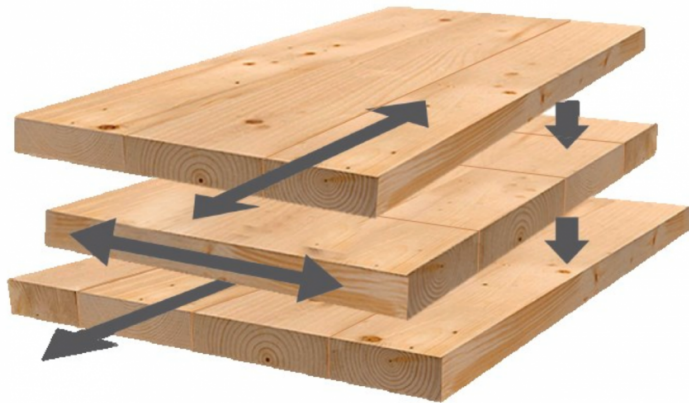


CLT床版の数値モデル化

7513704 今町 崇人

CLT(Cross Laminated Timber
:直交集成板)



ヨーロッパで普及



木材の繊維方向が直交するよう交互に積層

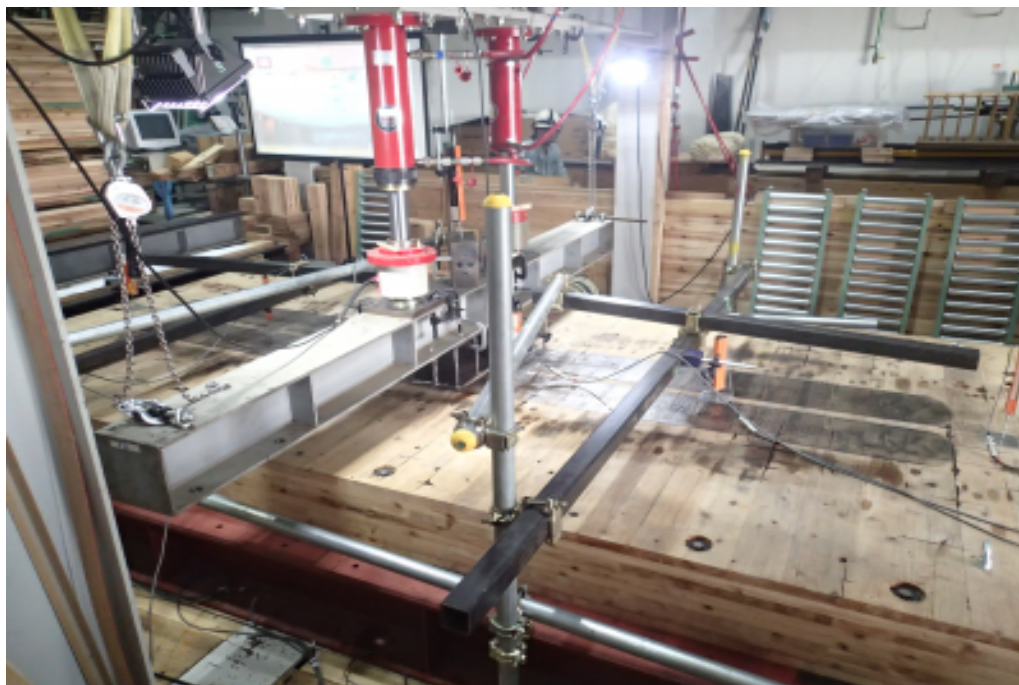
橋梁床版として期待



