

THE GREATEST REGULAR-SOLID VARIETY OF SEMIGROUPS

KLAUS DENECKE, JÖRG KOPPITZ

*University of Potsdam, Institute of Mathematics
Am Neuen Palais, 14415 Potsdam, Germany*

e-mail: kdenecke@rz.uni-potsdam.de

e-mail: koppitz@rz.uni-potsdam.de

AND

NITTIYA PABHAPOTE

*The University of the Thai Chamber of Commerce
Department of Mathematics
126/1 Vibhavadee Rangsit Road
Bangkok, 10400 Thailand*

e-mail: anipa@mail.utcc.ac.th

Abstract

A regular hypersubstitution is a mapping which takes every n_i -ary operation symbol to an n_i -ary term. A variety is called regular-solid if it contains all algebras derived by regular hypersubstitutions. We determine the greatest regular-solid variety of semigroups. This result will be used to give a new proof for the equational description of the greatest solid variety of semigroups. We show that every variety of semigroups which is finitely based by hyperidentities is also finitely based by identities.

Keywords: hypersubstitutions, terms, regular-solid variety, solid variety, finite axiomatizability.

2000 Mathematics Subject Classification: 20M14, 20M07.

Research of the third author supported by DAAD.

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Received 25 April 2007

Revised 16 June 2007