

## **Influence of the Eccentricity of a Concentrated Load on the Behavior of Multilayers Slabs**

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**Abstract :** The method of strengthening of concrete works by composite materials is a practice which knows currently an important development. From this perspective, we propose to make a contribution to the analysis of the behavior of concrete slabs reinforced with composite fabrics, arranged in parallel folds according to the thickness of the slab. The analysis of experimentally obtained modes of failure confirms, generally, that the ruin of the structure occurs essentially by punching. Accordingly, our work is directed to the analysis of the behavior of reinforced slabs towards the punching. An experimental investigation is realized. For that purpose, a set of trial specimens was made. The reinforced specimens are subjected to an essay of punching, by making vary the direction of the eccentricity. The first experimental results show that the ultimate loads, as well as the transition from the flexion failure mode to the punching failure mode, are governed essentially by the eccentricity.

**Keywords :** composites, concrete slabs, failure, laminate, punching

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