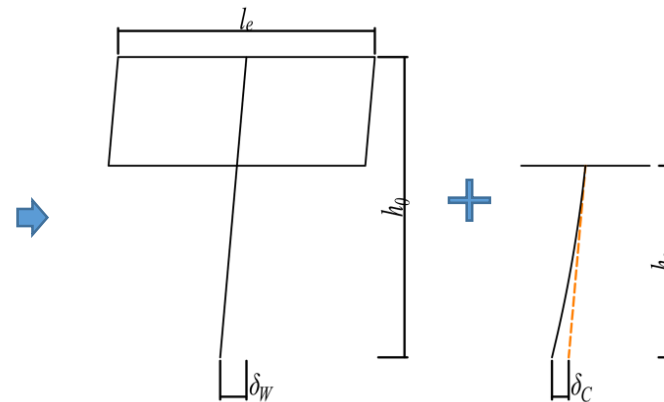
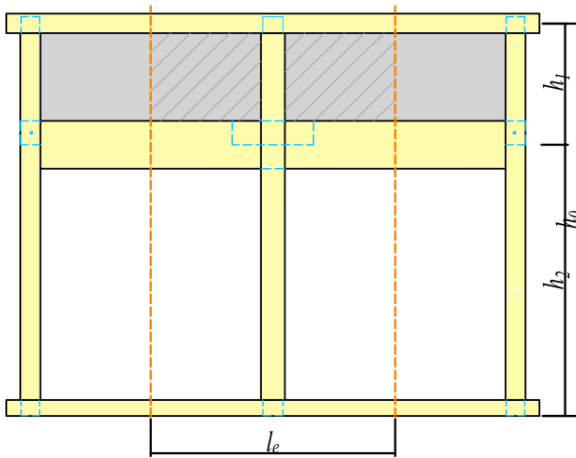


Introduction

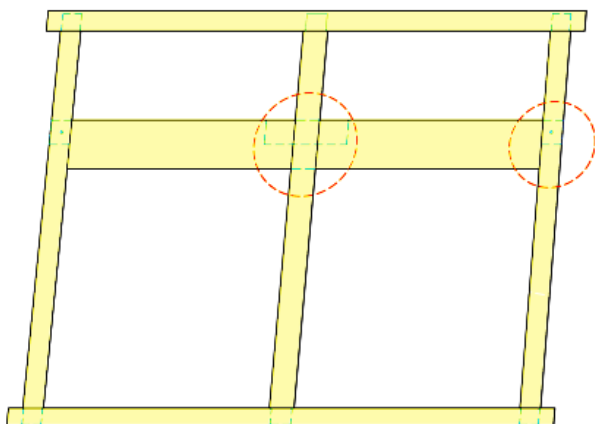
Based on the current structural calculation method for the timber frames that applied in Japanese traditional residential houses:



Shear resistance of mud wall with column bending

+

Moment resistance of tenon-mortise joints?

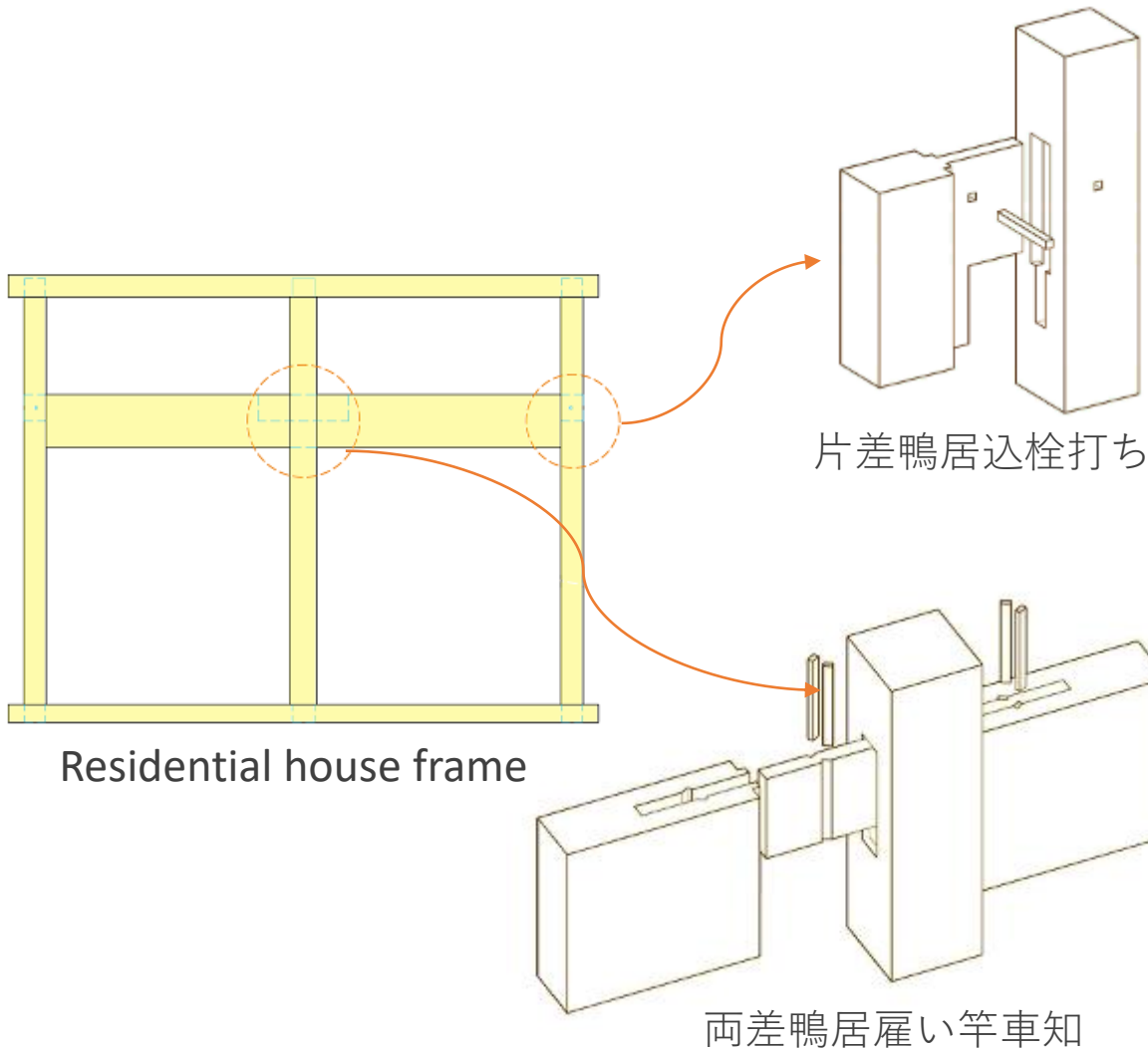


Objectives:

- 1) Clarify the contribution from moment resistance of end joints between columns and tie-beams;
- 2) Contrast rotational properties considering the inner structural difference of tenon-mortise joints of the Sashi-gamoi Tie Beam.

Introduction

Two types of Sashi-gamoi tie beam's end joints are mainly considered :



1) Side joint (T-shaped)

- Connect Sashi-gamoi tie beams with columns on both sides of the frame;
- Fixed with the wood dowel.

2) Center joint (X-shaped)

- Connect two Sashi-gamoi tie beams with the center column;
- Tie-beams on both sides are linked with the inserted spline and fixed by inclined shear keys.