



## **Investigation of using total station with ATR system in monitoring of displacements**

M. Woźniak

Institute of Applied Geodesy, Warsaw University of Technology, Poland,  
(m.wozniak@gik.pw.edu.pl / Fax: +4822-6251527 / Phone: +4822-6607299)

Control measurements of changes in object's geometry are necessary to ensure the safety of an object and its surroundings. . The geodetic monitoring should satisfy high accuracy, reliability and frequency requirements. New total station equipped with ATR (Automatic Target Recognition) system automatically moves the telescope to the center of the prism.

This paper will present the results of testing monitoring measurements using total stations Leica: TDA 5005 and SmartStation during investigations on hydrotechnical objects Wiory (dam) and Zar (the crest of the upper, artificial reservoir of the Pumped-Storage Power Station). The accuracy effects of using ATR system in precise measurements were controlled in laboratory and field conditions for standard and cube corner reflector.