



(51) International Patent Classification:

C08G 75/00 (2006.01) *E01C 1/00* (2006.01)
C08L 95/00 (2006.01)

(21) International Application Number:

PCT/PL2010/000116

(22) International Filing Date:

15 November 2010 (15.11.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

P-389668 25 November 2009 (25.11.2009) PL
P-389824 8 December 2009 (08.12.2009) PL

(71) Applicant (for all designated States except US):
MYSŁOWSKI, Włodzimierz [PL/PL]; ul. Chochołowska 28, PL-43-346 Bielsko-Biała (PL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **JANICZEK, Andrzej** [PL/PL]; Łęki, ul. Osiedłowa 13, PL-32-651 Nowa Wieś (PL). **MYSŁOWSKI, Włodzimierz** [PL/PL]; ul. Skalna 50, PL-43-300 Bielsko-Biała (PL).

(74) Agent: **RYGIEL, Andrzej**; Kancelaria Rzecznika Patentowego, ul. Bohaterów Warszawy 26 Lok. F, PL-43-300 Bielsko-Biała (PL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD FOR PRODUCTION OF GRANULATED POLYMER -ASPHALT BINDER AND SULFUR CONCRETE WITH PARTICIPATION OF SULFUR POLYMER OBTAINED IN WASTE SULFUR SOLVENT - BORNE MODIFICATION

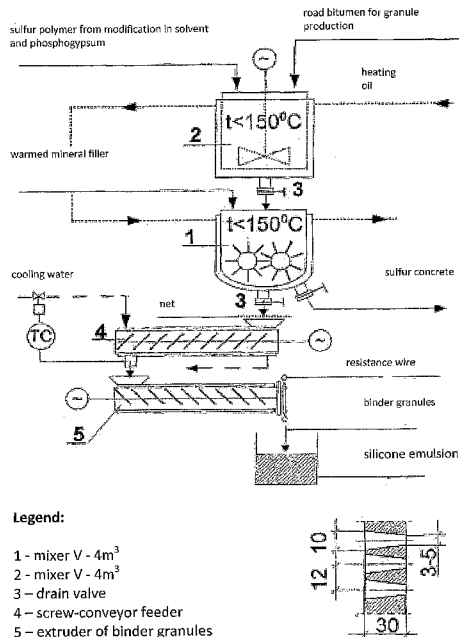


Fig. 1

(57) Abstract: The method of production of granulated polymer-asphalt binder and sulphur concrete with the participation of sulfur polymer obtained through solvent-borne modification of waste sulfur at the temperature of 135-150°C consists in composing this sulfur polymer with other ingredients. At the production of granulated polymer-asphalt binder the content of the sulfur polymer amounts to 40-60% by weight which, after heating to the temperature of 135-150°C, is mixed (mixer 2) with 20-40% by weight of waste phosphogypsum and after they are mixed, 15-20% by weight of D-50 road asphalt is dosed, which dissolves in this mixture reacting partly with the sulfur polymer. Next, this mixture is cooled to plastic form and granules of polymer-asphalt binder are formed in the extruder, which fall into 5% solution of silicone emulsion where they are cooled and covered with a layer of silicone emulsion. At the production of sulfur concrete at the temperature of 135-150°C, sulfur polymer in the amount of 25-35% by weight is mixed with waste phosphogypsum in the amount of 10-20% by weight (mixer 2); then the material flows downwards where it is mixed (mixer 1) with hot mineral material and waste slag from copper smelting. Liquid sulfur concrete, which is cooled and crushed into grains of 0-1 cm or poured into moulds, is formed. The produced polymer-asphalt binder is used for making a binder course in road surfaces and for road repairs. The produced sulfur concrete is used for basic foundations in road surfaces.



Published:

— with international search report (Art. 21(3))

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))