

Title (en)

HIGH PULP DENSITY, FAST SETTING AND HIGH EARLY STRENGTH BACKFILL METHOD AND MATERIAL

Title (de)

FESTSTOFFREICHES SCHNELLABBINDENDES UND FRÜH HOCHFESTES AUFFÜLLUNGSVERFAHREN UND MATERIAL

Title (fr)

MATIERE REMBLAI A DENSITE DE PULPE ELEVEE, PRISE RAPIDE ET RESISTANCE INITIALE ELEVEE ET PROCEDE CONNEXE

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Application

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Abstract (en)

[origin: WO9849115A1] This invention discloses a high pulp density, fast setting and high early strength backfill method for underground mining, in which novel binding materials, with high early strength properties, are used as the binding reagent, where mine tailings, natural sands, ground sands and industrial waste materials are used as aggregate. The binding material, aggregate and water are mixed together uniformly to produce a high pulp density backfill slurry with 65-85 % pulp densities. The backfill slurry produced is transported to underground mining stopes through a pipeline by gravity or pumping. Once the backfill slurry fills the stope, it quickly solidifies within several hours into a solid backfill body with high early strength. Because of the large amount of mine tailing being used as aggregates without classification, the surface pollution in mines is decreased.

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