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Abstract

An injection stretch blow molding apparatus and method wherein while the preforms (1) are amply cooled the injection molding cycle time is shortened and furthermore a small number of blow cavities are used and the operation rate of these blow cavities is increased.

In an injection molding section (14), N ($N \geq 2$) preforms (1) are injection molded and then released from the injection cavity mold (42) at a relatively high mold-release temperature. While the preforms (1) are cooled by the injection core mold (50), they are carried to a preform ejecting section (16). After the preforms cool to a temperature at which they can be ejected, the preforms (1) are ejected from the injection core mold (50). In a transfer station (200), n ($1 \leq n < N$) of the simultaneously molded N preforms (1) at a time are transferred to a blow molding station (300) in (N/n) transfer operations. In the blow molding station (300), each preform (1) is carried by a carrier member (330) through a heating section (306) and a standby section (308) into a blow molding section (310). In the blow molding section (310), n bottles (6) are simultaneously blow molded from n preforms (1).



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