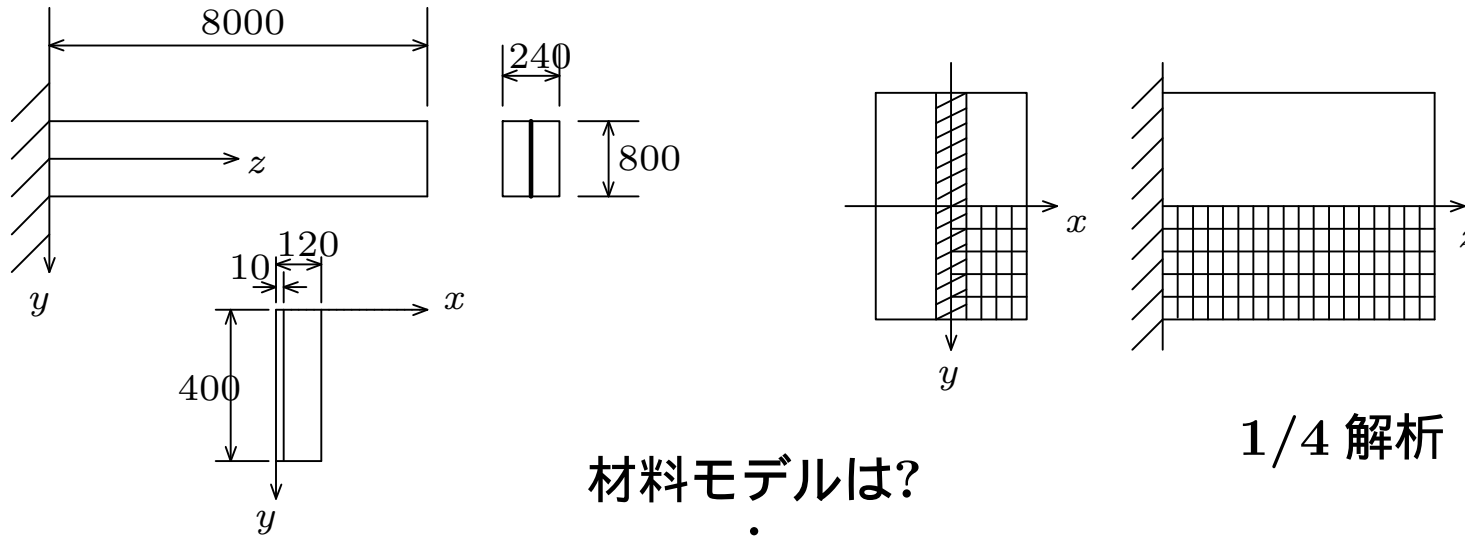


# 熱膨張・乾燥収縮を受ける鋼板挿入集成材梁の有限要素解析

秋田大学 00485

解析方法は ... → 直方体要素 FEM



1/4 解析

材料モデルは?

⋮

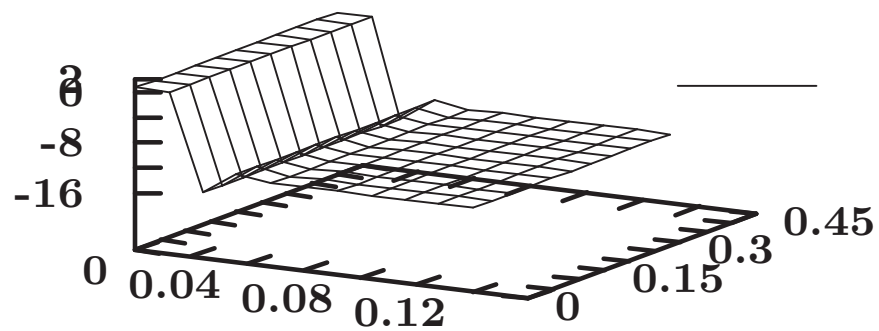
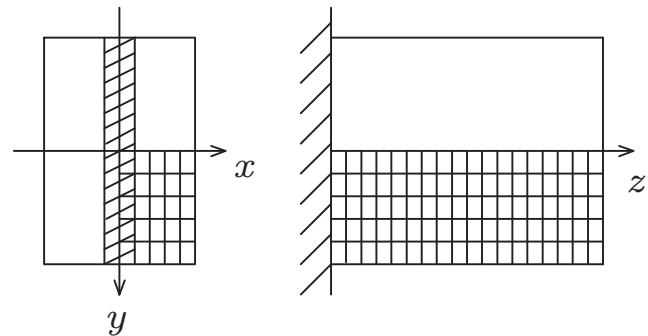
鋼：等方性材料 ( $E, G$ )

集成材：直交異方性  $\begin{pmatrix} E_x, E_y, E_z \\ \nu_{xy}, \nu_{xz}, \nu_{yz} \\ G_{xy}, G_{xz}, G_{yz} \end{pmatrix}$

次

# 端部变位

(温度变化:  $+10^{\circ}\text{C}$ , 含水率变化:  $-10\%$ )

