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***National State of the Art Report***  
***of the construction inspector job***

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## Introduction

The National Commission of Statistics issues data on Romania. The following extracts describe the main features and characteristics of the country:

- Romania is situated in the south-eastern part of Central Europe and on the lower Danube, bordering the Black Sea.
- Its access to the sea enables the connections with the countries in the Black Sea basin, in the Mediterranean basin, and therefore with all the countries in the world.
- The Danube-Black Sea canal favours connections with the North of Europe.
- The main features of Romania's relief are its proportionality (31% mountains, 36% hills and plateaus, 33% plains and meadows), a concentric display in amphitheatre form of the major relief forms.
- The running waters have a radial display, most of them having their sources in the Carpathians, being finally collected by the Danube, which flows along 1,075 km of the Romanian territory.
- In the mountain areas there are numerous glacial lakes and recently, anthropic lakes used for exploiting the hydropower potential of the rivers.
- Romania is located in a strongly seismic zone particularly in the southern, south-eastern part. Other natural factors with a high-risk level are: floods, hail storms, drought, landslides, soil erosion and others.
- The subsoil, although rich in important natural resources, cannot however meet (with few exceptions), the needs of the national economy. Among these we may list: oil with old traditions in its extraction, natural gas, coal, especially coke coal, lignite and brown coal; iron and non-ferrous ore; gold, silver and bauxite deposits; large salt reserves and other non-metalliferous sources.

## ***Construction sector***

In Romania the quality of constructions is defined by the law 10/1995, as the sum of the totality of their behavioural performances in operation, in order to satisfy, during their existence, the requirements of users and communities. The requirements concerning the quality of technological outfits and equipments for production are established and are achieved on the basis of specific regulations for every field of activity.

The provisions of the law are applied to every category of constructions and to their afferent outfits - independently of the form of property or destination - designated



later as constructions, and to the works of modernization and to their modernization, transforming, consolidation and repairs.

The quality system in constructions is applied depending of the categories of importance of the buildings, according to the application of provisions and procedures to every constituent of the system. The classification in categories of importance of the constructions is made depending the complexity, destination, usage, security risk degree as well as economical reasons.

In order to obtain constructions of proper quality, the achievement and the maintenance of the following requirements are compulsory, during the existence of constructions: a) resistance and stability; b) safety of usage; c) fire safety; d) hygiene, human health, environment, restoring and protection; e) thermal and waterproof insulation, energy saving; f) noise protection.

The quality system in constructions has the following components:

- a) technical regulations in constructions;
- b) the quality of components used in the achievement of constructions;
- c) the technical agreements for new products and procedures;
- d) the control of projects, of the execution of the projects and the expertise of projects for constructions;
- e) the management and quality assurance in constructions;
- f) the authorization and the accreditation of the laboratories for analysis and tests in the field of constructions;
- g) the activity of metrology in constructions;
- h) the acceptance of constructions;
- i) the behaviour in operation and interventions;
- j) the after-use of constructions;
- k) the State control of the quality in constructions.



## 1. The content of the construction inspector job (CIJ)

In Romania there are three main types of construction inspector jobs:

- construction inspectors- employed by The *State Inspection in Constructions* – S.I.C., public institution having legal personality, subordinated to the Government of Romania;
- site inspectors (subject to authorisation) - employed by the client;
- technical inspectors (subject to authorisation) – employed by the contractor.

The tasks and the responsibilities of the construction inspectors are defined by the Romanian regulations in force.

Authorized specialists have the right to be inspectors of a building site in the authorized field and to perform this activity for the unities, for investors/ users-legal entities or specialized unities for consulting in the field of the quality control.

### 1.1 The main types of the job relating the client

#### 1.1.1 Daily inspection in the process of the construction on behalf of the client

The rights and the obligations defined below according to the Romanian regulations in force are not limitative, the building site inspector being able to participate as a representative of the investor/beneficiary in all the stages regarding the conception, designing and performance of the construction works, limited by his prerogatives established by the regulations in force and by the contract with the investor/beneficiary.

There is no special rule to classify the construction inspector jobs by value limit.

The inspectors of a building site are responsible towards investor/user, according the law, for the activity of the right checking of the execution of the construction works and they have the following principal rights and duties:

1. *The inspector of a building site in the field of "building materials and products":*

a) checks up the observance of the legislation concerning the utilized materials referring to: the existence of the documents that certified the quality, the conformity of their quality with the regulations stipulated in the quality certificates, contracts projects;



b) forbids the utilization of the inadequate semi-manufactured and prefab goods or without conformity certificate, conformity statement or without technical agreement (for untraditional materials).

