

ABSTRACT

POLYMERIZATION REACTION APPARATUS AND
METHOD OF PRODUCING POLYMER BY USING THE SAME

5 The present invention provides a polymerization reaction apparatus which can prevent a monomer and a polymer resulted therefrom in a reaction mixture from adhering to a shaft seal bearing part during the operation. Disclosed is a polymerization reaction apparatus comprising
10 a polymerization reaction vessel 10 for performing the polymerization reaction of a raw material mixture containing monomer; a rotatable shaft 20; a stirring blade 22 fixed to the rotatable shaft 20, which stirs the raw material mixture within the polymerization reaction vessel
15 10; and a shaft seal bearing part 30 which supports the shaft 20, wherein the shaft seal bearing part 30 has a shaft sealing part 40 comprising a shaft seal portion (A) 32; a void portion 34 formed between the shaft seal portion (A) 32 and the polymerization reaction vessel 10; a shaft
20 seal portion (B) 38 formed between the void portion 34 and the polymerization reaction vessel 10; and a liquid inlet 36 for introducing a liquid containing the polymerization inhibitor into the void portion 34, wherein the liquid introduced from the liquid inlet 36 is removed through the
25 void portion 34 into the polymerization reaction vessel 10.

Figure 1