MODIFICATION OF AFTER-PRODUCTS OF PETROCHEMISTRY AND PETROLEUM REFINING

E.M. Movsumzade, G.R. Aliev, Sh.F. Recuta and M.M. Agaguseinova

Azerbaijan State Oil Academy
Baku, Azerbaijan Republic

Roofings are exposed to intensive climatic factors. In summer those are high temperature and solar radiation which promote oxidative process, in winter low temperatures act on roofing.

In roofing industry during manufacturing of roll roofing carpet, mastics made from polymeric materials are implemented basic insulative function jointly with covering layers of roll materials.

We developed the roofing mastic containing by-product of lubricating oils selective purification by furfurol, so-called extract of aromatics, side by side with traditional semifabricates of petrochemistry and oil refining. This waste material is accumulated in big quantity at refineries and is used as a component of fuel oil.

The developed process of mastic production is technologically simple and consists in mixing of bitumen and polyethylene with subsequent addition of extract of aromatics, propylene glycol and asbestos filler.

By mathematical simulation the optimal conditions of process carrying out and component proportions are selected.

The properties of the obtained roofing mastic was studied by physical and chemical methods in various climatic conditions. By mathematical simulation the optimal thickness of mastic layer was determined. The designed polymeric roofing is used in large scale by roofing industry.