*2. The inspector of a building site in the field of "constructions works":*

a) checks up the existence of the authorization of constructions as well as the accomplishing the legal provisions concerning this;

b) checks up the conformity of the authorization's provision with the project;

c) assumes the emplacement and the levelling marks and hands over to the performer free of any task;

d) participates together with the designer and the performer to the general drawing of the construction and fixes together the bench marks;

e) hands over to the performer the land reserved for the building site organization;

f) studies the projects, the conditions of project, the technologies and procedures established for the performance of the constructions;

g) checks up the existence of all written and drawn, correlation between them, the observance of the regulations concerning the projects' control by the certified control specialists;

h) checks up the existence of the provisions concerning determinative stages, as well as the existence of the control program for quality;

i) checks up the existence of all the approvals, agreements as well as the respecting the legal provisions concerning the technical regulations;

j) checks up the existence and the respecting of the "Quality Plan" and the procedures of the process for the respective work;

k) follows the performance of the construction in conformity with the provisions of the contract, of the projects, of the condition of project and of the technical in force regulations;

l) checks up the respecting of the performance technologies, the correct use of them in order to provide the quality level established by the technical documents by the contract and by the technical in force regulations;

m) forbids the performance of the unauthorized workers in case of trades for which the technical regulations have special provisions;

n) performs the verifications stipulated by the regulations and signs the documents holding the result of the verification activities (official reports for determinant stages, official reports for hidden constructions works);

o) participates at the verification during determinant stages;

p) forbids the utilization of new technologies without technical agreement;

r) participates at the taking off the samples from the placement on the construction work;

s) follows the performance of the works from the technical the point of view as long as the performance works lasts, accepting for payment only the works that accomplish the quality level.

s) asks the performer, depending on each case, to cease the performance works, elimination or to remake the construction works performed inadequately, on the basis of the solutions given by the designer or by the persons enabled by the law to elaborate them;



- t) transmits his own conclusions or those of the other participants at the construction works to the designer, regarding the non-conformities found during the performance works;
- t) checks up the observance of the legal provisions regarding the requirements established by the Law no. 10/1995 concerning the quality in constructions, in case of modifications of the documentation or adopting new solutions that changes the initial conditions;
- u) follows the executant to respect the indications given by the designer or by the other enabled bodies;
- v) takes the documentation from the beneficiary and the designer and completes the technical book of the construction with all the necessary documents provisioned by the legal regulations;
- w) follows the deactivation of the organizational works and hands over the ground to its owner;
- x) participates to acceptance of construction works, ensures its secretariat and makes the necessary papers;
- y) follows the solving of the problems found by the acceptance of construction commission and makes the necessary papers to accomplish the measures disposed by the acceptance of construction commission;
- z) hands over to the investor/user the papers for the acceptance of construction, economical and technical documentation of the construction together with the technical book of the construction;

The building site inspectors are responsible in case of un-accomplishing the obligations mentioned above according to the Romanian regulations in force, and also in case of un-insurance, of their fault, the realizing the qualitative level of the construction works as provisioned in the contracts, designs, conditions of projects and the technical in force regulations.

### **1.1.2 Supervisory job on behalf of Central, Regional or local Authorities**

The State Inspection in Constructions – S.I.C., public institution having legal personality, subordinated to the Government of Romania, represents the technical specialized structure for implementing the state control concerning the respecting of the discipline in town planning (urbanism) and of the regime of the authorization for the construction activities and also the unitary appliance of the legal provisions in the domain of the quality in constructions.

The State Inspection in Constructions from the Ministry of Public Works, Transports and Dwelling, the districts inspectorate for buildings and the inspectorate for buildings from Bucharest subordinated by the State Inspectorate for Buildings are responsible for the exercise of the State control, regarding the common application of the legal provisions in the field of the quality of constructions, in all the stages and components of the quality system in constructions, as well as for the establishment of



contraventions, the application of sanctions established by the law and, in case, for the stopping of unsatisfactorily accomplished works.

#### Competences of S.I.C:

- it exerts the state controlling regarding the quality of constructions and the discipline in town planning;
- it verifies the legality of the emission of the authorization for construction;
- it authorizes the testing laboratories in constructions;
- it authorizes the specialized personnel in constructions for:
  - the directing of a building site ;
  - the quality control;
- to pursuit the behaviour of the constructions in exploiting;
- the control of the testing laboratories in constructions.

