

Exercise 1: values appraisal of an existing structure

Hauteroche mansion

Background and objective

The “Hauteroche” mansion is located in Swiss Jura (Le Pont), above the Joux lake, Figure 1. It is one of the first reinforced concrete structures in Switzerland. The structure was designed in reinforced concrete following the pioneering patent of François Hennebique [3]. It was erected between 1911 and 1913. The verification of the structural safety of the building in 2013 showed that it was sufficient. More detailed information is given in Annex A.

→ The objective of this exercise is to characterize the values of the building according to the criteria given in [1]. The exercise will be performed in groups. Each group will briefly present its results and all results will be finally compared and discussed.



Figure 1: Hauteroche mansion, Le Pont, VD, Switzerland, [2].

Question 1

Determine the different values of the building with the support of the translation of [1] given in the course documents, chapter 1, fill Table 1 accordingly, and discuss the results.

Table 1: values appraisal based on [1]

Immaterial values		Ranking
1	Situation value	
2	Historical-cultural value	
3	Esthetical value	
4	Technical value	
5	Sociocultural value	
6	Emotional value	

Material values		Ranking
A	Location value	
B	Use	
C	Construction	
D	Society	
E	Economy	
F	Environment	

➔ The ranking is on a scale of -3 to +3, +3 being the highest (best) value and -3 the worst, "0" meaning no value.

References

- [1] SIA (2000), “Valeur de conservation des ouvrages”, Cahier Technique SIA CT-2017, SIA, Zürich.
- [2] <http://www.histoirevalleedejoux.ch/docs/Bunau-Varilla%20.pdf>, 16.08.2023.
- [3] Hennebique F., (1892), <https://patents.google.com/patent/US611908A/en>, 16.08.2023.
- [4] AFGC, <https://www.afgc.asso.fr/history-heritage/hennebique-francois/>, 16.08.2023.
- [5] <https://www.ingbaukunst.ch/file/411/Einladungskarte-Exkursion-Hauteroche.pdf>, 16.08.2023.
- [6] <https://cche.ch/fr/projets/manoir-haute-roche/>, 16.08.2023.

Note: this exercise is adapted from the lecture notes of Prof. Eugen Brühwiler “Structures existantes : Examen et interventions”, edition 2013, exercise 1, course CIVIL-436, courtesy of Prof. Brühwiler.

Annex A



Figure 2: overview of the building [5].



Figure 3: view from the building [6].



Figure 4: a) inside the building, b) mural frescoes from Henri Deluermoz, [6].

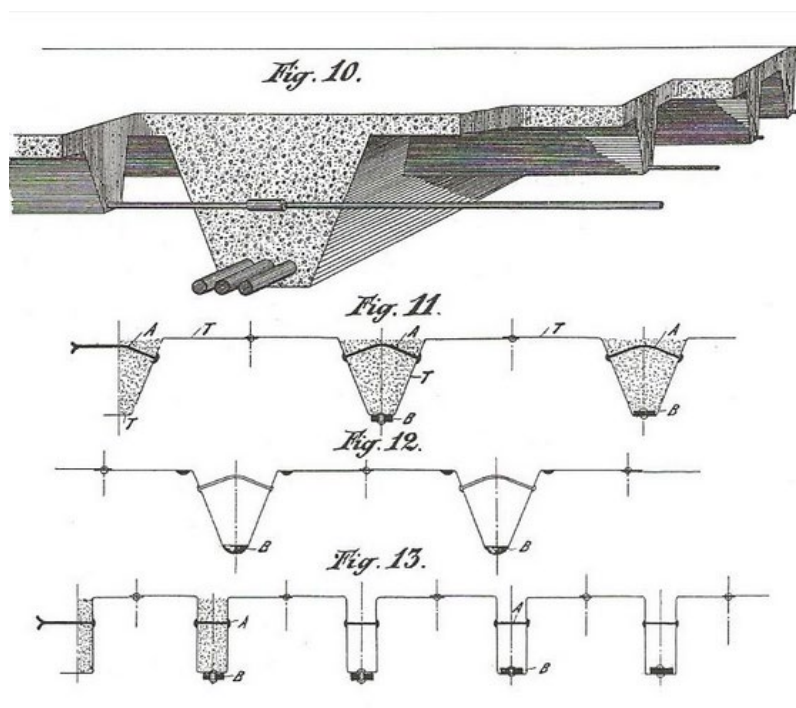


Figure 5: excerpt from Hennebique's patent [4].



Figure 6: condition of the building in 2013, photo E. Brühwiler.



Figure 7: condition of the building in 2013, photo E. Brühwiler.