

ABSTRACT

After a cyclopentadiene compound and a vinyl aromatic compound are thermally polymerized in a polymerizing portion (2), the obtained copolymer is subjected to hydrogenation reaction in a hydrogenating portion (3). After most of a hydrogenation solvent is separated by a solvent evaporation tank (41) from the hydrogenated product obtained in the hydrogenating portion (3), an additive separately prepared by dissolving an antioxidant is added in an adding portion (43). While the hydrogenation solvent is a naphthenic solvent, the additive is prepared by dissolving the antioxidant in an aromatic additive solvent having the same carbon atoms as those of the hydrogenation solvent. A low-molecular-weight component as well as the remaining hydrogenation solution and the additive solvent are separated by a thin-film evaporator (42) from the hydrogenated product added with the additive. The obtained molten resin is pelletized in a pelletizing portion (5) to produce hydrogenated petroleum resin pellets. Time for uniformly blending the antioxidant can be shortened.