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## Work carried out on elevators: plans and specifications duly authenticated by an engineer are mandatory... it's a matter of security!

**T**wo judgments rendered by the Court of Québec (Criminal and Penal Division) respectively on December 2, 2008 (docket number 200-61-122381-088 in the Québec judicial district) and on May 25, 2009 (docket number 200-61-122382-086 in the Québec judicial district) confirm that it is mandatory to have plans and specifications that have been signed and sealed by an engineer, a member of the Ordre in good standing, or by someone who holds a temporary permit, with respect to work relating to an elevator in a building whose cost exceeds \$100,000.

In effect, two companies, Ascenseurs Thyssen Krupp (Canada) Ltd.<sup>1</sup> and Otis Canada Inc.<sup>2</sup>, were both found guilty of:

Count no. 1: violating section 5, paragraph i) of the Engineers Act, for having acted as contractor and carried out works mentioned in section 2, paragraph e) of the Engineers Act namely, works relating to the electrical and mechanical systems in a building whose cost exceeds \$100,000, such as installing an elevator while these works were not carried out under the authority of an engineer;

Count no. 2: violating section 24, paragraph 1 of the Engineers Act, for having acted as contractor and used irregular plans and specifications with respect to works set out in section 2, paragraph e) of the Engineers Act namely, works relating to the electrical and mechanical systems in a building whose cost exceeds \$100,000, such as installing an elevator.

The Court of Québec ordered each of the companies to pay a \$3,000 fine for the first count and a \$1,500 fine for the second count, plus applicable costs.

Both of these companies had manufactured their elevators and were in the process of installing them when an inspector with the Ordre's department charged with monitoring unlawful practice of the profession visited their worksites.

In both cases, the elevators were installed in multiple dwelling buildings used for senior citizens homes.

### A MATTER OF SECURITY

These decisions clearly dictate that plans and specifications relating to elevators are subject to the Engineers Act and as such, must be signed and sealed by an engineer who is a member in good standing of the Ordre or by someone who holds a temporary permit. Consequently, all types of buildings whose cost exceeds \$100,000, as well as all public buildings, whether suited for commercial, industrial, institutional or agricultural purposes, are subject to this Act.

Preparing plans relating to elevators requires engineering calculations with respect to constraints or stress, deflexion and factors pertaining to safety, heat evolution and electrical discharge. An elevator's design affects the building's foundations and structure as well as its electrical and mechanical systems. In that respect, designing an elevator deals with structural engineering (e. g. car frame), mechanical engineering (e. g. driving machine) and electrical engineering (e. g. monitoring equipment). A faulty design may cause injury or death to those who ride the elevator or to elevator mechanics.

Thus, it is important that the engineers who are called upon to design certain elements of a building in which the installation of an elevator is planned obtain from the engineer responsible for the design of the elevator all relevant information relating to the needs and constraints arising from the elevator's installation with respect to the design of such elements in the building, in a clear and precise manner.

### THE QUÉBEC CONSTRUCTION CODE

Moreover, let us note that the elevators found in the buildings in question in these two judgements were subject to the requirements set out in Chapter IV of the Québec Construction Code.

In fact, since October 21, 2004, the chapter in the Construction Code (adopted under the Building Act) entitled "Elevators and other elevating devices" replaces regulations which applied to the construction of such equipment pursuant to the Public Buildings Safety Act. Under section 4.01 of the Construction Code, the 2004 edition of the Safety Code for Elevators and Escalators (CAN/CSA B44) came into force on May 31, 2006.

The Building Act requires that those who prepare plans and specifications, contractors and owner-builders respect the Construction Code. As for owners, they must comply with the Safety Code which came into force on January 1, 2006, as regards the operation and maintenance of their equipment.

The Construction Code standardizes all applicable requirements throughout Québec with respect to all elevators and other elevating devices. From now on, all elevators and other elevating devices, irrespective of the type of building in which they are found, must be installed in compliance with the Construction Code. Such is the case namely for elevators found in condominiums and for industrial freight elevators or lifting platforms.

The Construction Code's chapter entitled "Elevators and other elevating devices" is comprised of the CAN/CSA B44-04 code (Safety Code for Elevators and Escalators), the CAN/CSA B355-00 standard (Lifts for Persons with Physical Disabilities),

including the amendments of B355S1-02 Supplement No. 1 and its updates of March 2002 and October 2003, as well as the CAN/CSA B613-00 standard (Private Residence Lifts for Persons with Physical Disabilities), including the update of January 2002, published by the Canadian Standards Association (CSA).

In addition, this chapter applies to the following devices, irrespective of the type of building in which they are found:

- elevators, freight elevators, dumbwaiters, escalators, moving sidewalks, hoisting towers and other elevating devices pursuant to Code CAN/CSA B44 ;
- lifts for persons with physical disabilities pursuant to standard CAN/CSA B355-00 ;
- private residence lifts for persons with physical disabilities pursuant to standard CAN/CSA B613-00.

The above-mentioned equipment which does not form an integral component of a building also falls under the application of the Code (e. g.: funicular or cable car).

In conclusion, it bears reminding that the Ordre's mission is to ensure the public's protection. In fulfilling its mandate, the Ordre can institute penal proceedings against individuals or companies who violate the Engineers Act. In connection with its unlawful practice monitoring activities, the Ordre carries out inspections or verifications on worksites all over Québec in order to make sure that works under the Engineers Act are carried out according to plans and specifications that have been signed and sealed by an engineer or by the holder of a temporary permit, thereby ensuring the public's protection. The courts have again confirmed the merits of this mission as well as the means used to carry it out.

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1. Court of Québec, no 200-61-122381-088, Ascenseurs Thyssen Krupp Ltd.

2. Court of Québec, no 200-61-122382-086, Otis Canada Inc.