to give a reaction product, and continuously discharging the reaction product from the tank reactor.

[0009] [2] The method, as described in [1], for producing a (meth)acrylic resin composition, wherein the liquid starting material (A) has the dissolved oxygen concentration of not more than 1 ppm.

[3] The method, as described in [1] or [2], for producing a (meth)acrylic resin composition , wherein a concentration of the radical polymerization initiator in the liquid starting material (B) is not less than 0.01 % by mass and less than 4 % by mass.

[4] The method as described in any one of [1] to [3], wherein the dissolved oxygen concentration in the liquid starting material (A) is controlled by a method comprising mixing the liquid starting material (A) and an inert gas so that a ratio of a feeding amount of the liquid starting material (A) [kg/h] to a feeding amount of the inert gas [Nm^3/h] is less than 0.30.

[5] The method, as described in any one of [1] to [4], for producing a (meth)acrylic resin composition, further comprising removing unreacted matter from the reaction product.

ADVANTAGEOUS EFFECTS OF THE INVENTION

[0010] In the method for producing a (meth)acrylic resin composition of the present invention, a liquid starting material comprising a polymerization initiator as well as a reaction solution within a tank reactor can be maintained stable during temporarily halted operation in the continuous bulk polymerization mode for the purpose of repair or inspection, for example, and when the operation resumes, the operation can return to a

CLAIMS

1. A method for producing a (meth)acrylic resin composition, the method comprising:

preparing a liquid starting material (A) which comprises methyl methacrylate, an acrylic acid alkyl ester and a chain transfer agent, has a mass ratio of the acrylic acid alkyl ester to the methyl methacrylate of 0/100 to 20/80, and has a dissolved oxygen concentration of not more than 50 ppm,

preparing a liquid starting material (B) which comprises a radical polymerization initiator, a polymerization inhibitor and methyl methacrylate, and has been maintained at a temperature of not more than 10°C in the presence of oxygen, wherein the radical polymerization initiator has a half-life period of 0.5 to 120 seconds at a temperature inside a tank reactor,

continuously feeding the liquid starting material (A) and the liquid starting material (B) into the tank reactor,

allowing bulk polymerization to proceed in the tank reactor at a polymerization conversion ratio of 40 to 70 % by mass to give a reaction product, and

continuously discharging the reaction product from the tank reactor.

2. The method for producing a (meth)acrylic resin composition according to claim 1, wherein the liquid starting material (A) has the dissolved oxygen concentration of not more than 1 ppm.

3. The method for producing a (meth)acrylic resin composition according to claim 1, wherein a concentration of the radical polymerization initiator in the liquid starting material (B) is not less than 0.01 % by mass and less than 4 % by mass.

4. The method for producing a (meth)acrylic resin composition according to claim 1, wherein the dissolved oxygen concentration in the liquid starting material (A) is controlled by a method comprising mixing the liquid starting material (A) and an inert gas so that a ratio of a feeding amount of the liquid starting material (A) [kg/h] to a feeding amount of the inert gas [Nm^3/h] is less than 0.30.

5. The method for producing a (meth)acrylic resin composition according to claim 1, further comprising removing unreacted matter from the reaction product.

6. The method for producing a (meth)acrylic resin composition according to claim 1, wherein the preparing the liquid starting material (A) comprises mixing the methyl methacrylate, the acrylic acid alkyl ester and the chain transfer agent.

7. The method for producing a (meth)acrylic resin composition according to claim 6, wherein the preparing the liquid starting material (A) comprises mixing the methyl methacrylate, the acrylic acid alkyl ester, the chain transfer agent and the unreacted matter.

8. The method for producing a (meth)acrylic resin

composition according to claim 1, wherein the preparing the liquid starting material (B) comprises dissolving the radical polymerization initiator and the polymerization inhibitor in the methyl methacrylate.

9. The method for producing a (meth)acrylic resin composition according to claim 1, a content of the polymerization inhibitor in the liquid starting material (B) is 0.1 ppm to 50 ppm relative to a content of the methyl methacrylate in the liquid starting material (B).

10. A method for temporary halt of continuous polymerization process of (meth)acrylic resin composition, wherein the continuous polymerization process comprises preparing a liquid starting material (A) which comprises methyl methacrylate, an acrylic acid alkyl ester and a chain transfer agent, has a mass ratio of the acrylic acid alkyl ester to the methyl methacrylate of 0/100 to 20/80, and has a dissolved oxygen concentration of not more than 50 ppm; preparing a liquid starting material (B) which comprises a radical polymerization initiator, a polymerization inhibitor and methyl methacrylate, wherein the radical polymerization initiator has a half-life period of 0.5 to 120 seconds at a temperature inside a tank reactor; continuously feeding the liquid starting material (A) and the liquid starting material (B) into the tank reactor, allowing bulk polymerization to proceed in the tank reactor at a polymerization conversion ratio of 40 to 70 % by mass to give a reaction product; and continuously discharging the reaction product from the tank reactor,
the method comprising

pausing the continuously feeding the liquid starting material (A) and the liquid starting material (B) into the tank reactor and the continuously discharging the reaction product from the tank reactor, and

storing the liquid starting material (B) while being maintained at a temperature of not more than 10°C in the presence of oxygen.