

The invention relates to a process for acetylation of wood having a density of above 400 kg/m³, particularly, of Southern Yellow Pine, and acetylated wood obtainable by this method. The described acetylation process allows the production of acetylated wood having higher acetylation levels, such as an acetyl content of at least 20 % by weight. The acetylated wood has also a low residual acetic acid content, in particular, lower than 1 % by weight. The invention is particularly useful for acetylation on industrial scale of pieces of solid wood, preferably, of wood beams.