

The invention relates to the separation of materials according to the magnetic properties and can be used for removal of ferromagnetic scrap of large unit weight from friable mixtures of materials. An electromagnetic system for separation of the mixture of bulk materials according to the magnetic properties contains a belt conveyer with rubber belt with woven cord, on external surfaces of branches of which transverse partitions also from nonmagnetic material are fixed; moreover this conveyor is located above carrying branch of working conveyor, by which the mixture of bulk materials is transported, perpendicularly to the longitudinal axis of the latter. Preferably round hoisting electromagnet with external and internal poles is used as electromagnet, this is located inside between branches of the conveyor of electromagnetic system. The invention provides increase of unit weight of ferromagnetic scrap metal (up to 70 kg and more), which is removed from the friable mixtures of the materials, which are located on the mobile belt of working conveyor, and simplification and cheapening of the design of electromagnetic system.