

IMPACT MINE BLASTING ON THE ENVIRONMENT OF QUARRY OPERATION (neighbour perception and operator duties)

G. GOMEZ Ciments-Calcia (France) Italcementi Group

Abstract

The sources of complaints by neighbours of the operating quarry are due to the 3 following causes :

- Impulsional noises or air hoch waves
- Vibrations

D u s t

How a blasting in a quarry operation is felt by neighbours cannot be measured solely by the various limits set by national and European regulations regarding vibrations and air shock waves (sound pressure).

This difference is due to the fact that regulatory limits definitions are based on objective values regarding the appearance of damages in different construction categories (refer to the technical rules annexed to the circular n° 23 dated July 23-1986 explaining the emission of mechanical vibrations into the environment by installations classified for environment protection, and to the GFEE recommendations with in circular n° 96-52 of July 2-1996 concerning the application of September 22-1994).

On the other hand, the nuisance felt by neighbours is a subjective notion difficult to quantify and regulate with thresholds that depend on factors such as age, sex, physiological and psychological situation of the people concerned (refer here under the detail of our survey and 2 heart frequency monitoring).

Ciments Calcia has voluntarily developed a method allowing to take into consideration the subjective dimension of the problem.

In fact, in the last four years, each quarry has regularly invited all the population concerned (neighbours, association.. .) at various environmental meetings and concertations.

The agenda of the meetings are established without exclusivity taking into account the demands of the people invited. All the impacts of our activity are treated especially the use of explosives in the quarry, as well as methods and instruments used by our society to control blasting effects in the environment.

In this feelings and information in addition to legal measures are exchanged, allowing the neighbours' expectations in technical data to be expressed. This can become a plan for progress in all transparency..