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- (71) Applicant and (72) Inventor: MYSLOWSKI, Wlodzimierz [PL/PL]; ul. Skalna 50, PL-43-300 Bielsko-Biala (PL). For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



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(54) Title: PRODUCTION METHOD AND MIXTURE FOR REFLECTIVE ROAD SECTIONS

(57) Abstract: The object of the invention is the production method of reflective road sections, particularly pedestrian crossings and a mixture of reflective mass, especially for forming pedestrian crossings. The production method of reflective road sections, particularly pedestrian crossings, is characterised by the fact that the road surface, designed for pedestrian crossing or other horizontal marking, is covered, preferably by spraying, with sulphur polymer containing a modifier enhancing responsiveness of sulphur polymer to microwave activity and then, the road surface designed for horizontal marking is heated, preferably using a microwave device, until liquefaction of sulphur polymer layer occurs, which is accompanied by pouring reflective material, preferably in a form of glass beads, on the liquefied surface and finally, the reflective material layer is mechanically pressed against the road by vibrating and/or compacting it, preferably with a vibrating roll. A mixture of reflective mass for forming reflective road sections, particularly pedestrian crossings, is characterised by the fact that it contains from 70 to 95% by weight of sulphur polymer mixed with 5 to 30% by weight of modifier and 1 to 10% by weight of reflective material, and metal salts or metal powders are used as modifiers.

PRODUCTION METHOD AND MIXTURE FOR REFLECTIVE ROAD SECTIONS

The object of the invention is the production method of reflective road sections, particularly pedestrian crossings and a mixture of reflective mass, especially for forming pedestrian crossings.

Hitherto all road sections have been produced using homogenous material, usually being bituminous and asphalt mixtures or concrete mixtures, which have been subsequently marked by painting their surfaces with reflective paints or by sticking reflective plastic tapes on their surfaces or using special reflective elements permanently fastened to the road.

The aim of the invention is to develop a method of producing reflective road sections, particularly pedestrian crossings, and to develop a recipe of reflective mass mixture, which would ensure intensive reflection of light by its

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surface as well as enhanced adhesiveness by obtaining a special, coarse surface.

The production method of reflective road sections, particularly pedestrian crossings is characterised by the fact that the road surface, designed for pedestrian crossing or other horizontal marking, is covered, preferably by spraying, with sulphur polymer containing a modifier enhancing responsiveness of sulphur polymer to microwave activity and then, the road surface designed for horizontal marking is heated, preferably using a microwave device, until liquefaction of sulphur polymer layer occurs, which is accompanied by pouring reflective material, preferably in a form of glass beads, on the liquefied surface and finally, the reflective material layer is mechanically pressed against the road by vibrating and/or compacting it, preferably with a vibrating roll.

A mixture of reflective mass for forming reflective road sections, particularly pedestrian crossings, is characterised by the fact that it contains from 70 to 95% by weight of sulphur polymer mixed with 5 to 30% by weight of modifier and 1 to 10% by weight of reflective material, with metal salts or metal powders used as the modifier.

Example 1

The road surface designed for a pedestrian crossing is sprayed with sulphur polymer containing metal powder and then, the designated pedestrian crossing

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zone is heated within the area of stripes using a microwave device until liquefaction of sulphur polymer layer occurs, which is accompanied by pouring glass beads on the liquefied strip surface and finally, glass bead layer is mechanically pressed against the road by vibrating.

Example 2

The road surface designed for horizontal marking is sprayed with sulphur polymer containing a modifier in a form of metal salts and road surface designated for horizontal marking is heated using infrared radiators until liquefaction of sulphur polymer layer occurs, simultaneously pouring reflective material on the liquefied surface and then, the reflective material layer is mechanically pressed against the road using a vibration roll.

Patent Claims

1. The production method of reflective road sections, particularly pedestrian crossings, **characterised by the fact** that the road surface, designed for pedestrian crossing or other horizontal marking, is covered, preferably by spraying, with sulphur polymer containing a modifier enhancing responsiveness of sulphur polymer to microwave activity and then, the road surface designed for horizontal marking is heated, preferably using a microwave device, until liquefaction of sulphur polymer layer occurs, which is accompanied by pouring reflective material, preferably in a form of glass beads, on the liquefied surface and finally, the reflective material layer is mechanically pressed against the road by vibrating and/or compacting it, preferably with a vibrating roll.
2. A mixture of reflective mass, especially for forming pedestrian crossings **characterised by the fact** that it contains from 70 to 95% by weight of sulphur polymer mixed with 5 to 30% by weight of modifier and 1 to 10% by weight of reflective material, preferably glass beads.

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3. The mixture, according to claim 2, **characterised by the fact** that metal salts are used as modifiers.

4. The mixture, according to claim 2, **characterised by the fact** that metal powders are used as modifiers.

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C04B28/36 E01F9/04 E01C23/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C04B E01F E01C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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