

29-6 A New Ultimate Capacity Formula for Unstiffened CHS Joints under
Compression-Continuous Formula between T,TT and X-Joints-

環境システム工学科 大学院生 森田 みずう
環境システム工学科 教授 牧野 雄二
環境システム工学科 教授 黒羽 啓明
環境システム工学科 特別研究員 G. J. van der Vegte

Design formulas in AWS, API, CIDECT and AIJ Codes, are too complicated for designers. In this study, new ultimate capacity formulas for X,T and TT-joints are proposed as a first step to derive simple design formulas. The new ultimate capacity formulas use no complicated geometric variables. Furthermore, the formulas for TT-joints are continuous to the ultimate capacity formulas for X or T-joints and are in accordance with the TT-joints' failure types. Although, at this point, the formulas are only for X,T and TT-joints under compression, this study shows that the ultimate capacity equations for the other joints can be derived using similar procedures.

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