

LEGAL MAINTENANCE OF RESIDENTIAL BUILDINGS AND THE ROLE OF THE BUILDING ENGINEERING GRADUATE

MANTENIMIENTO LEGAL EN LOS EDIFICIOS DE USO RESIDENCIAL Y EL PAPEL DEL GRADUADO EN EDIFICACIÓN

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All the regulations of our legal framework, starting with the generalist one, as the Civil Code, to the specific of the construction sector, as the LOE for example, require the owners and the users to maintain the buildings in a state of conservation that keeps out of risk the people who use it.

A series of periodically programmed activities are deduced of the technical regulations set of the building systems, which form the Plan of Legal Preventive Maintenance of the Building. This Plan contemplates the intervention in the system parts where the failures can cause important damages for the health of the users (elevators, boilers, etc.) or high economic impact injuries (façades, covers, etc).

The real truth is that good maintenance practices implemented in buildings with other uses (industrial, hospital, public, etc.) are not transferred to residential buildings, despite forming the largest group of all of them.

Censos de Población y Viviendas 2011. Edificios. Resultados Nacionales			
Edificios según tipo de edificio por tamaño del municipio y nº de inmuebles			
	Total	Destinado principal o exclusivamente a viviendas	Otros fines
Total (nº de viviendas)	9.814.785	9.730.999	83.786
1	7.701.066	7.701.066	..
2	680.023	651.034	28.989
3	215.056	202.023	13.033
4	148.166	140.755	7.411
5 a 9	431.649	412.664	18.985
10 a 19	410.544	398.959	11.585
20 a 29	133.492	131.068	2.424
30 a 39	48.507	47.853	654
40 o más	46.282	45.577	705

Fig. 3 Number of residential buildings in Spain [1]

Several negative circumstances arise from the above considerations: deferred maintenance becomes corrective one with the high economic costs associated with the added values of urgency and opportunity, systems and materials life cycle reduction trigger the renewal; the owner's liability to third parties' damages increases and the insurance policy contracted not always covers all situations where exist a clear lack of functions.

On the other hand, the economic importance of the sector is evident, despite the difficulty of setting representative economic average values for the group. The data of figure 1 shows that 2,029,933 buildings for residential use can be taxed with a legal maintenance cost of 2,500.00 € / year, considering that any building contains fire protection, elevation and telecommunication facilities. The huge magnitude of an excessively fragmented sector and little given to good practices can be seen.

The role of the Building Engineering graduate must be fundamental in all the processes related to the building maintenance. The university education offers the knowledge in the characteristics of the materials and constructive systems, as well as the criteria of durability and the mechanisms through which pathological

processes initiate. Therefore, it is able to interpret the injuries and damages that appear and to plan the necessary corrective actions.

Making a comparison with medicine field, buildings need a doctor who recognizes their condition in the first instance and who knows to diagnose and cure if necessary, or to send to a specialist treating it. That "head technician" is the building graduate.

There are many maintenance operations that need to be performed by a technician. These ones go far beyond the manual practices because an interpretation of the signals that the buildings show us is required.

Therefore, the ideal situation proposed is that once the work is finished, the construction director becomes - using the knowledge of the building acquired during the performance of the works- in the person in charge of maintenance of the building, according to different tasks:

- Writer of the annual maintenance plan
- Supervisor of compliance with the plan
- Responsible for technical decisions
- Responsible for repair or replacement interventions required.
- Property advisor related to the building.

REFERENCES

[1] Instituto Nacional de Estadística. Censo de Población y Vivienda 2011. Edificios.

<http://www.ine.es/dynt3/inebase/index.htm?type=pcaxis&path=/t20/e244/edificios>