XS6380 滑鞍零件的工艺规程及夹具设计

摘 要

本文主要针对 **XS6380** 滑鞍零件的工艺规程及夹具设计。夹具是产品制造各个阶段非常重要的工艺装备之一。传统机床夹具设计大多数是根据设计者的经验以及设计者的水平设计的，设计需要很长的时间而且使用的寿命也很短。为了提高夹具的使用年限，选择夹具的使用材料非常重要。

通过查阅资料，对该零件的功能以及使用方法了解的比较透彻，对该零件结构也非常的了解。根据零件的二维图纸绘制出零件的三维立体图形方便观察。根据这个零件的表面粗糙度、零件的大小以及技术要求等，绘制出零件的二维毛坯图，并根据二维图纸完成三维图的绘制。确定毛坯的精基准还有粗基准。选择合适的加工方法对毛坯进行加工，经常用的到的加工方法有钻削、铣削、刨削和车削等。根据所选用的加工方法选择每一道加工工序所需要的刀具、夹具以及量具等。全部选择完成之后进行工艺流程图的绘制以及确定主要工序的切削用量和基本时间，对主要工序进行工艺卡片和检验卡片的填写。

针对 130 工序进行钻削夹具的设计。分析这道工序在加工的时候需要的具体要求提出设计的主要方案。分别对定位装置、夹紧装置和导向装置进行设计。定位装置选择国家标准工件定位销和支撑板。夹紧装置是利用双头螺柱跟压板对零件进行夹紧。导向装置选择钻套跟配用螺钉，为了方便钻套的使用将钻套安装在钻模板上。最后对零件进行装配。

关键词：机械加工；机械加工工艺规程；夹具

Abstract

This paper mainly deals with the process specification and fixture design of xs6380 saddle parts. Fixture is one of the most important process equipment in every stage of product manufacturing. Most of the traditional fixture design is based on the designer's experience and the designer's level and the design needs a long time and the service life is also very short. In order to improve the service life of fixture, the material of fixture is very important.

Through consulting the materials, we have a thorough understanding of the function and use method of the part, as well as the structure of the part. According to the two-dimensional drawing of the part, the three-dimensional drawing of the part is drawn for convenient observation. According to the surface roughness, size and technical requirements of the part, the two-dimensional rough drawing of the part is drawn, and the three-dimensional drawing is completed according to the two-dimensional drawing. Then determine the fine datum and coarse datum of the rough drawing. Select the appropriate processing method to process the rough drawing, the commonly used processing methods are drilling, milling, planning and turning. According to the selected processing method, select the tools, clamps and measuring tools required for each processing procedure. After all the selections are completed, draw the process flow chart, determine the cutting amount and basic time of the main process, and fill in the process card and inspection card of the main process.

According to 130 working procedure, the drilling fixture is designed. This paper analyzes the specific requirements of this process in processing and puts forward the main design scheme. The positioning device, clamping device and guiding device are designed respectively. The positioning device selects the national standard workpiece positioning pin and support plate. The clamping device uses the double head stud to clamp the parts with the pressing plate. The guide device selects the drill sleeve and matching screws, and installs the drill sleeve on the drill template for the convenience of the use of the drill sleeve. Finally, assemble the parts.

Key Words: machining; machining process specification; fixture

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