

以提质增效为导向的无人机智能运检管理 【上架时间： 2023-03-30】



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### 详细信息

【标题】以提质增效为导向的无人机智能运检管理

【Title】Unmanned Aerial Vehicle Intelligent Operation and Inspection Management Oriented by Improving Quality and Efficiency

【摘要】随着清洁能源的高速发展,装机量不断增加,电网规模逐渐扩大,对输电线路巡检能力提出更高要求。内蒙古电力航检公司结合多年研究经验,建立自动巡检技术标准,统一规范巡检全流程:编制技术导则和指导书,对于航线管理、数据成果整理要求和危险点分析及预控措施等进行规定说明;科学有序管理航线,实现巡检质效提升:有效把控航线质量,对规划后的海量航线文件分区域、统一管理、云端存储,实现集中管控;优化任务执行监管,实现作业动态掌控:管理人员通过航线管理平台查看全部巡检任务、巡检任务具体状态或查询指定巡检任务,了解巡检人员的工作内容,把握巡检作业的工作进展;科学配置账号权限,实现人员精准管控:无人机航线规划软件、航线管理平台、智能巡检终端用户账号实名制,且三方互通,上传航线或接收巡检任务,精确到人,实现人员精准监管;高效整理巡检照片,实现数据规范管理:巡检结果标准统一、集中管理,数据成果规范一致,方便后续研究利用。通过该管理体系实现了作业标准化、巡检智能化、管理精益化,输电线路运维质效得到显著提升,运检成本大幅降低,有力保障了电网安全稳定运行。

【Abstract】With the rapid development of clean energy, the installed capacity continues to increase, and the power grid scale gradually expands, which puts forward higher requirements for the inspection ability of transmission lines. Inner Mongolia electric power aviation Inspection Co., Ltd. has established technical standards for automatic patrol inspection based on many years of research experience, unified and standardized the whole process of patrol inspection: prepare technical guidelines and instructions, and specify and explain the route management, data results sorting requirements, risk point analysis and pre control measures; Scientific and orderly management of routes to improve the quality and efficiency of patrol inspection: effectively control the quality of routes, and realize centralized management and control of the planned massive route files by regions, unified management and cloud storage; Optimize task execution supervision and realize dynamic operation control: the management personnel can view all patrol inspection tasks, specific status of patrol inspection tasks or query designated patrol inspection tasks through the route management platform to understand the work contents of patrol inspection personnel and grasp the work progress of patrol inspection; Scientifically configure account permissions to achieve accurate personnel control: UAV route planning software, route management platform, intelligent patrol terminal user account real name system, and three-party intercommunication, upload routes or receive patrol tasks, accurate to people, and achieve accurate personnel supervision; Organize the patrol photos efficiently and realize the standardized management of data: the patrol results are standardized and centrally managed, and the data results are standardized and consistent, which is convenient for subsequent research and utilization. Through this management system, the standardization of operation, intelligent inspection and lean management have been realized, the quality and efficiency of transmission line operation and maintenance have been significantly improved, the cost of operation and inspection has been greatly reduced, and the safe and stable operation of the power grid is effectively guaranteed.

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