

ON-SITE AND MODEL TESTS OF SUSPENDED MATTER SEDIMENTATION IN MINE  
WATER SETTLING TANK OF THE ZIEMOWIT COAL MINE  
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**Abstract:** The results of investigations into suspended matter sedimentation from mine waters in the settling tank at the Ziemowit coal mine as well as in the relevant model of the settling tank were presented. It was shown that variations in the performance of the tank are caused by improperly accumulated sediment, which generates privileged water flow in superficial layers. Additionally, impetuous periodical water discharges seem to be important. The investigations performed on the settling tank model were focused on estimating the influence of temperature, flow rate and the aeration of mine water on the suspended matter sedimentation. Reasons for inefficiency of the settling tank were determined, and technological changes enhancing the process of suspensions removal were suggested.