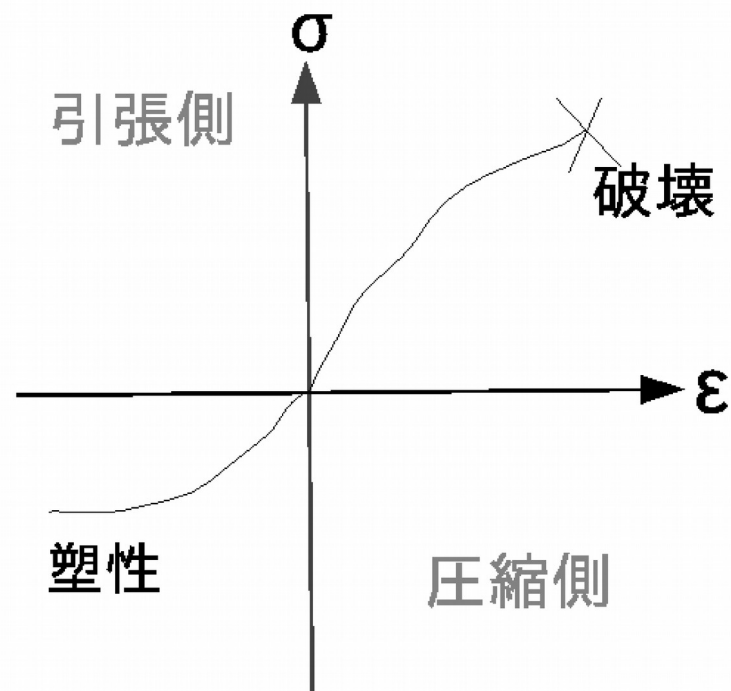
FEM(有限要素法)でどうモデル化するか?



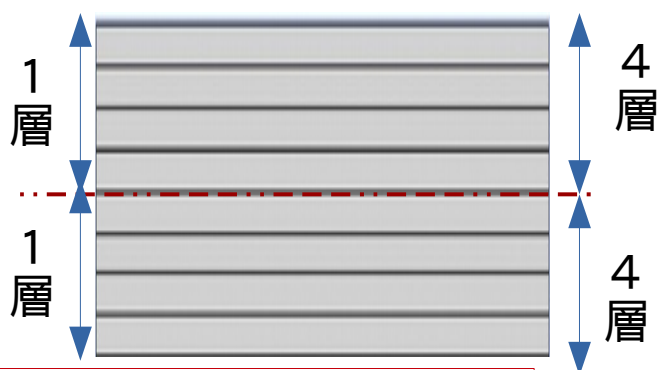
解析モデル



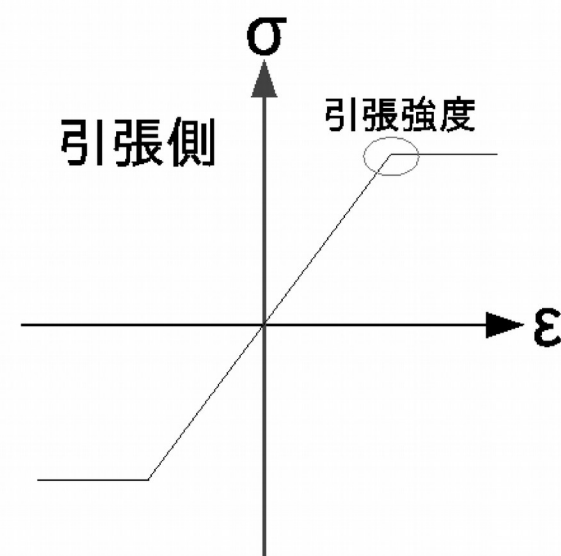
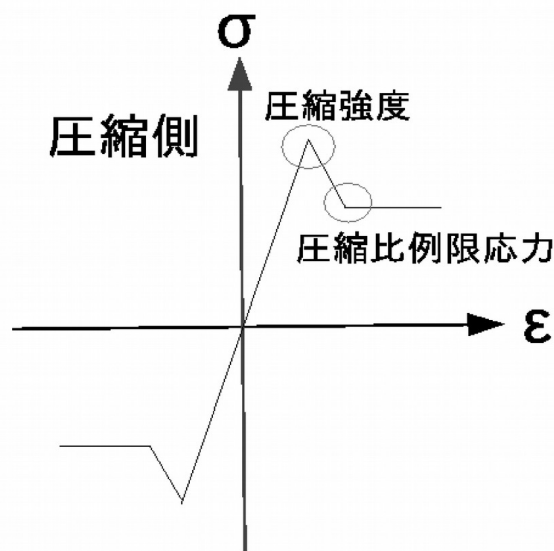
能代での破壊試験