## **1.2 The main field of the CIJ**

### **1.2.1 Type of the CIJ related to the project/ 1.2.2 Type of the CIJ related to the professional area**

In Romania, only authorized specialists have the right to be inspectors of a building site in the authorized field. The domains of authorisations are:

- Construction materials and articles
- Construction works:
  - Farming, industrial and civil buildings (separated by category of importance);
  - Roads, bridges, tunnels, subway, tramway, flight strips, cable transport separated by category of importance: national, district, local);
  - Railways
  - Hydrotechnical works (separated by category of importance);
  - Technical and urbanistic works:
    - water supply and sewerage
    - land improvements
  - Forest construction works
  
  - Installations adherent to construction works (Categories of importance A, B, C, and D)
    - Electrical installations
    - Installations sanitation, technical-ventilation, gas
  - Networks:
    - electrical
    - water supply and sewerage
    - thermicals
    - gas
    - telecommunications
    - for transporting of the mineral oil products





- Monuments, ensembles and historical places, piles, architectural or cultural
  - reinforcements
  - restorations

## 2. The legislation of the construction inspector job

### 2.1 Mandatory fields of the CIJ

#### 2.1.1 Governmental / Regional / Local level of the required registration

Taking into consideration the classifications from the beginning of the report of the three types of construction inspector jobs we have three level of registration:

- construction inspectors- employed by The State Inspectorate in Construction (SIC) from the Ministry of Public Works, Transports and Dwelling (public institution having legal personality, subordinated to the Government of Romania) and the districts *inspectorate for buildings (local public institutions subordinated to the SIC)*;
- site inspectors - subject to a local authorisation, issued by the local office of the SIC;
- technical inspectors subject to an authorisation issued by the Ministry of Public Works, Transports and Dwelling.

The registration of constructor inspectors is mandatory. According to SIC, the number of registered inspector is:

- site inspectors for construction materials – 217 authorized inspectors
- site inspectors for construction works - 1902 authorized inspectors
- authorized testing laboratories – 441

The authorization of the building site inspectors is made on the following legal bases:

- Law nr. 10/1995, concerning the quality in constructions
- The Order of the MLPTL (the minister in charge with the construction sector) nr. 488/2002

In order to become an authorised building site inspector, one should:

- have a graduation diploma from an education institute;
- have a minimum activity in this field of activity;
- fit in the examination requirements of the authorization commission;

At an interval of 3 months The Ministry of Public Works, Transports and Dwelling publishes in specialized magazines the list of authorised specialists, the list of previously authorised specialists that were suspended during last 3 months. It also



publishes once a year the complete list of the authorised persons and the domain they were authorised for.

### **2.1.2 Role of the Chambers in the system**

The Chambers of Commerce have no particular role in the registration system.

## **2.2 Voluntary field of the CIJ**

### **2.2.1. The aim of the voluntary inspections**

In Romania, except the mandatory registration form, there is no other form of voluntary registration or professional association targeted specifically towards construction inspectors.

However, part of the construction inspectors might be member of other special associations.

There is an associations named "*The Ownership of Romanian Contractors*", that is gathering natural both legal persons of research, design, consultancy bodies and building materials industry and is following to the promotion and protection of legal interests of his members and is jointing their responsibility, in order to increase the prestige of that Institution and to enhance his contribution for the development, growing up and updating of Romanian economy.

Apart the contractors association, we have also "*The General Association of the Engineers*" (*A.G.I.R*), that is a federative organization, with a flexible structure that is adaptable at its member's requirements. The AGIR's Departments were made up for the view to support the development of the activities complex of the association, for the achievement of its objectives. We should point out here both:

- The Organization & Relations Department, which is concerned with the establishment of organizations within the association, according the Statutes previsions, establishes internal and international relationships, support the European accreditation of the Romanian technical faculties and the international recognition of the Romanian engineers through the Eurlng title, and
- The Continuing Education Department, which organizes continuing education activities with the view to enlarge the knowledge of the engineers for their adaptation at the requirements of the society, collaborates with internal training institutions and from abroad, manages the data bases with the association s members.



## 2.2.2. Main fields

A.G.I.R. recognizes to its members the right to associate in branches, professional societies, or circles in function of problems of common interest, of professional profile, working place or any other criteria, mutual accepted by at least 20 members. The branches, the professional societies and the circles collaborate and help one another in organizing and carrying out, on local and territorial plan, the AGIR's activities.

The professional societies are set up, according to statutes, as AGIR's organizations and function in conformity with their own regulations, elaborated in respect of these statutes. Until now, 19 professional societies are set up.

