

Inspection of Construction Works According to Polish Construction Law

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Abstract. Construction regulations are still different in many European countries, even though the European Union directives have unified many acts for construction works and construction products in the member countries. The scheme of the construction process presented in the paper could be valid for most countries, despite of detailed regulations of legal systems. The number of construction regulations to be followed in order to get the Construction Permit in Poland is rather big, so the time between the start of the investment process and the day when the Construction Permit is issued could be several months. Only licensed professional engineers can play the role of site managers, site inspectors and designers, registered for the given construction project. Duties and responsibilities (civil liability) of these engineers are strictly defined by regulations. The obligatory inspection of construction works should be executed by the licensed site inspectors. Moreover, the works can be incidentally inspected by Authority, banks, insurance companies or designers. Foreign designers and foreign site engineers in order to be allowed by respective Authority to play official roles on Polish construction sites should present documents proving that they can do the same jobs in their countries as per regulations obligatory there.

1. Polish construction law

According to the European Attractiveness Survey 2014 prepared by Ernst&Young, Poland is the most attractive country for investment in Central and Eastern Europe. At the end of 2013, Foreign Direct Investments in Poland totaled at EUR 160.5 bn [12]. Great number of new construction projects have been performed in the recent years. So, international investors like to be familiar with all the fundamental roles of managing the construction projects in Poland. The objective of this paper is to show the basic roles of construction project inspection as per Polish regulations, presented from project management perspective. It is worth to notice that there is a big diversity with regard to

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construction project supervision regulations in the EU countries. According to the World Bank Group ranking, in 2015 Poland has been classified 137 (out of 189 economies ranked) in the category “Dealing with Construction Permits” [4]. Fortunately, the number of construction regulations obligatory in Poland is decreasing year by year. On the other hand, organizational scheme of the construction project as normally performed in Poland is similar to the schemes in other countries. Its simplified proposal is presented in figure 1. As the effect of the big number of various obligatory documents and reports to be elaborated and approved by respective authorities in order to submit the application for the Building Permit, the whole project preparation phase usually takes several months.

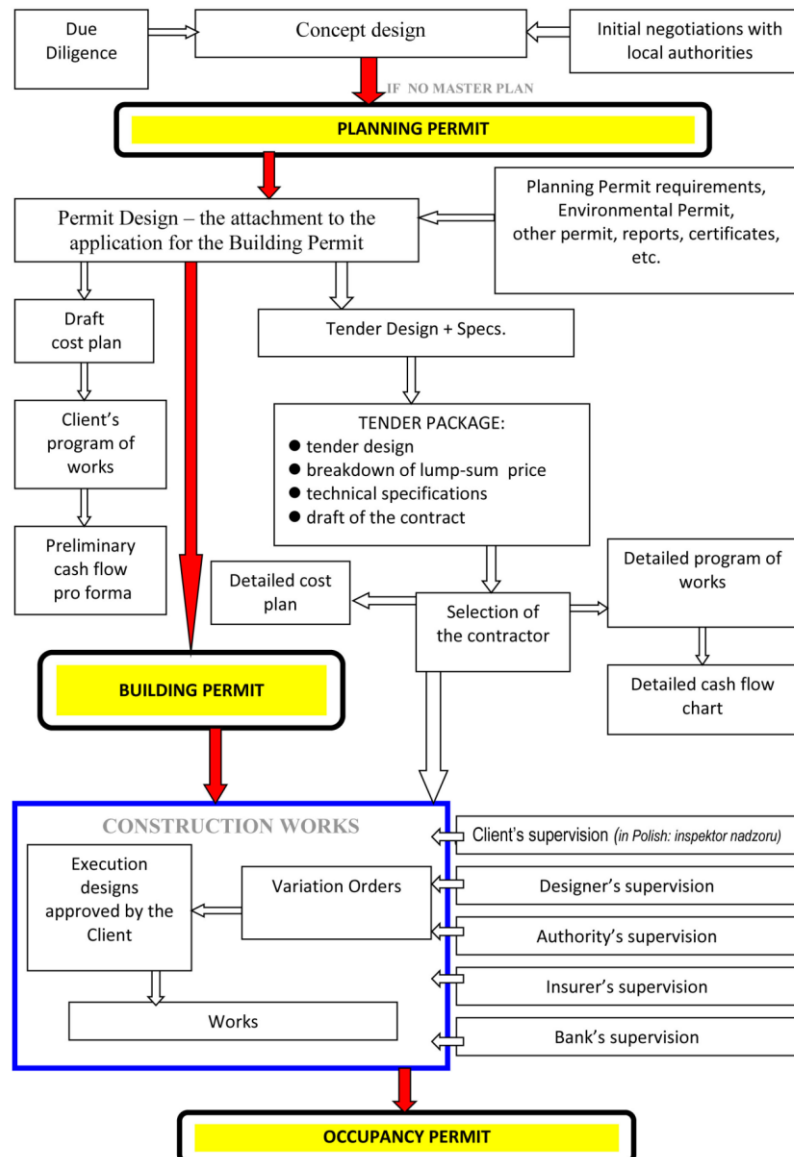


Figure 1. Simplified organizational scheme of the construction project.

