

寒冷地で利用される塗装木材に関する屋外暴露試験と 促進耐候性試験の相関性

Correlation Between Natural and Accelerated Weathering of Coated Wood Used in a Cold Region

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要 旨

寒冷地で利用される塗装木材の耐候性について、撥水度を指標に用いて屋外暴露試験と促進耐候性試験の相関性を調べることを研究の目的とした。試料には、市販の水性8種類及び油性3種類の屋外用木材塗料で塗装されたカラマツ心材（主に半透明塗装仕上げ）を用い、3年間の屋外暴露試験（暴露地：北海道旭川市、暴露角度：南面45度と0度）と2種類の促進耐候性試験を行った。その結果、光照射、水スプレー、凍結融解処理による促進劣化処理は、0度条件で3年間屋外暴露された塗装試片の撥水度をよく再現し、光照射と水スプレーによる促進劣化処理は、45度条件で3年間屋外暴露された塗装試片の撥水度をよく再現されることが明らかになった。

キーワード：屋外暴露試験、促進耐候性試験、相関性、凍結融解、塗装木材

Abstract

The purpose of this study was to investigate the correlation between natural and artificial weathering of coated wood used in a cold region in terms of the water repellency index. Japanese Larch (*Larix kaempferi*) heartwood specimens finished with 8 water-borne and 3 solvent-borne commercially available exterior wood coatings were exposed to a 3-year natural weathering test (45° and 0° inclination facing south in Asahikawa, Hokkaido) as well as two types of artificial weathering tests (xenon-arc radiation, water spray, with or without freeze-thaw treatment). It was found that the artificial weathering using xenon-arc radiation and water spray and freeze-thaw treatments provided a good simulation of the water repellency indices of the finished specimens exposed at 0° for 3-year natural weathering, and the artificial weathering using xenon-arc radiation and water spray well simulated the water repellency indices of the finished specimens exposed at 45° for 3-year natural weathering.

Keywords: Natural Weathering, Artificial Weathering, Correlation, Freeze-thaw, Coated wood