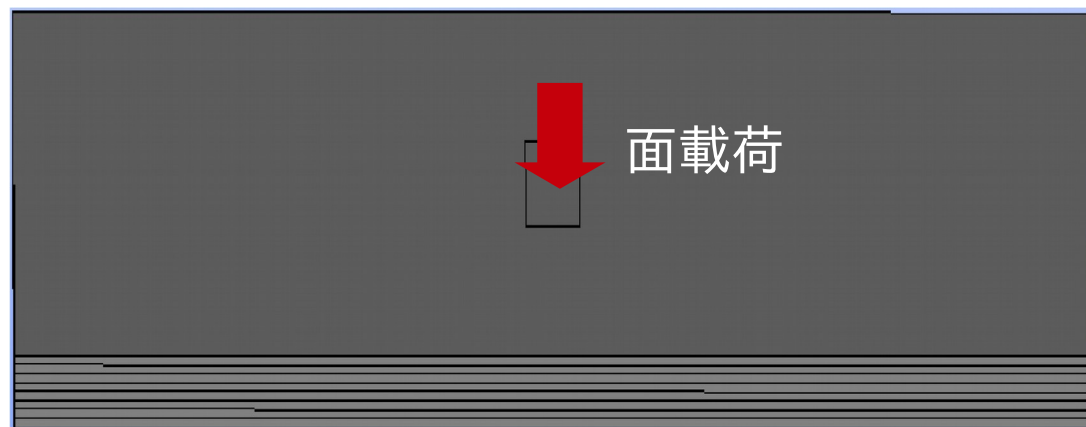
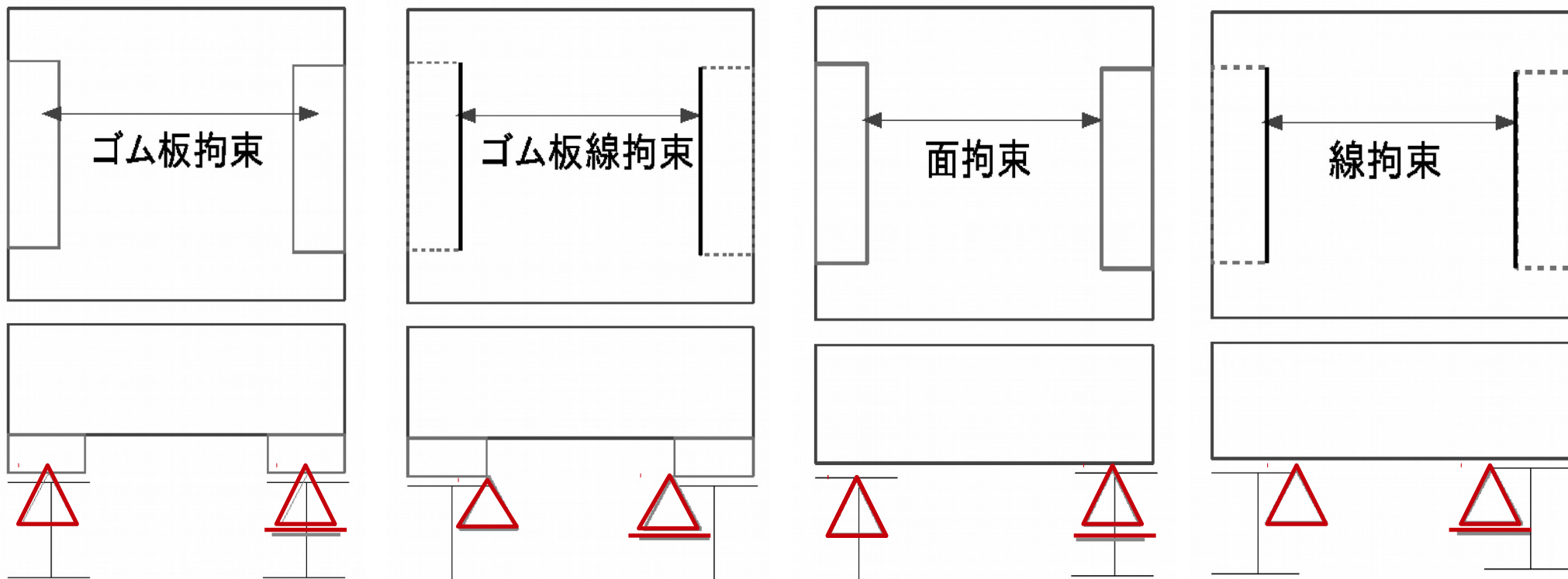
圧縮側 $\sigma_c=2,7\text{MPa}, \sigma_{cp}=2,3\text{MPa}$



