

ZPMC

基于RFID射频识别技术的 港口机械门禁管理定位系统

Access management positioning system based on RFID technology

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一、概述

针对进出港口机械上作业人员的安全管理和智能化区域定位的需求，“RFID射频识别技术的门禁管理定位系统”为上述需求提供有效的解决方案。其能为人员进出作自动化判断管理、人员的区域性定位管理；同时可以实现后方智能监控管理、人员信息资料管理、越界报警、求助报警、人员追踪等功能；该系统接口开放，具有多方面扩展功能，能与视频监控系統联动，实现精细化管理。

I、Overview

The access manage positioning system based on RFID technology is designed for the needs of improving the safety managing of working people and intelligent localization. It can automatically judge the position of people and also can help to achieve the fuction such as intelligent monitoring management far away, personnel information management, boundary violation alarm, personnel track, etc. Its interface is open, can be link to the video monitor system.

二、应用实例——宁波二期岸桥门禁管理系统

II、Application example--Access managing system on NBCT



(岸桥入口 QC Entrance)



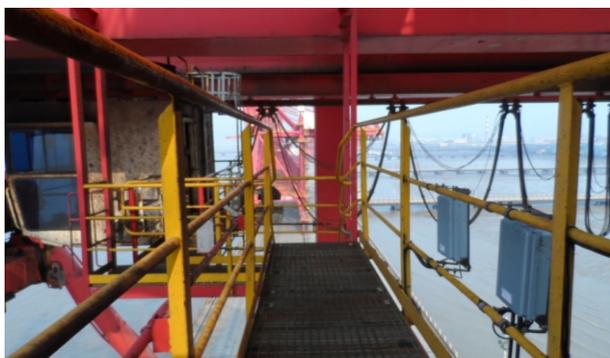
(小车架 Trolley Frame)



(机房入口 Machine Room Entrance)



(电气房入口 Electric room Entrance)



(小车通道 Trolley Access)



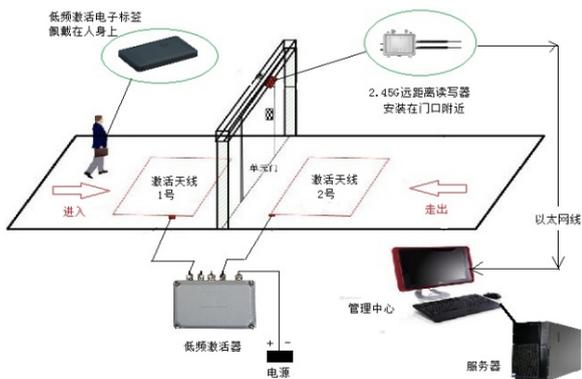
(前大梁入口 Boom Entrance)

三、门禁定位系统工作原理

如图所示，我们给每一个需要管理的门禁安装一台低频激活器，每台激活器引出2路低频激活天线，分别是1号天线，2号天线，各自布置在门禁的外面和里面，而在门禁旁边安装一台2.45G远距离读写器，作为信号接收器。当人员佩戴着RFID低频激活标签，进入门禁时，依次被激活天线1号和激活天线2号激活，这样系统则判断出人员进入门禁，相反，则系统辨识为出门，就这样完成了整个门禁系统人员进出判断的管理(见图1, 图2)。

四、门禁管理定位系统主要特点

- ◆ 读取准确、能智能识别行动方向，安全性强；
- ◆ 通过无线数据传输，能在后方实现全面监控管理，提高管理效率；
- ◆ 数据容量大，能动态实时通信；
- ◆ 使用寿命长，应用范围广。



(图1 Pic.1)

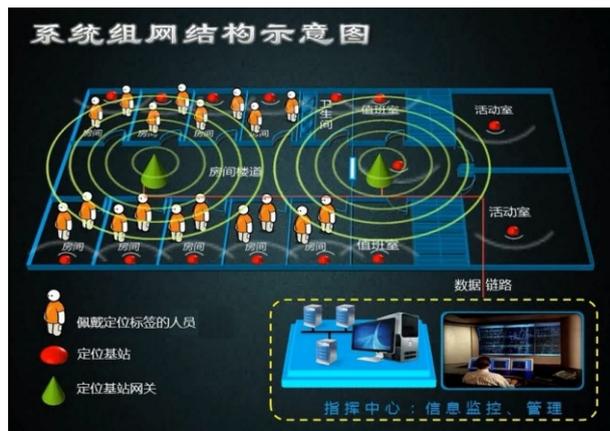
III、Work principle of access managing system

For each door that needs managing, we will install a low-frequency activator on it. And it has two ways of low-frequency activating antennas out which is No.1 antenna and No.2 antenna. They will be located inside and outside the door seperately. And besides, we use a 2.45G long distance Read/write device as the signal receiver. When the people walks into the door with a RFID equipment, it will activate the No.1 antenna and No.2 antenna in turn. So the system can identify that someone has walk into the door, and vise versa.

(See Pic.1,2).

IV、Many characteristic of access managing system

- ◆ Correctly read, high safety.
- ◆ By the using of wireless data transmission, users can monitor all the situation from long distance. So as to improve the manage efficiency.
- ◆ Large data capacity, can support the dynamic communicating.
- ◆ Long service life, wide application range.



(图2 Pic.2)

五、主要元件



A 远距离读写器

Long distance Read/write device



B 低频激活器

Low-frequency activator



C 电子标签

RFID

V、Many components



六、门禁管理软件

1. 司机室监控画面

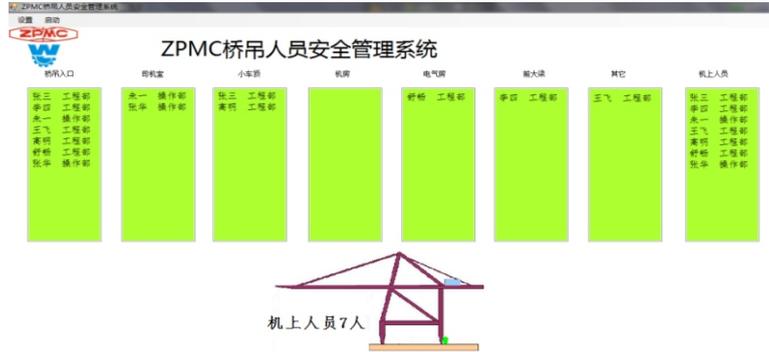
在司机室内配置本地监视器，以便司机监控机上人员位置及动向，提高作业的安全性；



VI、 Access managing software

1. Monitor screen in driving room

The monitor in the driving room can help the driver to know the condition of the people on the crane in time. So it can protect the safety.



2. 远程监控画面

在远程中控室提供了具有丰富扩展功能的监控画面，可在线监控、历史查询、越界报警、人员追踪、信息统计等功能，可与原有的RCMS集成，大大提高港口的综合管理能力；

In the control room far away, the monitoring system has many extended functions such as: online monitorin, historical inquiries, boundary violation alarm, personnel tracking, information statistics and so on. And it also can be integrated with the former RCMS system, so help to improve the comprehensive management ability.

2. Long distance monitor screen



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