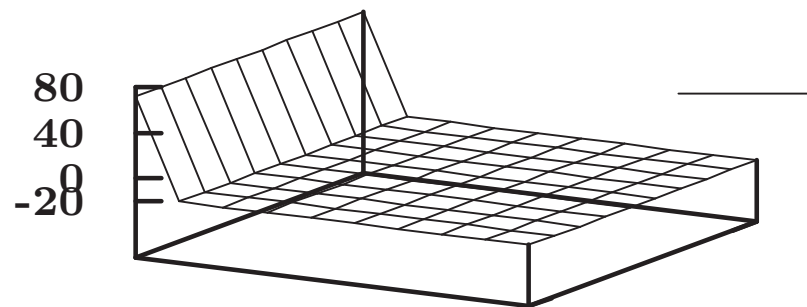
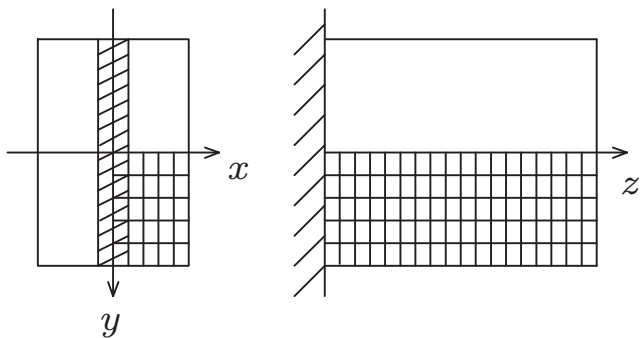


端部变位 (mm)

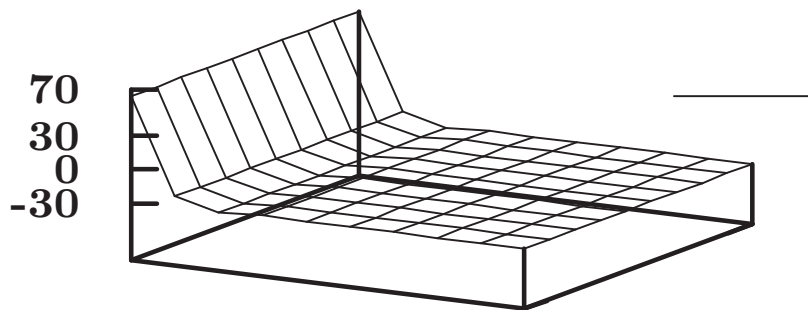
(要素分割:  $10 \times 10 \times 10$ )

# 端部垂直应力

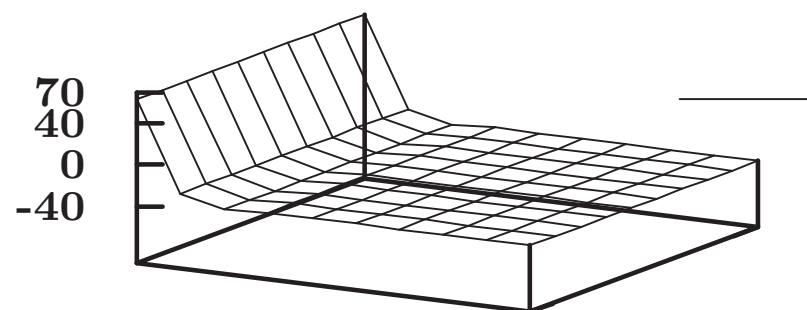
(温度变化: +10°C, 含水率变化: -10%)



$\sigma_x$  (MPa)



$\sigma_y$  (MPa)

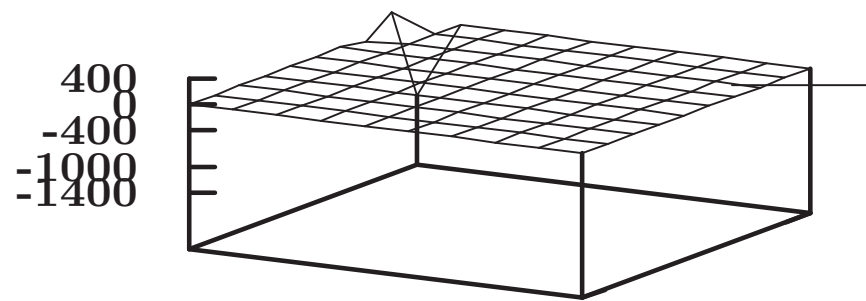


$\sigma_z$  (MPa)

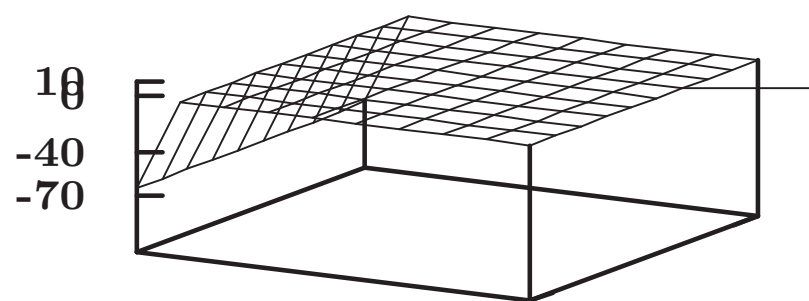
前、次

# 端部せん断応力

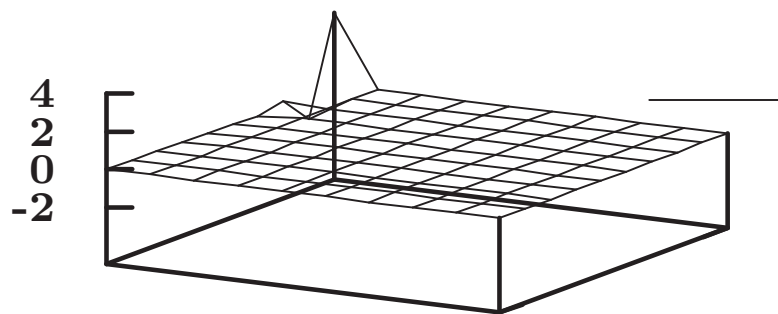
(温度変化: +10°C, 含水率変化: -10%)



$\tau_{xy}$  (kPa)



$\tau_{xz}$  (kPa)



$\tau_{yz}$  (kPa)

モデル、端部変位、前