Servomecanism hidraulic de reglare a poziției cu reacție prin laser destinat echipării utilajelor terasiere de nivelare

POPESCU T.C., ŞOVĂIALĂ Gh., NICOLESCU C. - Institutul Național de Cercetare-Dezvoltare pentru Optoelectronică (INOE 2000) Bucuresti

The goal of the theoretical and experimental research activities presented is to promote a modular system, comprising laser and electro hydraulic parts, which gives the navvy machines the possibility to perform land leveling in automatic running [1]. The theoretical research activities include numerical simulation of the dynamics of the modular system and implicit mathematical modeling, performed by means of numerical simulation in AMESim [2]. The experimental identification of the modular system was performed both in laboratory, on a device that simulates the actual operating conditions, and on a motorgrader, while performing leveling work in ”automatic running” [3]. Beside the advantages consisting in high prercision of leveling works and significant reduction in fuel consumption and manpower, leveling based on laser position reaction offers some other advantages in the case of leveling agricultural lands. These concern efficient utilization of water and diminishing soil compaction.