ABOUT CONSTRUCTION OF THE REGULAR SEMIGROUPS THAT CONTAIN A MEDIAL NORMAL IDEMPOTENT

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Abstract

The idempotent play an important role for the properties of semi groups. A special role is played by the medial idempotent and medial normal idempotent. We will see this in the construction of the semi groups that contain a normal medial idempotent. Blyth, T. S and R. B. McFadden in their paper "On the construction of a class of regular semi groups" have studied and constructed the regular semi groups which contain a normal medial idempotent in terms of an idempotent-generated regular semi group $\overline{E}$ that contains a normal medial idempotent u and an inverse semi group S with identity, such that the semi lattice of idempotent $E(S)$ of S, is isomorphic with the subband $E^0 = u\overline{E}u$ of $\overline{E}$. M. Loganathan in his paper "Regular semi groups with a medial idempotent" has described the construction of the regular semi groups which contain a medial idempotent in terms of an idempotent-generated regular semi groups $\overline{E}$ that contains a medial idempotent u and an orthodox semi groups S with identity, whose band of idempotent $E(S)$ of S is isomorphic with the subband $E^0 = u\overline{E}u$ of $\overline{E}$. In this paper will show how we can construct a regular semi group which contains a normal medial idempotent in a different way from that followed by Blyth, T. S and R. B. McFadden in their paper. We will follow the method that M. Loganathan used to construct the regular semi groups which contain a medial idempotent to construct also the regular semi groups which contain a normal medial idempotent u. We will see also the connection between the constructed semi group and the "buildings bricks", $\overline{E}$ and S, which will transfer their properties in the constructed semi group from them.

Keywords: *semi group, medial idempotent, normal medial idempotent*

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