

**Jodłowski, A., Piastka, W. Use of Advanced Diagnostic Techniques in Deep Well Operation for the Needs of the Water Supply System of Lodz. *Ochrona Środowiska* 2008, Vol. 30, No. 1, pp. 39–43.**

**Abstract:** The method of feeding the water supply system of Lodz (groundwater intakes, 62 deep wells) is discussed. The study addresses the following issues: the aging of the wells (which includes understanding the character of the processes occurring both in the wells and in the aquifer) and the available strategies for limiting the occurrence of undesired phenomena when the wells are in service. Taking the experience gained by the waterworks of the city of Lodz as an example, a modern video-based well inspection system is described, which involves a closed-circuit customized TV camera and enables visual assessments of water wells with diameters exceeding 100 mm to the depth of 1000 m. It has been demonstrated that video-based inspections of the well interior provide information about the condition of the well casing and the filter. They are also of help in identifying the deposits and other materials that potentially impair the performance of the well. An analysis of the data obtained in this way makes it possible to program processes that will provide a reliable performance and operation of the well by the application of preventive or correcting measures

**Keywords:** Deep well, operation, aging, video inspection.