

# 水下行走小车的研究

## 摘要

水下行走小车，这个名词对于大部分人来说十分新颖。但在水下工业领域，水下行走小车却显得常见而举足轻重。尤其在水下地质地貌采样，海上石油开采，山体隧道地质信息采集，以及一些水下清理等日常工作都有它的身影。

为了满足与水下作业相关的现代工业需要，完成水下作业任务，研究并设计水下行走小车，解决科技进步难题，正需要我们把它视为迫不及待的工作，其也是科研探究的目的与我们奋斗的动力。水下行走小车是需要机械设计，液压系统设计，控制工程等多学科交叉运用的一门综合领域。对于水下行走小车的设计，相比陆用车辆，一般体型更小型化，动力和功率更稳定，也更低。同时由于水下情况的复杂和难以预测，还需要很多其他水况监测装置等辅助水下小车的工作。同时也需要小车有比其他机械相对较高的灵活性，可操作性和操作稳定性。

随着对水下行走小车的研究，有关水下行走下车的设计也越来越全面，结合大数据分析。新一代的水下行走小车会越来越胜任它特殊用途的角色。

关键词：水下小车；行走系统；履带；液压

## Abstract

The term underwater walking trolley is very new to most people. However, in the underwater industry, underwater walking vehicles are common and important. Especially in the daily work of underwater geological landform sampling, offshore oil

mining, geological information collection of mountain tunnels, and some underwater cleaning.

In order to meet the modern industrial needs related to underwater operations, complete underwater operation tasks, research and design underwater walking vehicles, and solve the problems of scientific and technological progress, it is necessary for us to treat it as an urgent task. The motivation to struggle. Underwater walking trolley is a comprehensive field that requires mechanical design, hydraulic system design, control engineering and other interdisciplinary applications. For the design of underwater walking vehicles, compared with land vehicles, the general size is smaller, and the power and power are more stable and lower. At the same time, due to the complexity and unpredictability of the underwater situation, many other water condition monitoring devices and other auxiliary underwater vehicles are needed. At the same time, the trolley needs to have higher flexibility and operation stability than others.

With the research on the underwater walking trolley, the design of the underwater walking trolley has become more and more comprehensive, combined with big data analysis. A new generation of underwater walking vehicles will become more and more competent for its special purpose roles.

**Keywords:** underwater car;walking system;tracks;hydraulic

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