

电力系统

自适应光学电流互感器与保护一体化运行研究

李岩松¹;刘君¹;杨以涵¹;于文斌¹;及洪泉¹;谢晓梅¹

华北电力大学电气与电子工程学院¹

收稿日期 2006-12-20 修回日期 网络版发布日期 2007-11-5 接受日期

摘要

电磁式CT的磁饱和问题一直是影响继电保护正确动作的主要原因之一,只有应用新型的无磁饱和互感器以及相应的保护系统才能从根本上解决这些问题,为此,该文在完善了新型自适应光学电流互感器(AOCT)理论体系基础上,研制了实用化的AOCT,将AOCT与新型线路差动保护构成的一体化系统应用于河北省保定供电公司的一条35kV输电线路运行。运行结果表明,AOCT具有优良的测量性能,能够为保护提供高保真的测量数据;整套一体化系统当发生多次区外故障时均可靠不动,在一次区内故障时正确动作,满足了现场实际运行的要求。

关键词 [光学电流互感器](#) [继电保护](#) [Faraday效应](#)

分类号 [TM77](#)

Research on Whole Operating of Adaptive Optical Current Transducer and Protection

Abstract

Magnetism saturation of traditional current transformer is one of the main reason for relay wrong operation. It is applying new transducer with no saturation and its protection that can solve these problems thoroughly. The new practical adaptive optical current transducer (AOCT) is manufactured, on the basis of perfecting the theory system of AOCT, and the operating system of AOCT and its transmission line differential protection is applied in the 35kV transmission line in BaoDing city HeBei province. The operating results indicate that AOCT take on the excellent measurement performance and can provide the real measurement datum of current for its protection; when fault out of protecting area occurring the operating system of AOCT and its protection do not act reliably, by contrast when fault in protecting area occurring do act reliably; therefore the system can meet the need of operation in the substation.

Key words [optical current transducer](#) [protection](#) [Faraday effect](#)

DOI:

通讯作者 李岩松 liyansong811@sina.com; liyansong811@sohu.com; liyansong811@126.com

作者个人主页 李岩松 刘君 杨以涵 于文斌 及洪泉 谢晓梅

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(475KB\)](#)
- ▶ [\[HTML全文\]\(OKB\)](#)
- ▶ [参考文献\[PDF\]](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“光学电流互感器”的相关文章](#)
- ▶ 本文作者相关文章

- [李岩松](#)
- [刘君](#)
- [杨以涵](#)
- [于文斌](#)
- [及洪泉](#)
- [谢晓梅](#)