We think it should be mentioned some of the professional societies:

Society of Seismic Engineering of Banat	members: 26
Society for Strength of Materials	members: 37
Society of Women in Engineering	members: 18
Society of Engineers in Natural Gas	members: 27
Society of Experts and Technical Consultants	members: 63
Romanian Society of Energetics	members: 46

## 2.3 Validity for the CIJ

### 2.3.1 Time frame, time extension process

The qualification is automatically of national level.

The construction inspectors from The State Inspectorate in Construction have this quality for as long as they are employed by SIC.

The site inspectors' authorisation is valid for a period of 4 years with the possibility of renewal after a new exam.

The technical inspectors' authorisation is lifetime valid.

### 2.3.2 Fields limitations and opportunity of the fields of the extensions

The table below presents in details the compulsory requirements per domain of authorisation in order to be authorised as a site inspector.



CURRENT NUMBER	DOMAIN OF AUTHORIZATION	STUDIES			
		LEVEL	SPECIALIZATION	SENIORITY	
1	Construction materials and articles	superior	engineer	- Construction materials	4 years
			sub-engineer	- CCIA, CFDP, Hidro, Installations	6 years
<b>2.</b>	<b>Construction works:</b>				
<b>2.1.</b>	<b>Farming, industrial and civil buildings:</b>				
2.1.1.	Category of importance D	medium	technician	- Constructii	10 years
		superior	engineer	- CCIA, CFDP, CH, IF, INS	3 years
			sub-engineer	- CCIA, CFDP, CH, IF, INS	5 years
2.1.2.	Category of importance B si C	superior	engineer	- CCIA, CH*, CFDP*	8 years
2.1.3.	Category of importance A	superior	engineer	- CCIA, CH*	10 years
2.2.	Roads, bridges, tunnels, subway, tramway, flight strips, cable transport:				
2.2.1.	national	superior	engineer	- CFDP, CCIA*, CH*	5 years
2.2.2.	district	superior	engineer	- CFDP, CCIA*, CH*	5 years
			sub-engineer	- CFDP, CCIA*, CH*	7 years
2.2.3.	local	superior	engineer	- CFDP, CCIA*, CH*	3 years
			sub-engineer	- CFDP, CCIA*, CH*	5 years
2.3.	Railways	superior	engineer	- CFDP	5 years
			sub-engineer	- CFDP	8 years
<b>2.4.</b>	<b>Hydrotechnical works</b>				
2.4.1.	Category of importance D	superior	engineer	- CH, CCIA, INS*, IF*	3 years
			sub-engineer	- CH, CCIA, INS*, IF*	5 years
2.4.2.	Category of importance B si C	superior	engineer	- CH, CCIA, INS*, IF*	5 years
			sub-engineer	- CH, CCIA, INS*, IF*	7 years
2.4.3.	Category of importance A	superior	engineer	- CH, CCIA*	10 years
<b>2.5.</b>	<b>Technical and urbanistic works:</b>				
2.5.1.	water supply and sewerage	superior	engineer	- CH, INS, CCIA, IF, CFDP*	5 years
			sub-engineer	- CH, INS, CCIA, IF, CFDP*	8 years
2.5.2.	lend improvements	superior	engineer	- CH, INS, CCIA, IF, CFDP*	5 years
			sub-engineer	- CH, INS, CCIA, IF, CFDP*	8 years
2.6.	Forest construction works	superior	engineer	- CH, CCIA, Sylviculture College, section of constructions	3 years



			sub-engineer	- CH, CCIA, Sylviculture College, section of constructions	5 years
<b>2.7.</b>	<b>Installations adherent to construction works (Categories of importance A, B, C, and D)</b>				
			engineer	- INS, Energetics Study College*	5 years
2.7.1	Electrical installations	superior	sub-engineer	- INS, Energetics Study College*	8 years
			engineer	- INS, Specialized Technical College and authorization ANRGN*	5 years
2.7.2.	Installations sanitation, tehcnical-ventilation, gas*	superior	sub-engineer	- INS, Specialized Technical College and authorization ANRGN*	8 years
<b>2.8.</b>	<b>Networks:</b>				
			engineer	- INS, CCIA, fSpecialized Technical College and authorization from Electrica	5 years
2.8.1	electricals	superior	sub-engineer	- INS, CCIA, fSpecialized Technical College and authorization from Electrica	8 years
			engineer	- INS, CCIA, Specialized Technical College and authorization	5 years
2.8.2.	water supply and sewerage	superior	sub-engineer	- INS, CCIA, Specialized Technical College and authorization	8 years
			engineer	- INS, CCIA, Specialized Technical College and authorization	5 years
2.8.3.	thermicals	superior	sub-engineer	- INS, CCIA, Specialized Technical College and authorization	8 years
			engineer	- INS, CCIA, Specialized Technical College and authorization	5 years
2.8.4.	gas	superior	sub-engineer	- INS, CCIA, Specialized Technical College and authorization	8 years
2.8.5.	telecommunications	superior	engineer	- INS, CCIA, Specialized Technical College and	5 years



