

Year: 2016

Vol.: 89

Fasc.: 4

Title: A note on normal idempotents

Author(s): Xiangfei Ni and Haizhou Chao

Let S be a regular semigroup and $\overline{E}$ be the subsemigroup of S generated by the set E of all idempotent elements of S . By [1], an idempotent element u of S is called a normal idempotent if $xux = x$ for every $x \in \overline{E}$ and $u\overline{E}u$ is a semilattice. In this paper we introduce the notion of a quasi-normal idempotent of S as an idempotent element u of S which satisfies the conditions: $eue = e$ for every $e \in E$ and uEu is a semilattice. It is clear that every normal idempotent is quasi-normal. The main purpose of our paper is to show the converse statement, that is, every quasi-normal idempotent of a regular semigroup is also normal.

Address:

Xiangfei Ni
Department of Mathematics
Zhejiang Normal University
321004 Jinhua, Zhejiang
China

Address:

Haizhou Chao
Department of Mathematics
ShangHai University of
Finance and Economics
Zhejiang College
321004 Jinhua, Zhejiang
China