

Abstract

METHOD AND APPARATUS TO PRODUCE SYNTHETIC POLYMER ASPHALT

Invention relates to a method of making synthetic polymer asphalt as asphalt bitumen substitute by utilization of waste from palm oil refinery waste spent earth bulk, resin polymer and elastomer additive, used lube oil and kerosene which consist of the following flow process: enter the materials of spent bleaching earth/sodium bentonite to hopper (2) via belt conveyer (1), enter the resin polymer and elastomer additive to hopper (2) successively, after which the resin polymer is crushed by a crusher (3), conduct the raw materials to rotary dryer (4), after which the raw materials are sent to a high rise screw conveyer (6) and then poured into a tank homogenizer (8), additive in the form of used lube oil and kerosene from tank (7) is also conducted to the tank homogenizer via the screw conveyor where the mixture of raw materials is heated between 120°C to 140°C, the tank is provided with churn appliance with blades level off and hot system steam, the homogenous mixture is done by a mixer with speed of agitation at 140 - 400 rpm for 60 minute and release the synthetic polymer asphalt through output spillway to a relocation tank with conic base and a heater system using pump gear (11).

Fig. 1.