F_{ij} and F_{ji} are affected by the confining pressure and the intermediate principal stress or the parameter

$$b=(\sigma_2-\sigma_3)/(\sigma_1-\sigma_3)$$

for a given specimen. In general, F_{ij} increases with the increase in the mean principal stress and have smaller values for $1>b>0$ than for $b=1.0$ or $b=0.0$. How the b value affects F_{ij} is not clarified yet. It will be assume hereafter that

$$F_{ij}=1.0 \quad \text{for} \quad \sigma_i+\sigma_j+\sigma_k=\text{a constant} \qquad (11)$$

Equation (9) can be derived from the empirical hyperbolic stress-strain postulate for monotoneous loadings as

$$\sigma_i/\sigma_j=1+(\varepsilon_{i_{ij}}/(\alpha_{ij}+\beta_{ij}\varepsilon_{i_{ij}})) \qquad (12)$$

The parameter $1/\alpha_{ij}$ means the initial tangent in the $\sigma_i/\sigma_j \sim \varepsilon_{i_{ij}}$ relation and the parameter $1/\beta_{ij}$ means the ultimate value of σ_i/σ_j at $\varepsilon_{i_{ij}}=\infty$ Both α_{ij} and β_{ij} can be considered to be considerably affected by void ratio, inherent anisotropy and the b-parameter. The confining pressure affects α_{ij} but does not affect β_{ij} considerably. From Equation (12),

$$d\varepsilon_{i_{ij}}=\alpha_{ij}/(1-\beta_{ij}(\sigma_i/\sigma_j-1))^2\cdot d(\sigma_i/\sigma_j) \qquad (13)$$

And from Equations (6), (7), (8), (10) and (11)

$$d\varepsilon_{i_{ij}}=K\cdot \sigma_i^{K-1}/\sigma_j\cdot h_{ij}\cdot d(\sigma_i/\sigma_j) \qquad (14)$$

Equations (13) and (14) give Equation (9). The parameters

Table 1 Parameters in the theory

Parameter	Void Ratio	Mean Stress	Inherent Anisotropy	$b=\dfrac{\sigma_2-\sigma_3}{\sigma_1-\sigma_3}$
K	X	X	X	A
F_{ij}	A	A	A	A
α_{ij}	A	A	A	A
β_{ij}	A	X	A	A

A: affected by this factor,
X : not or negligibly affected by this factor.

which appear in the theory is summarized in Table 1.

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– Continued –

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正　誤　表（6月号）

頁	段	行	種別	正	誤
229	左	↓ 14	本 文	実験結果と対比して	実験結果との対比して
232	左	↓ 10	本 文	不備を補えば	不備を捕えば