In general, the Client prior to submitting the application for the Building Permit should collect a lot of approvals and other respective administration permits. During the whole preparation phase as well as during the construction phase, the Client should fulfil not only the Construction Law regulations, but also regulations of other laws regarding the environment, energy, wastes, public utilities, fire protection, etc. All in all, the number of formalities, approvals, and reports required makes the process really time consuming to a considerable extend. Clients used to order all the Building Permit formalities and the required documentation with an experienced architect or engineer who respectively authorized by the Client acted as the leading designer as well as the client representative. Despite time-consuming dealing with construction permits, the increase of new construction investments is considerable in Poland [14].

Very specific element of Polish Construction Law concept is civil liability of key construction process participants, such as the site managers, designers, and site inspectors, for their site job performance [1, 7]. The mentioned individuals must be respectively licensed as Professional Engineers by the Polish Chamber of Civil Engineers. So, in the light of Construction Law, any failures, accidents, use of wrong materials, design mistakes, etc. it is not corporate responsibility of the contracting company, but rather civil responsibility of the respective individual licensed Professional Engineers, officially registered as paying duties for a given project. The contracting companies face contractual responsibility correspondingly to their contracts for the construction works. The Building Permit design for medium and large size of construction projects must be elaborated by licensed designers (architect, structural, electrical, HVAC, etc.). Construction works of such projects should be managed by a licensed site manager and should be supervised by licensed site inspectors. Very common practice is that the site manager is employed by the Contractor while the site inspector – by the Client, however, other scenarios are not excluded as per the Construction Law. However, the key factor is that the mentioned licensed professionals do perform their jobs fully independently and they are responsible as individuals for their construction site decisions, even if they are employed by the contractor or the client.

2. Inspection of construction works

Construction inspections in public and private projects have been investigated by many authors in several directions, like planning and coordinating of inspection activities [6, 10], automation of the processes supporting inspection [2, 5] or developing models and systems of inspection process to avoid defective construction [3, 13]. Other research projects are those focused on detailed inspection actions required for a particular type of works, like concrete works, piling, etc. [8]. Polish construction regulations do not present any restrictions for using the newest research achievements in planning, automation or modelling of the inspection process. According to regulations, the inspection team should secure full agreement of everyday construction works with construction standards and design specifications.

In Poland, the main obligatory inspection of construction works during the whole project duration is performed by the licensed site inspectors who inspect civil, electrical, HVAC/mechanical and road works- depending on the type of their licenses. They are registered in the local Authority by the Client as site inspectors of the given construction project. Their main duty is to check systematically the works before these works become covered by the next phase works. So, for example, each reinforcement should be checked before the concrete-mix is placed into the formworks. Also, site inspectors should check if all the construction materials used by the Contractor comply with the project specifications and with the Polish Construction Materials regulations presenting conditions for

use of products in construction (like certificates, declarations of performance, etc.). Finally, the inspectors check if all the works are being executed as per the Permit Design, quality standards and as per the obligatory regulations of the Construction Law. Schematic scope of main duties of site inspectors is presented in figure 2. The site inspectors represent the interests of the Client and also they represent public interests checking if works follow national construction and safety regulations.

For some specific or complex projects, the Authority can also demand the additional inspection to be performed by designers. In case of such a demand, the designer's inspection is obligatory. But, also

