The Least-Squares problem (LS problem) is an approximation method for solving a system of linear algebraic equations which are burdened with errors for many reasons. The existence and uniqueness of solutions and LS methods for those solutions are available for different types of matrices that represent these systems. Matrices are typically huge and sparse, however, many practical applications generate sparse-dense matrices - known as sparse matricies with one or more dense rows. We focus on LS methods for this type of LS problem. These are usually based on splitting matrix to sparse and dense part and dealing with both of them separately. Therefore basic assumption of full column rank of the sparse part which is needed for most LS methods doesn't have to hold. We specifically address the procedures that solve this problem with non-regularity.