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# 旋转脱落式瓶盖模具设计

## 摘 要

在我国的现代化生产中，模具广泛应用于各种加工技术中，一直以来，模具被称为“工业之母”。注塑成型是塑料成型中最常见的方法，对于模具的研究对于塑料成型技术的发展十分重要。本文主要设计一种针对带有内螺纹的塑料瓶盖的旋转脱模模具，通过对塑件的结构和材料分析，制定出注塑成型的方案，然后进行模具设计。包括对塑件的分析，所使用的材料的加工性能的分析；选择注塑机；确定分型面；主要零件的设计，因塑件带有内螺纹选择组合式凸模，使用螺纹型芯成型塑件内螺纹；浇注系统的设计，方便浇口料的脱落，选用点浇口，也避免浇口痕迹对外观的影响；导向系统以及冷却系统给的设计；脱模机构的设计，采用链条齿轮的传动方式进行旋转脱模；最终进行数据校核后完成零件图和装配图的绘制工作。

**关键词：注塑；模具设计；旋转脱模**

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## Design of Rotary Demolding Mold for Bottle Cap

### ABSTRACT

In my country's modern production, molds are widely used in various processing technologies. For a long time, molds have been called "the mother of industry". Injection molding is the most common method in plastic molding, and research on molds is very important for the development of plastic molding technology. This article mainly designs a rotary demolding mold for plastic bottle caps with internal threads. Through analysis of the structure and material of plastic parts, a plan for injection molding is developed, and then the mold design is carried out. Including the analysis of plastic parts, the analysis of the processing performance of the materials used; the selection of injection molding machines; the determination of the parting surface; the design of the main parts, because the plastic parts have internal threads, the combined punch is selected, and the thread core is used to form the plastic Internal thread; the design of the pouring system is convenient for the shedding of the gate material, the point gate is selected, and the influence of the gate trace on the appearance is also avoided; the design of the guide system and the cooling system; the design of the demoulding mechanism using the chain gear The drive mode carries out rotational demoulding; after the final data verification, the drawing of the part drawing and assembly drawing is completed.

**Key Words:Injection molding;Mould design;Rotary demolding**

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