On superadditive ergodic type theorem in non-associative Segal-Dixmier Lp-space (for finite $p > 1$) affiliated with a semi-finite JBW-algebra.

Let $T$ be a positive kernel in a Lp-space (for finite $p > 1$) $E$ affiliated with a semi-finite JBW-algebra $A$ with a faithful normal semi-finite trace $t$. Let $(S(n), n > 0)$ be a superadditive process in $E$, that satisfies a condition that the limit of the infimum of the Lp-norm of the averages of the sums of the expressions $(S(i) - T(S(i-1)))$ is bounded. Then we prove that the limit of averages of $S(n)$ exists $t$-almost everywhere in $E$. (Received September 25, 2005)