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Application thinking of surveying and mapping technology in land consolidation, reclamation and development

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Abstract

The rational application of surveying and mapping technology in the implementation process of land consolidation and reclamation and development work can provide more information reference and technical support for land reclamation and development, and ensure the scientific pertinence and effective implementation of land consolidation and reclamation and development work. This article will also focus on this, mainly discusses the land consolidation reclamation and development of common process of surveying and mapping technology, surveying and mapping technology in land consolidation reclamation and development of application and attention, hope that through this article discussion and analysis can provide more reference and reference for related units, scientific and reasonable application of surveying and mapping technology, security land consolidation reclamation development work can smoothly and orderly, improve the quality and efficiency of land consolidation reclamation development.

Keywords

surveying and mapping technology; land consolidation; reclamation and development; application points; land resources

土地整理复垦和开发中的测绘技术应用思考

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摘要

在土地整理复垦及开发工作落实过程中合理应用测绘技术可以为土地复垦开发提供更多的信息参考与技术支持, 确保土地复垦复垦和开发工作落实的科学性针对性和有效性。本篇文章也将目光集中于此, 主要讨论了土地整理复垦和开发过程中常见的测绘技术、测绘技术在土地整理复垦和开发中的应用及注意事项, 希望通过本篇文章的探讨和分析可以为相关单位提供更多的参考与借鉴, 科学合理地应用测绘技术, 保障土地整理复垦开发工作能够顺利推进有序开展, 提高土地整理复垦开发工作质量和效率。

关键词

测绘技术; 土地整理、复垦和开发; 应用要点; 土地资源

1 引言

土地整理复垦开发是土地整治工程中十分重要的组成部分, 对于建设生态文明社会、推进新农村建设、提高土地资源利用率都会起到至关重要的影响, 必须引起关注和重视, 而在土地整理复垦和开发的过程中合理应用测绘技术是十分必要的。

2 土地整理复垦和开发中常见的测绘技术类别

2.1 极坐标标高工程测绘技术

极坐标标高工程测绘技术主要是以坐标为基础落实测绘工作, 在测绘过程中工作人员可以借助附近的已知城市坐

标控制点, 将其引入到宗地中, 根据已知的坐标对测绘地区的坐标进行测算。工作人员在测绘中需引入全站仪, 并将其放置于已知坐标点位置, 得出垂直距离、斜距和水平位置等相应数据, 在此基础上对未知目标点的三维坐标进行测量。极坐标标高测绘法更加适用于测程在 3km 以内、精度为 $\pm (5\text{mm}+5\text{ppm})$ 的测绘任务中。如果测绘地区距离已知坐标相对较远, 这时则需要通过坐标控制点迁移的方式设置传送点和过渡点, 操作流程相对而言较为复杂, 操作难度相对较高, 同时测绘结果的准确性和有效性无法得到保障, 因此该项技术方法并不会高频率、大范围地应用于土地整理复垦和开发工作中。

2.2 GPS 全球定位系统

GPS 全球定位系统在土地整理复垦和开发中得到了广泛应用, 该项技术是以 GPS 全站仪为基准, 配合信息技术和卫星信号高效、高质量地完成测绘工作, GPS 全球定位

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