

# **INFLUENCE OF INJECTORS PLATES SPACING USED IN ACTIVE STRATIFICATION SOLAR TANKS ON THE THERMAL STRATIFICATION**

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**ABSTRACT.** The aim of this work is the study using a CFD code, of the thermal stratification in two solar tanks equipped with active stratification devices and having equal volume. The first one equipped with three injectors with parallel plates spaced of 2 cm, while the second is equipped with three parallel plates injectors spaced of 4 cm. The influence of flow rate is highlighted. Results show that increasing the injection flow rate leads to a fast lose of stratification of the storage tank for both solar storage tanks. Thus, for high injection flow rate, the stream creates along both sides of the tank leads to a faster lose of stratification. The second tank with injectors more spaced preserves better the stratification compared with the first tank.

**KEYWORDS:** *Thermal stratification, injectors, solar storage tanks, injection flow rate.*