引張側 $\sigma_t=5,5\text{MPa}$

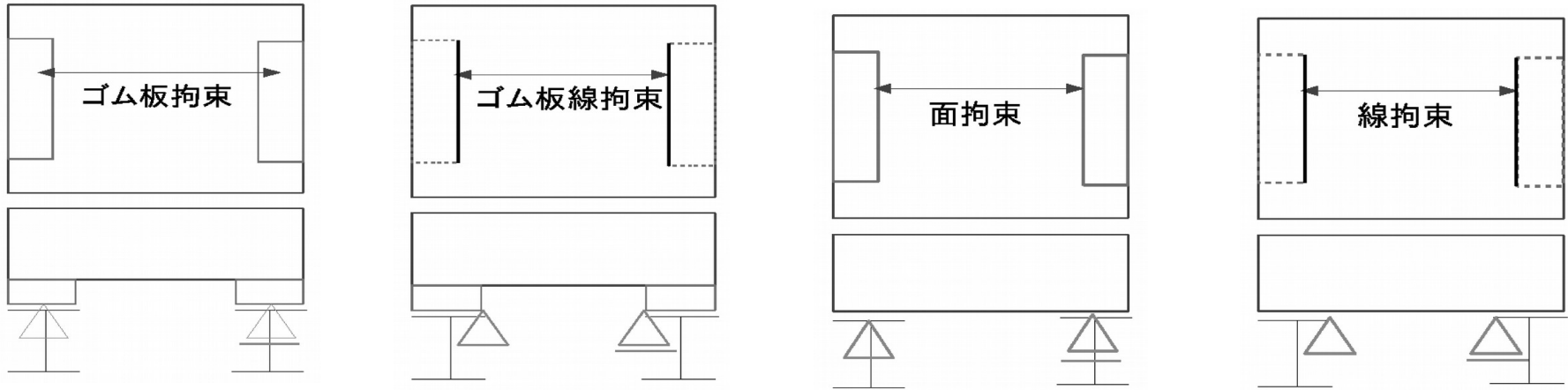


解析モデル(境界条件)

