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纸质湿帘力学特性及其测试方法

Mechanical performance and test method for paper wet-pad

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中文关键词: [力学特性](#) [抗压强度](#) [剥离](#) [测试](#) [湿帘](#)

英文关键词: [mechanical properties](#) [tensile strength](#) [peeling](#) [testing](#) [wed-pad](#)

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中文摘要:

纸质湿帘材料是目前温室湿帘-风机降温中应用最为广泛的工业化产品,其质量影响着使用效果,但目前尚缺少力学特性的试验测试及评价方法。通过对纸质湿帘进行力学试验研究,提出了“抗压强度”和“剥离强度”的概念并给出定义,将其作为评价纸质湿帘质量的力学性能参数。还分析论述了“抗压强度”和“剥离强度”的试验原理,研究确定了测试方法,通过采用干燥和浸湿2种状态下的湿帘进行测试,对测试方法进行了验证。结果表明,测试方法需要的仪器设备具有通用性,易于达到试验要求的条件,试验数据有较高的重复性,能够反映出湿帘的质量,因此可以用作湿帘产品力学特性的质量评价。

英文摘要:

Fan-pad cooling is one of the most popular and economic cooling method in greenhouse. Wet-pad is the most important component of the fan-pad cooling equipment. Wet-pad made of paper is the industrialized product and widely used. The quality of wet-pad affects the using results. Besides thermal and ventilating resistance performances, the mechanical performances are needed to evaluate the wet-pad quality. By now there is no evaluating method for the mechanical performances of wet-pad. In this paper, based on mechanical performances tests of wet-pad, two new concepts which were tensile strength and peeling strength of wet-pad were put forward and used as the parameters to describe mechanical performances. Also the test principles and methods were discussed. Besides, the methods were verified through the wet-pad tests in two conditions which were dry and wet. The results show that the test equipment are common used and test data have good repeatability. The method can be used to evaluate the mechanical performances of wet-pad.

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