				authorization	
			sub-engineer	- INS, CCIA, Specialized Technical College and authorization	8 years
			engineer	- INS, CCIA, Specialized Technical College and authorization	5 years
2.8.6.	for transporting of the mineral oil products	superior	sub-engineer	- INS, CCIA, Specialized Technical College and authorization	8 years
<b>2.9.</b>	<b>Monuments, ensembles and historical places, piles, architectural or cultural</b>				
2.9.1.	reinforcements	superior	engineer	- CCIA	8 years
2.9.2.	restorations	superior	architect	- Architecture	8 years

*\*) There are taken into consideration the situations with at least 2 years of seniority in the domain of authorizations, which are proved by the work card and recommendations.*

Legend:

CCIA = Farming, industrial and civil construction works

CFDP = Railway, roads, bridges

CH = Hydrotechnical works

INS = installation for construction works

### 3. Required qualification for the CIJ

#### 3.1 Examination process for the qualification

The exam for constructor inspector job concerns the operational knowledge and the legislation in force in construction domain.

In order to become a constructor inspector at SIC one has to take an exams prior to employment and also to fulfill minimum requirements regarding studies and seniority.

In order to become an authorized site inspector one has to pass the test organized at local SIC office.

In order to become a technical inspector one has to pass the test organized by the Ministry of Public Works.

The Authorizations Committees for site inspectors are appointed by Decision of the General State Inspector. The Committees can issue authorizations in all domains mentioned above (see table in 2.3.3) and for all category of importance of the buildings. The Committees can be gathered for a minimum of 10 applicants. Usually



the members of these Committees are constructor inspectors of SIC, but also independent experts and University professors qualified in the respective fields.

One should present the following documents in order to be accepted to take the exam:

- a standard written request;
- a standard form CV;
- the graduation diploma;
- 2 recommendations related to the domain the applicant is requesting authorizations;

After analyzing the submitted documents Committee let the applicant know the domain/ domains for which he/she can take the exam. The exam has two parts: one oral and one written. Both parts verify the understanding and comprehension of the legislation in force and compulsory technical rules. In order to pass the exam a minimum grade of 8 (out of maxim of 10) is required.

The new authorizations issued after the test, are being registered in a special book by the Authorizations Committee.

The list of the domains and persons authorized are published in specialty magazines. Also a list is available on the web site of the State Inspection in Construction.

### ***3.2 Qualification based on former activity***

Recognition of former experiences in the field is not sufficient. The conditions regarding the level of studies are compulsory and cannot be replaced by experience.

## **4. Education practice for CIJ**

### ***4.1 Pre-exam education practice for obtaining qualification***

#### **4.1.1. Framework of the education**

There are not any compulsory preparatory courses in view of the exam of authorizations as construction inspector. College knowledge, prior experience, and individual study are sufficient in order to pass the exam.



The preparatory courses can be organized by various institutions (but usually not SIC). The courses are specialized on a certain domain, according to the domains of authorization, and are covering topics such as legislation in force, quality system in constructions and technical issues and rules regarding that specific domain. The trainers are professors or prior authorized inspectors.

Preparatory courses can be occasionally held by individuals already authorized or small private companies.

As any other university graduate, the construction inspector has the opportunity to attend post graduate courses.

## **5. Barriers and opportunities of the CIJ**

### **5.1. Barriers related to the CIJ**

#### **5.1.1. Legislation barriers related to CIJ**

No legal barriers influence the practice and the effectiveness of the CIJ. The legal framework only sets the minimum requirements for the job and the rights and the duties of the titular of the authorization.

Furthermore, within the Restructuring and Reform Strategy of the Ministry of Public Works, Regional Planning and Urban Development, as well as in the Sector Strategy for Romania's accession to the European Union the following major objectives were stated for 2004:

- Providing the conditions for the fulfillment of the envisaged investments programme;
- together with the creation of the general framework to favour quality and effectiveness in a competitive system;
- Improving the life conditions in localities by promoting a housing policy, as well as a policy for the development of infrastructure and urban services, and the protection of the built environment.