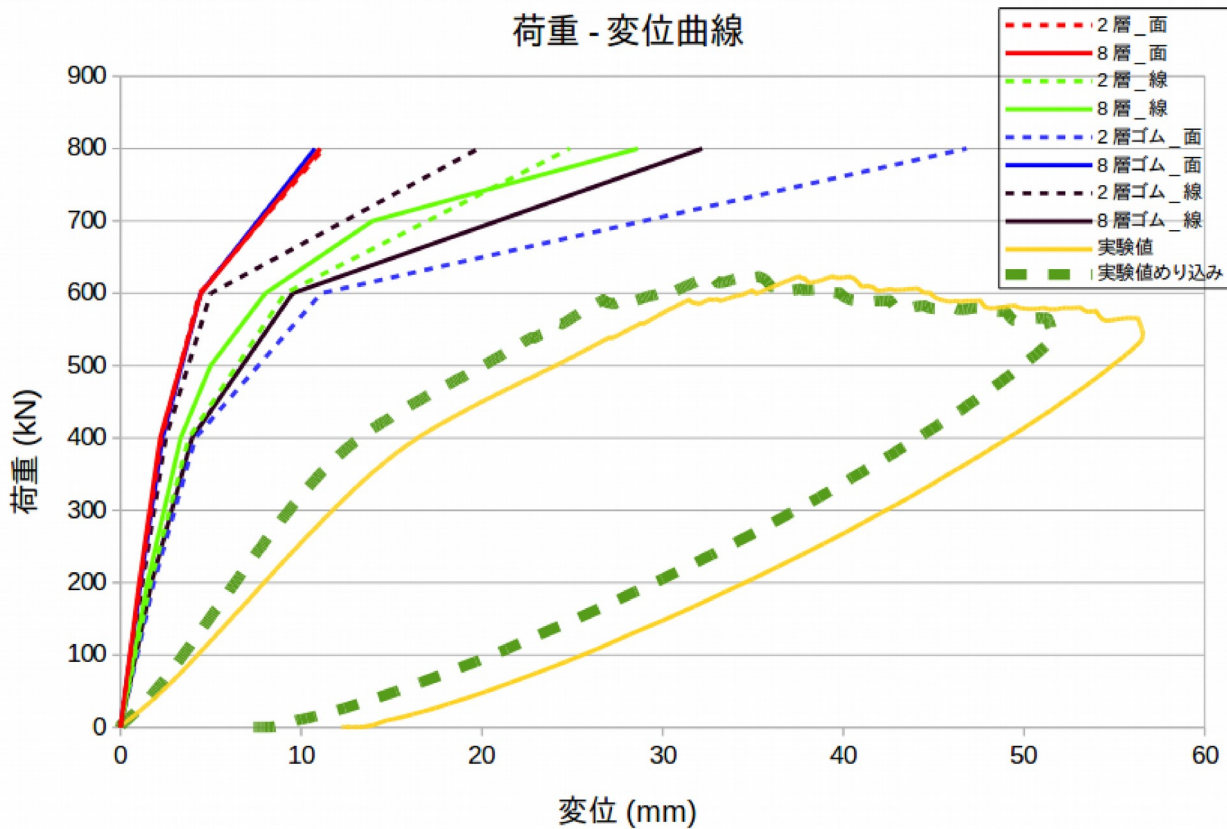


200×500mmの面に
2000kNの荷重を載荷

解析結果

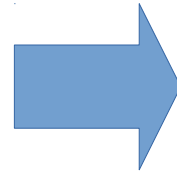
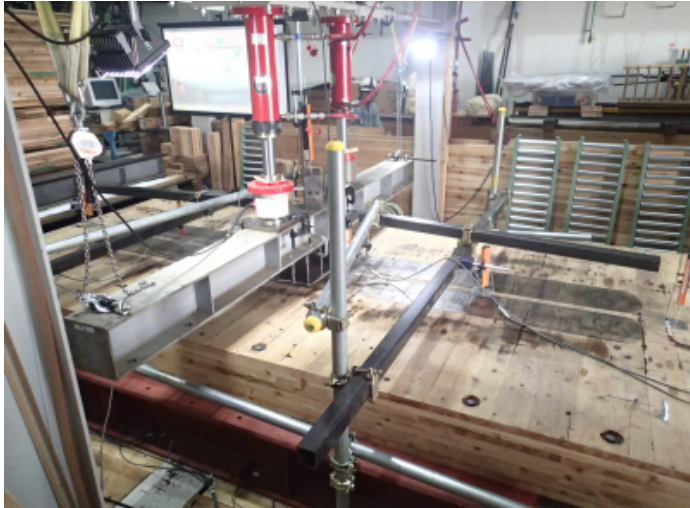


