东风 K6-N 后驱动桥设计

摘要

近年来汽车领域发展迅速,普及度渐渐提升,关于载货汽车的发展前景也逐渐广阔,商业用的车辆的制造中,轻型货车所占据的百分比是很大的,而对于汽车所有结构来说,驱动桥的作用的十分关键的。

现在,载货汽车需要同有良好性能,主要是需要具备速度快、有用功率与驱动功率的比值大、效率高和经济效果好的优势性能,所以我们必须将其与高效和可靠的驱动轴相匹配。设计一种结构简单、运行可靠、销售价格低的驱动桥,可以有效降低整车生产所耗费资源的货币性能,推动汽车行业形势的进步。另一方面,通过本文的研究与试验,驾驶人能够了解更多的汽车方面的信息和知识,提高科研技能。所以,设计出一种性能优良的轻货驱动桥不仅对该行业有不凡的意义,还可以提高个人能力。

对于本文的研究,大体思路如下:起初,先确定所设计驱动桥的类型,确定 其主要的构成与各种设计数据和要求,在深入了解其发展现状与目前市面上存在 的驱动桥的优劣之后,制定合理的方案。比较常用的设计方法是对驱动桥的主要 构成部件进行设计与参数运算,如主减速器、差速器、半轴和桥壳等,并完成校 核。最后,完成装配图和主要零件图。

关键词: 轻型货车; 驱动桥; 单级主减速器; 差速器; 半轴; 桥壳

Abstract

In recent years, with the rapid development of the automobile field and the gradual improvement of the popularity, the development prospect of the truck is also gradually broad. In the manufacturing of commercial vehicles, the proportion of light trucks is very large, and for all the structures of the car, the role of the drive axle is very important.

At present, the truck needs to have good performance, mainly the advantages of fast speed, high ratio of useful power to driving power, high efficiency and good economic effect, so we must match it with efficient and reliable driving shaft. The design of a drive axle with simple structure, reliable operation and low sales price can effectively reduce the monetary performance of the resources consumed in the production of the whole vehicle and promote the progress of the automobile industry. On the other hand, through the research and experiment of this paper, the driver can learn more information and knowledge about the automobile and improve scientific research skills. Therefore, the design of a light cargo drive axle with excellent performance is not only of great significance to the industry, but also can improve personal ability.

For the research of this paper, the general idea is as follows: first, determine the type of the designed drive axle, determine its main composition and various design data and requirements, and then make a reasonable plan after in-depth understanding of its development status and the advantages and disadvantages of the existing drive axle on the market. The commonly used design method is to design and calculate the main components of the drive axle, such as the main reducer, differential, axle shaft and axle housing, and complete the check. Finally, the assembly drawing and main parts drawing are completed.

Keywords: Pickup truck; Drive axle; Single reduction final drive; Differential; Axle; Drive Axle housing

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