Some Properties Associated with Adequate Transversals

Xiangjun Kong

Abstract. In this paper, another relationship between the quasi-ideal adequate transversals of an abundant semigroup is given. We introduce the concept of a weakly multiplicative adequate transversal and the classic result that an adequate transversal is multiplicative if and only if it is weakly multiplicative and a quasi-ideal is obtained. Also, we give two equivalent conditions for an adequate transversal to be weakly multiplicative. We then consider the case when $I$ and $\Lambda$ (defined below) are bands. This is analogous to the inverse transversal if the regularity condition is adjoined.

Received by the editors July 10, 2008.
Published electronically February 16, 2011.
This research was partially supported by the National Natural Science Foundation of China (No. 10971086).
AMS subject classification: 20M10.
Keywords: abundant semigroup, adequate transversal, Green’s $*$-relations, quasi-ideal.