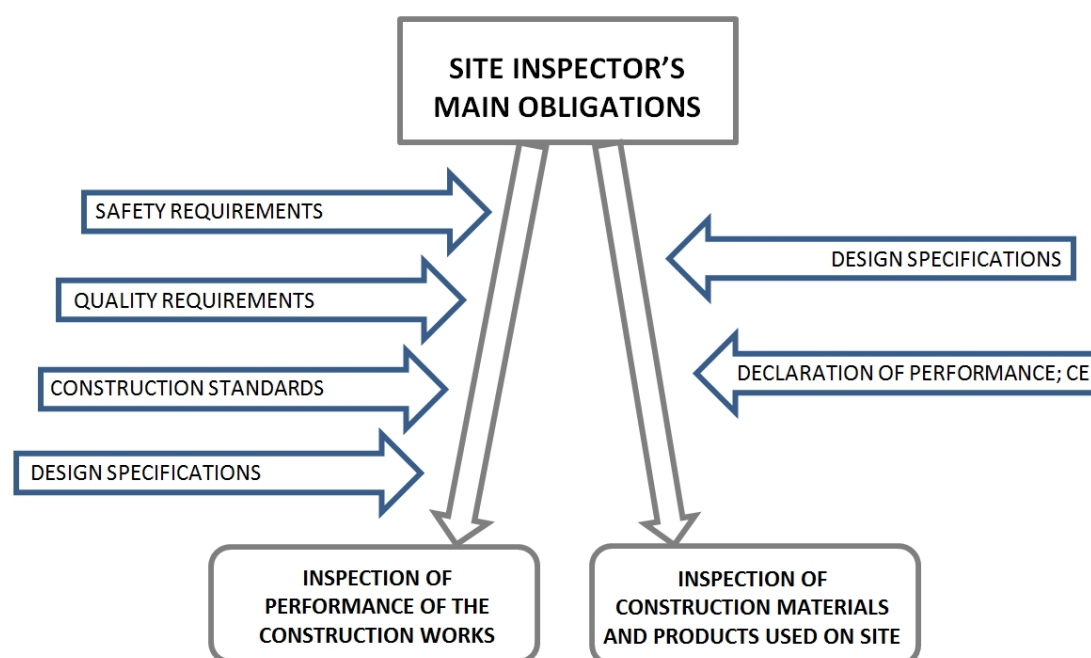


Figure 2. The scheme of main obligations of site inspectors.

in case it is not obligatory by law, the designer's inspection can be always demanded by the Client. The objective of designer's inspection is to check if Permit Design is fully followed during all site works. Also, the designer inspecting the site advises in change order acceptance and makes detailed design sketches or additional design drawings, if needed.

Several Authority departments (fire, sanitary, labor, safety, etc.) are entitled to inspect the construction site based on general law regulations. These are incidental inspection visits, usually rather detailed though, and they may result in fines addressed to site managers or site inspectors. The Authority departments do not have obligations to visit each site, so many construction sites are never inspected by the Authority department representatives.

Intensity of insurance inspection activities depends on the worth of the insurance policy. Some of insurance companies employ experienced engineers for systematic inspection visits to the site in order to get confirmation about the risk allocated to the works performed. It is normal that the insurance company is interested to reduce risk of any future claims which could be received from the Client / Contractor. So, the duty of insurance inspection is to warn about any case of risk which was not

considered while the insurance policy CAR/EAR was signed. Thus, the inspectors are focused on looking for opportunities to reduce any construction risks on site.

Construction investments are usually financed, at least partially, by bank credits. Banks send their inspectors every two weeks to the site to check if their money is invested as per the credit agreement. Bank inspectors are also called bank monitors in project management terminology. They are experienced engineers who are able to identify true cost of works completed to date of visit, with very good tolerance.

The Polish Chamber of Civil Engineers is entitled to approve the foreign engineer, who has no Polish license for site inspection in Poland. In general, the considered engineer must prove that she/he is entitled to do the equivalent inspection job in the home country, according to local regulations.

The official register book called the Site-Log-Book is the main document issued by the Authority for each construction project to record all important phases of the project. The licensed site manager, registered at the given project, is formally responsible for the Site-Log-Book. All comments, approval or rejection notes should be written in the S-L-B by site inspectors just after each inspection visit.

According to the data of General Office of Building Control of Poland, 193,172 construction permits were issued during the year 2014 in Poland, so this is also the number of commenced construction projects. In the same year, about 115,000 engineers licensed to all the fields, who play a role in the construction process, have been the members of the Polish Chamber of Civil Engineers [11]. So, it is a good balance between market needs and the number of licensed inspectors available, considering that the site inspector's job is usually not a full-time assignment and very often is performed by freelance engineers. So, one engineer can try to perform the duties of an inspector for several sites simultaneously. The average cost of the overall construction project site inspection including all needed inspectors is negotiable and nowadays constitutes about 1.5 – 3.0 % of the cost of all site works, depending on project complexity, duration, etc.

3. Conclusions

Construction process administrative procedures are subject to permanent improving legislation modifications to meet the development of the construction industry in Poland. Recommendations on improvements usually concern administrative procedures and not the concept of the site inspection practice, which has been well established in the last years [9]. The recent discussions have been conducted in Polish construction environment and also at the Polish Parliament bodies about changes needed in construction regulations. The debate has not contested the concept of site inspection. So, the construction site works should be systematically inspected by licensed, independent professional engineers, and members of the Polish Chamber of Civil Engineers. Each inspector is responsible for respective type of works (civil, electrical, HVAC/mechanical, road). Construction regulations secure good and efficient site practice, which help to ensure high quality standard of construction works. The obligation of construction site inspection in Poland executed by independent licensed engineers with civil liability for job performance is not a common European practice.

4. References

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