Fig. 6); pipelines pass through spaces in abutment, under the bridge design (Fig. 7). In contrast, interventions for pipe failure are probably much more difficult. Thus, there are quite complicated situations, but for which solutions must be found. A relatively simple solution is to avoid locating other structures near the bridges, so they do not obstruct them. These distances could be determined through studies and surveying calculations.



Fig. 4



Fig. 5



Fig. 6



Fig. 7

A similar situation occurs sometimes between the close bridges. This happens frequently when a bridge with historical and aesthetic value can not be used in the same request and another is made next to it, for the continued along the road route. An exemple is the “The Stone Bridge” (Figs. 8 and 9), built between 1836 and 1838, and which can be used only as a pedestrian bridge.



Fig. 8



Fig. 9



Fig. 10

The superstructure was made of double arches built of stone with openings of 3×11 , 50 m. The infrastructure is composed of stone masonry elevations and direct stone masonry foundations.

Parallel to this road has made a new bridge but this one obstructs the upstream side of the old bridge (Fig. 10). Avoiding this would have been very difficult, meaning actually rerouting the road. It is noted, however, that should be avoided wherever possible these situations, even incurring great investment.

Of course, the cause which almost always contributes to the degradation of the aesthetics of bridges is improper maintenance of technical condition.



Fig. 11



Fig. 12

At all bridges and passages presented above may find the following main defects and degradation (Figs. 11,...,14):

- a) segregation, cracking, corrosion;
- b) discovered corroded steel reinforcement;
- c) dirty, smoky concrete surfaces, black spots, etc.
- d) surface alteration by the appearance of stone blocks cracks and crevices;



Fig. 13



Fig. 14

3. Conclusions

In the aesthetic of bridges is recommended

- a) to avoid spatial agglomeration of constructions so as not to cause obstruction of mutual visibility;
- b) a proper maintenance of the technical condition of bridges;
- c) a good management by adopting policies that would take precedence as far as possible the appearance of bridges, before the economic benefits.

REFERENCES

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PODURILE DIN IAȘI

Aspecte estetice

(Rezumat)

Se evidențiază anumite aspecte estetice ale podurilor din orașul Iași, cu prezentarea de date tehnice și fotografii.

Principala problematică este reprezentată de amplasarea unor construcții în vecinătatea podurilor, obturând vederea acestora. Astfel, caracterul estetic al podurilor, ce are o deosebită importanță în anumite cazuri, nu mai este pus în valoare. Aceeași problemă apare în cazul amplasării alăturate a mai multor poduri (două de obicei), acestea obstrucționându-se reciproc.