

Summary:

This bachelor thesis deals with treatment of mine waters rich in arsenic. First part is an overview of decontamination methods used for elimination of arsenic from water. Emphasised parts are focused on arsenic adsorption on Fe-oxides and hydroxides, particles which may be formed in mine waters; as well as on ODAS treatment system, widely used for mine waters decontamination. The experimental part is a study of decontamination process at mine treatment plant waters in Kaňk, Kutná hora. Extremely high concentrations of arsenic (77,72 mg/L) are found in acid mine drainage from closed Turkaňk mine. Results of this thesis signifies incorporation of arsenic and other elements dissolved in mine water into secondary forming Fe-oxyhydroxides within decontamination process.