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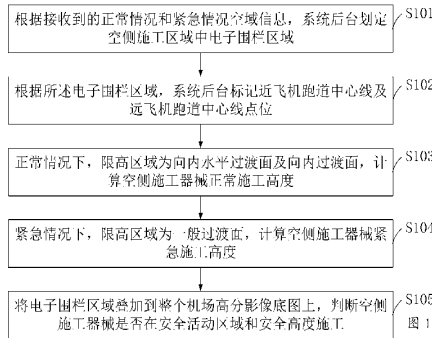
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(54) Title: AIRSIDE CONSTRUCTION EQUIPMENT SCHEDULING METHOD BASED ON HIGH-RESOLUTION REMOTE SENSING, BEIDOU AND ELECTRONIC FENCE

(54) 发明名称: 基于高分遥感、北斗和电子围栏的空侧施工器械调度方法



- S101 According to received airspace information under normal and emergency conditions, a system background delineates an electronic fence area within an airside construction area
- S102 According to the electronic fence area, the system background marks near aircraft runway centerline points and far aircraft runway centerline points
- S103 Under normal conditions where a height-restricted area is defined by an inward horizontal transition surface and an inward transition surface, calculate a normal construction height of airside construction equipment
- S104 Under emergency conditions where a height-restricted area is defined by a general transition surface, calculate an emergency construction height of the airside construction equipment
- S105 Superimpose the electronic fence area on a high-resolution image base map of an entire airport, and determine whether the airside construction equipment performs construction within a safe activity area and at a safe height

(57) Abstract: The present invention belongs to the technical field of airside construction data identification. Disclosed are an airside construction equipment scheduling method based on high-resolution remote sensing, Beidou and an electronic fence. The method comprises: according to received airspace information under normal and emergency conditions, a system background delineating an electronic fence area within an airside construction area; the system background marking near aircraft runway centerline points and far aircraft runway centerline points; calculating a normal construction height of airside construction equipment; calculating an emergency construction height of the airside construction equipment; and superimposing the electronic fence area on a high-resolution image base map of an entire airport, and determining whether the airside construction equipment performs construction within a safe activity area and at a safe height. In the present invention, for construction equipment that does not conform to an operation space, timely alerts can be issued to inform an operator to adjust the position and construction height of the construction equipment in a timely manner. In the electronic fence area superimposed on a high-resolution remote sensing image, a manager can be assisted in visualizing the range of an electronic fence in an actual scene, thereby facilitating the manager in making decisions.

WO 2024/207707 A1

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本国际公布:
— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本发明属于空侧施工数据识别技术领域, 公开了基于高分遥感、北斗和电子围栏的空侧施工器械调度方法。根据接收到的正常情况和紧急情况空域信息, 系统后台划定空侧施工区域中电子围栏区域; 系统后台标记近飞机跑道中心线及远飞机跑道中心线点位; 计算空侧施工器械正常施工高度; 计算空侧施工器械紧急施工高度; 将电子围栏区域叠加到整个机场高分影像底图上, 判断空侧施工器械是否在安全活动区域和安全高度施工。本发明针对不符合操作空间的施工器械, 可通过及时报警的方式, 告知操作人员及时调整施工器械位置及施工高度。在叠加高分遥感影像的电子围栏区域, 可辅助管理人员可视化电子围栏在实际场景下的范围, 方便管理人员决策。