

Device for the synthesis of a polymer with extraction of a gaseous substance, comprising a reaction chamber having at least one circular-cylindrical section

Abstract

5

An apparatus for synthesis of a polymer with separation of a gaseous substance (8) comprises a reaction space (1) comprising an essentially circular cylindrical upper section (11) which is bounded by two circular faces (111, 112) and one shell face (113) and has a longitudinal cylinder axis, and a lower section (12), an inlet orifice (2) disposed in a circular face or the shell face of the upper section (11), a first outlet orifice (3) disposed in a wall of the lower section (12), a second outlet orifice (4) disposed in the shell face of the upper section (11) opposite the first outlet orifice (3), and a removal device (5) which is disposed so as to be rotatable about the longitudinal cylinder axis and is in contact with both circular faces and the shell face. This

10

15 apparatus can especially be used for performance of a process which comprises the feeding of an oligomer melt (6) into a reaction space (1) through an inlet orifice (2), the polymerization of the oligomer melt (6) to give a polymer melt (7), the removal of the polymer melt (7) from the reaction space (1) through a first outlet orifice (3) of the reaction space, and the removal of a gaseous substance (8) from the reaction space

20 (1) through a second outlet orifice (4) of the reaction space (1), wherein deposits on at least one inner wall of the reaction space (1) are removed by a removal device (5) and transported into the oligomer melt (6).

25 (Fig. 2)