



CFRP布加固圆形木梁抗弯性能的试验

欧阳煜,李游

上海大学 土木工程系, 上海 200072

Experimental of Bending Behavior of Circular Timber Beams Strengthened with CFRP Sheets

OUYANG Yu, LI You

Department of Civil Engineering, Shanghai University, Shanghai 200072, China

- [摘要](#)
- [参考文献](#)
- [相关文章](#)

Download: [PDF \(4329KB\)](#) [HTML \(1KB\)](#) Export: [BibTeX](#) or [EndNote \(RIS\)](#) [Supporting Info](#)

摘要 对在实际工程中已经受损的木梁加固后的结构性能进行研究.通过对8根圆形木梁进行静力试验,研究碳纤维增强复合材料(carbon fiber reinforced polymer, CFRP)布加固受损木梁的抗弯性能,包括破坏特性、极限荷载、刚度、截面应变等结构性能.试验结果表明,CFRP布加固受损木梁具有良好的效果,能够有效提高木梁的承载力和刚度.研究结论对碳纤维工程加固的应用具有一定的参考价值.

关键词: [碳纤维增强复合材料布](#) [加固](#) [圆形木梁](#) [抗弯性能](#) [破损](#)

Abstract: In practice, most wood beams to be repaired have already been damaged or degraded. It is necessary to study the structural performances of damaged wood beams reinforced by carbon fiber reinforced polymer (CFRP) sheets. Based on static tests of 8 damaged circular timber beams strengthened with CFRP sheets, bending behaviors are studied, including failure characteristics, ultimate bearing capacity, rigidity, and strain of timber section. The results show that CFRP sheets have a good strengthening effect for timber beams. The loading capacity of a timber beam reinforced by CFRP is effectively enhanced. The results are useful to practical design.

Keywords: [carbon fiber reinforced polymer \(CFRP\) sheet](#), [strengthen](#), [circular timber beam](#), [bending behavior](#), [damage](#)

收稿日期: 2011-04-19;

基金资助:

国家高技术研究发展计划(863计划)资助项目(2009AA023203)

通讯作者 欧阳煜(1968~),男,副教授,博士,研究方向为工程结构加固.E-mail: oyy_wly@sina.com Email: oyy_wly@sina.com

引用本文:

.CFRP布加固圆形木梁抗弯性能的试验[J] 上海大学学报(自然科学版), 2012,V18(5): 545-550

.Experimental of Bending Behavior of Circular Timber Beams Strengthened with CFRP Sheets[J] J.Shanghai University (Natural Science Edition), 2012,V18(5): 545-550

链接本文:

<http://www.journal.shu.edu.cn//CN/10.3969/j.issn.1007-2861.2012.05.019> 或 <http://www.journal.shu.edu.cn//CN/Y2012/V18/I5/545>

没有本文参考文献

[1] 叶红义1,陈永秀2.碳纤维布加固混凝土梁支座负弯矩区的试验[J].上海大学学报(自然科学版), 2009,15(1): 105-110

Service

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [Email Alert](#)
- ▶ [RSS](#)

作者相关文章

