

HEALTH AND SAFETY

An ever present concern for engineers

Even though health and safety in the workplace is everyone's concern and employers are bound by weighty legal obligations to ensure their employees' safety, it should be acknowledged that, among professionals, engineers are probably the most affected by these issues.

How many projects, studies, and construction sites require an engineer's seal and signature and this, at each and every step? Even if these issues are often linked to civil engineering, we should not underestimate those obligations relating to health and safety pursuant to the Code of ethics of engineers and thus, lie with the engineering profession as a whole.

Here are the main sections relating to this matter:

2.04 The engineer shall express his opinion on matters dealing with engineering only if such opinion is based on sufficient knowledge and honest convictions.

3.01.01 Before accepting a mandate, an engineer must bear in mind the extent of his proficiency and aptitudes and also the means at his disposal to carry out the mandate.

3.02.04 An engineer must refrain from expressing or giving contradictory or incomplete opinions or advice, and from presenting or using plans, specifications and other documents which he knows to be ambiguous or which are not sufficiently explicit.

3.02.07 Where an engineer is responsible for the technical quality of engineering work, and his opinion is ignored, the engineer must clearly indicate to his client, in writing, the consequences which may result therefrom.

DUTIES THAT GO BEYOND THE PROFESSIONAL ACT

While the preceding sections relate to matters of health and safety, none deals more directly with these issues than section 2.01:

In all aspects of his work, the engineer must respect his obligations towards man and take into account the consequences of the performance of his work on the environment and on the life, health and property of every person.

Given the nature of their work, the public displays a great deal of confidence toward engineers. An engineer's seal generally guarantees the quality of the work as well as the expertise of the person carrying out the work. This confidence comes with high expectations.

Obligations towards "man" far exceed the engineering act itself.

Section 2.01 clearly spells out the degree of quality expected from engineers. This high standard speaks directly to health and safety in all aspects of the engineer's work: obligations towards "man" far exceed the engineering act itself.

CONSISTENT SANCTIONS

It should be noted that an engineer's liability in matters of health and safety will not be called into question only in the event of an unfortunate occurrence. The mere realization that the engineer did not take health and safety into account, whether by mistake, omission or negligence, could lead to the filing of a disciplinary complaint.

The second part of section 2.01 deals mainly with the consequences resulting from the engineer's work, during and after its execution. In fact, author Vandebroek has this to say on the matter¹:

Execution entails that an intellectual work will become an actual material work. While the engineering work is being carried out, and once it is completed and in use, engineers will have only fulfilled their obligations pursuant to section 2.01 if they "took into account" the consequences spelled out in this section, that is to say if they took positive actions encouraging execution processes and technical choices that are most compatible with respecting the environment and the life, health and property of every person. (Unofficial translation.)

In terms of disciplinary measures, the sanction usually requested for a violation of this section of the Code of ethics indicates the importance of the matter. In most cases, the required sanction is an almost automatic striking off the role, generally for a minimum of one month.

THE ENGINEER, A KEY PLAYER IN HEALTH AND SAFETY

The engineer's important role, whether at the design phase or during the execution of a project, is highlighted again

in another crucial section relating to health and safety, namely section 2.03 of the Code of ethics:

Whenever an engineer considers that certain works are a danger to public safety, he must notify the Ordre des ingénieurs du Québec or the persons responsible for such work.

Pursuant to this section, the engineer becomes a key player in matters relating to health and safety and, by the same token, gains an obligation towards the public.

Indeed, after having detected a potentially dangerous situation, a finding that must always be based on sufficient knowledge and honest convictions², the engineer must advise those responsible for the work. Under section 2.03, these can include the contractor, the subcontractor, the client or the Régie du bâtiment du Québec.

In light of the foregoing, engineers are crucial players in most projects affected by health and safety matters. They play a pivotal role, a role which should be fulfilled with all the necessary thoroughness and competence to adequately ensure the public's protection.

1. François VANDENBROEK, *L'ingénieur et son Code de déontologie*, Trois-Rivières, Les Éditions Juriméga, 1993, p. 40.2. Section 3 of the Regulation.

2. Section 2.04 of the Code of ethics of engineers.