The Plan for the National Territory Development (PATN) which formulates development plans at regional level but with a global concept and broad vision states that the priority fields are:

- major transport infrastructure
- rational management of water and soil resources
- safeguarding of the natural and built environment
- development of localities in relation to their economic-social and cultural historical importance





- development of special zones (with a specific economic, cultural and touristic potential; disadvantaged zones from a geographical, social and economic viewpoint; zones with the potential connection to the EU space)

### **5.1.2. Other barriers related to CIJ**

During the last years, the construction sector counted as one of the most dynamic and flexible areas of economic activity which is in line with the new requirements of the society, has faced some constraints caused by the process of structural reform.

Over 90% of the economic agents which operate in the construction sector are private capital firms and also more than 98% of them are small and medium size enterprises which cover over a half of the total turnover.

The labour force of the sector represents only 4.5% of the population, having an average gross income a little bit over the average income on the national level which is still very low in comparison with the other European countries.

In the last decade, construction prices have increased more than 650 times, the highest increases being as a result of increased railway transport fees, followed by the building materials costs and labour costs.

As a proportion of estimates for construction work buildings materials constitute about 40% of the cost, labour amounts to about 25% and transport about 11%.

All the above mentioned progress in Romanian construction sectors are more premises to a further development of construction inspectors jobs than barriers.

## ***5.2. Suggested opportunities related to the CIJ***

### **5.2.1. Estimated need for enhancing of the pre exam education**

The education of construction inspectors should be analyzed in the larger context of Romanian education system.

The number of students specializing in the technical field is decreasing (1/3 against 2/3 in 1989), while the number of students specializing in economics and law, as well as those in exact sciences are increasing (1/4 against 1/10).

There is no common practice to develop qualifications and to undergo lifelong training improving skills of the building inspectors. Even some building inspector jobs require re-authorization every 4 years; the exams concern mainly regulation in force and less new development and progress in construction industry: new practices



implemented in other countries, new law regulations, new technologies, and safeties systems and so on.

The enhancing of the education for CIJ should be part of the general restructuring of the technical and vocational education system, of the planned modernization of the Romanian education and professional training system, and of the harmonization of the education methods and study programmes applied in Romania with those of the EU member countries.

### **5.2.2. Evaluation of the potential opportunity of EU-wide and Interregional qualification**

Romania's economy has recently featured rapid growth, including booming consumer and light manufacturing sectors. These factors underlie demand for continued expansion of Romania's private sector construction market. Meanwhile, the substantial expansion and rehabilitation of Romania's transportation and environmental infrastructure over the next decade - as needed to meet European Union standards, and largely supported by international finance institutions - is expected to create numerous projects in these subsectors that will be of interest to European construction sector firms.

During the last years, remarkable efforts have been made for a fundamental restructuring at political, economic, social, legal, administrative, etc. level, which in itself is a movement in the spirit of sustainable development. The last European Commission's report on Romania's progress towards accession points out to the fact that the Romanian economy reached the status of a full market economy in the last years. One of the proofs is given by the increasing share of the services sector (it reached 53.7% of total value added in June 2004, or 59% if we include constructions, without considering the energy distribution services), and another by the fact that the growth of private consumption induced a higher growth rate for the services and construction sectors than for the industry and agriculture. In Semester I of 2004, the constructions sector saw an increase of 8.6% in real terms, while services grew with 6.5%, more than the 5.9% registered by industry.

The dominant type of construction continues to be civil engineering projects (over 50%), followed by non-residential buildings. Road and hydrotechnical projects are the most common civil engineering works and office buildings, industrial buildings and commercial buildings are the most common in the non-residential buildings sector.

All these latest developments in construction sector in Romania open new possibilities for construction and building inspectors.



## 6. Summary and conclusions

Although requirements may vary depending upon where one is employed, construction and building inspectors should have a thorough knowledge of construction materials and practices in the respective specialized area. Applicants for construction or building inspection jobs need several years of experience. Because inspectors must possess the right mix of technical knowledge, experience, and education, employers prefer applicants who have formal training as well as experience.

To become certified, inspectors with experience and education must pass stringent examinations on legislation in force and compulsory technical rules.

Construction and building inspectors must keep abreast of changes in areas of building codes, construction practices, and technical developments. Continuing education is imperative in this field. A special accent should be put on new materials and technologies, and also on health and security issues.



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