

# **ANALYSIS OF THE BEHAVIOR OF AN INDUSTRIAL BUILDING WITH PRESENCE OF VIBRATIONS DUE TO MACHINERY**

**ERCOLI N.L.<sup>1\*</sup>, PERALTA M. H.<sup>2</sup>, PICO L.<sup>3</sup>**

<sup>1</sup> Universidad Nacional del Centro de la Provincia de Buenos Aires, Facultad de Ingeniería  
Avda. Del Valle 5737. 7400 Olavarría. Bs. As. Argentina  
E-mail: nercoli@fio.unicen.edu.ar. <http://www.fio.unicen.edu.ar>

<sup>2</sup> Universidad Nacional del Centro de la Provincia de Buenos Aires, Facultad de Ingeniería  
Avda. Del Valle 5737. 7400 Olavarría. Bs.As. Argentina  
E-mail: mperalta@fio.unicen.edu.ar. <http://www.fio.unicen.edu.ar>

<sup>3</sup> Universidad Nacional del Centro de la Provincia de Buenos Aires, Facultad de Ingeniería  
Avda. Del Valle 5737. 7400 Olavarría. Bs.As. Argentina  
E-mail: lpico@fio.unicen.edu.ar. <http://www.fio.unicen.edu.ar>

## **ABSTRACT**

The design of structures in industrial buildings is complex due to the diversity and nature of the processes involved according to the destination with presence of systems and equipment that generate vibrations [1]. In order to achieve a suitable technical solution, the designer must possess adequate knowledge of every aspect related both to the equipment or machine and to the characteristics of the structure the equipment will be linked to so as to mitigate vibration problems[2] .

This paper addresses the issues related to a building which supports a crusher and screen equipment in a cement plant facilities in the city of Olavarría, Province of Buenos Aires. The building is a reinforced concrete structure composed of slabs and spatial frames laying on a concrete slab foundation.

Computer simulation models were calibrated and used to determine and analyze the structure dynamic properties and the structural response under service load. Design criteria are established in order to achieve a proper structural behavior, as well as recommendations related to the use of vibration isolation, obtained from the analysis results[3] .

## **REFERENCES**

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