

RADIATION TECHNOLOGY FOR RECYCLING AND REUSE OF WASTE POLYMERIC MATERIALS



Areas of Application

The technology is proposed for disposal of household and industrial polymeric waste (secondary polymers) and for transformation of a reactive mass under the action of radiation for reuse in heat-resistant composite road pavement with increased strength

Specification

The technology is based on destroying the surface of chemically neutral polymeric granules under the action of radiation with further chemical reaction with other components of bituminous asphalt in order to get a dense polymer bituminous composite for heat-resistant road pavement. The composite is sustainable within a range of operating temperature from $-50\text{ }^{\circ}\text{C}$ to $+120\text{ }^{\circ}\text{C}$ and has a longer service life as compared with the conventional materials



Advantages

There are no analogs in Ukraine. The radiation technology enables the production of high-quality road pavement materials and solves a pressing ecological problem as this technology provides recycling and reuse of environmentally hazardous polymeric waste

IPR Protection

IPR3

Stage of Development.

Suggestions for Commercialization

IRL3, TRL3

Technology is provided

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