荷重 - 変位曲線

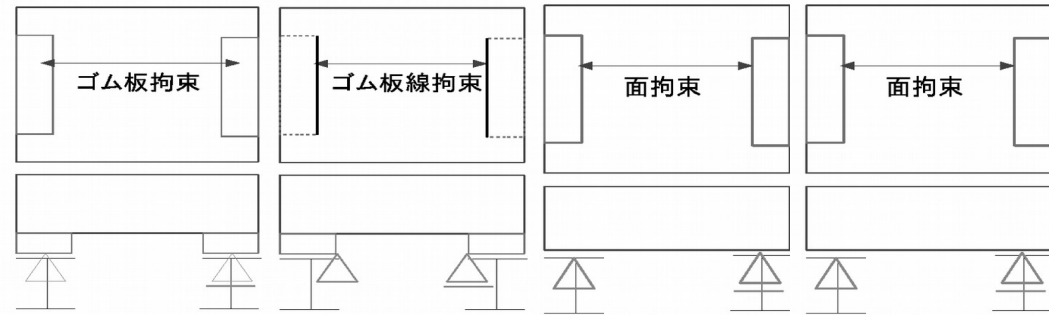
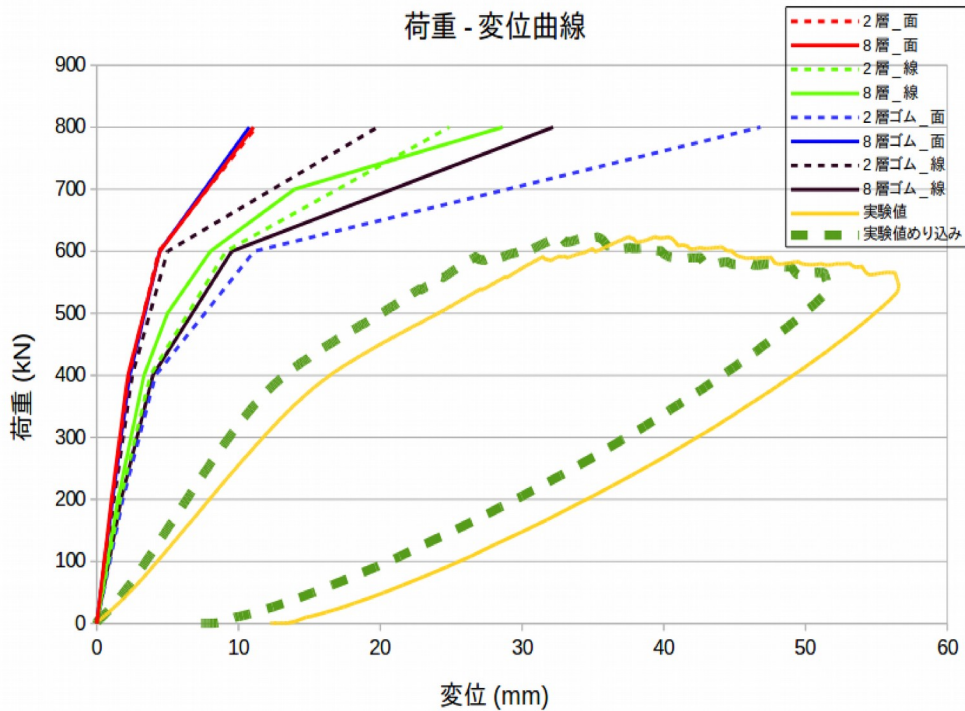
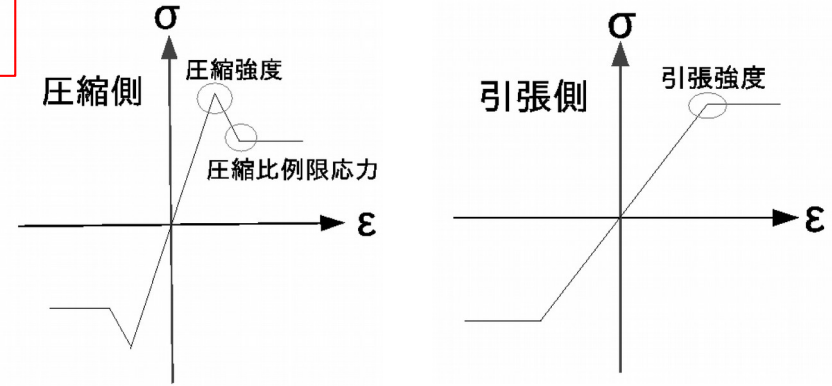
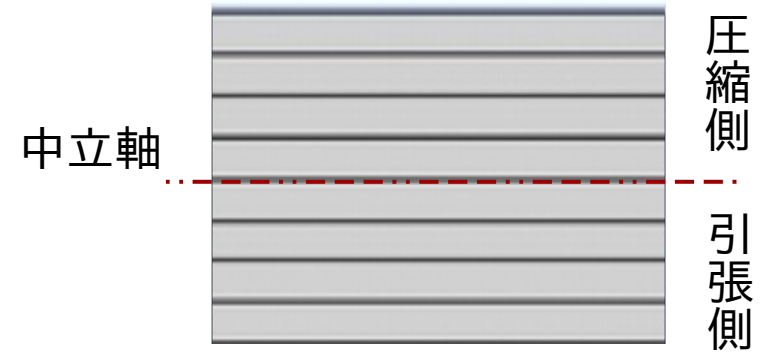


載荷部のめり込み

まとめ



FEMで
解析



- 実験値と降伏点の違いなどで固くなった
- 実際の降伏点で解析を行う