
Research on bond strength of bonded steel plate joints under high temperature environment

- Earthquake reinforcement method that attaches a steel brace with adhesives -

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An earthquake reinforcement method has been developed for earthquake reinforcement of steel-framed buildings, in which steel braces are attached using adhesives. Unlike welding, which is generally used in earthquake reinforcement work, this method does not use fire, so it can be used safely in warehouses and factories that handle combustible materials. In order to clarify the effects of construction conditions on the adhesive performance of the joints and the shear strength of the adhesive, tensile tests were conducted using elemental test specimens from which only the adhesive joints were extracted. Through the experiments, we confirmed the adhesive performance and the influence of construction conditions on the adhesive strength. Since adhesives tend to show a decrease in strength at high temperatures, this paper reports on temperature measurements in actual buildings and the setting of design temperatures.
