

ON ASSOCIATE SUBGROUPS OF REGULAR SEMIGROUPS

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Abstract

We describe the structure of a regular semigroup with an associate subgroup the identity element of which is a medial idempotent. As a particular application of this, we obtain the structure of perfect Dubreil-Jacotin semigroups in which the set of residuals of the bimaximum element form a subgroup.

References

- [1] T. S. Blyth : Perfect Dubreil-Jacotin semigroups, *Proc. Roy. Soc. Edinburgh*, 78, 1977, 101-104.
- [2] T. S. Blyth and M. H. Almeida Santos : On naturally ordered semigroups with biggest idempotents, *Communications in Algebra*, 21, 1993, 1761-1771.
- [3] T. S. Blyth and Emilia Giraldes : Perfect elements in Dubreil-Jacotin regular semigroups, *Semigroup Forum*, 45, 1992, 55-62.
- [4] T. S. Blyth, Emilia Giraldes and M. Paula O. Marques-Smith : Associate subgroups of orthodox semigroups, *Glasgow Math. J.*, 36, 1994, 163-171.
- [5] T. S. Blyth and M. F. Janowitz : *Residuation Theory*, Pergamon Press, 1972
- [6] T. S. Blyth and R. McFadden : Naturally ordered regular semigroups with a greatest idempotent, *Proc. Roy. Soc. Edinburgh*, 91, 1981, 107-122.
- [7] T. S. Blyth and R. McFadden : On the construction of a class of regular semigroups, *Journal of Algebra*, 81, 1983, 1-22.
- [8] T. S. Blyth and G. A. Pinto : Principally ordered regular semigroups, *Glasgow Math. J.*, 32, 1990, 349-364.
- [9] T. S. Blyth and G. A. Pinto : Idempotents in principally ordered regular semigroups, *Communications in Algebra*, 19, 1991, 1549-1563.
- [10] P. A. Grillet : *Semigroups*, Marcel Dekker, 1995.
- [11] T. E. Hall : On regular semigroups, *Journal of Algebra*, 24, 1973, 1-24.

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