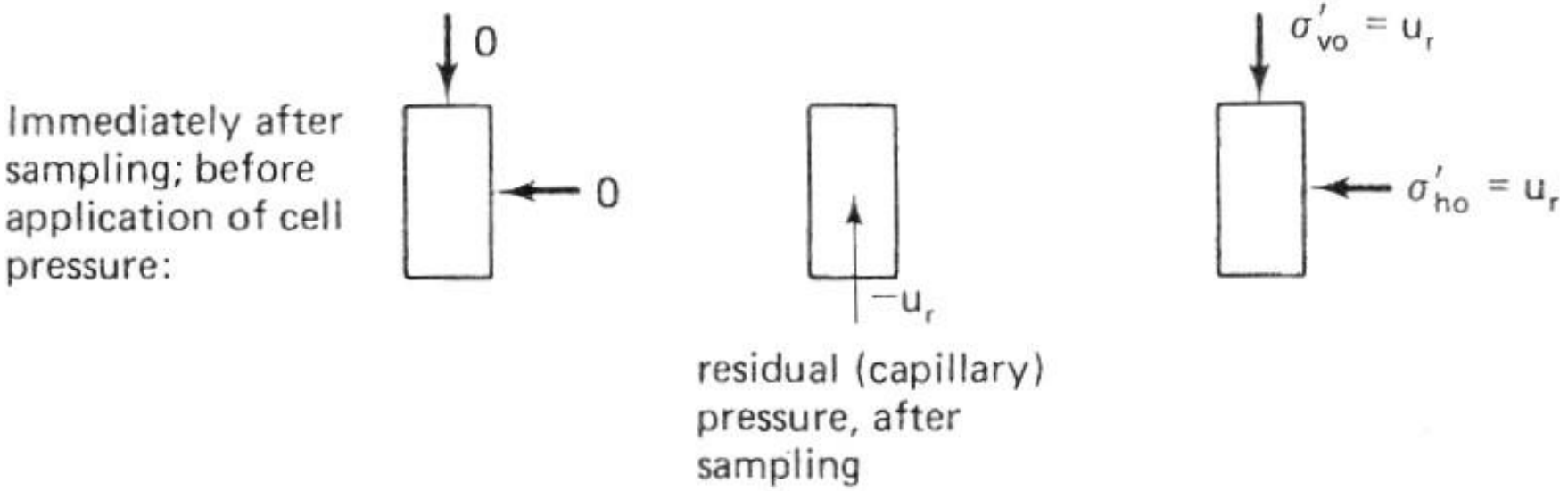
Shear Strength of Clays

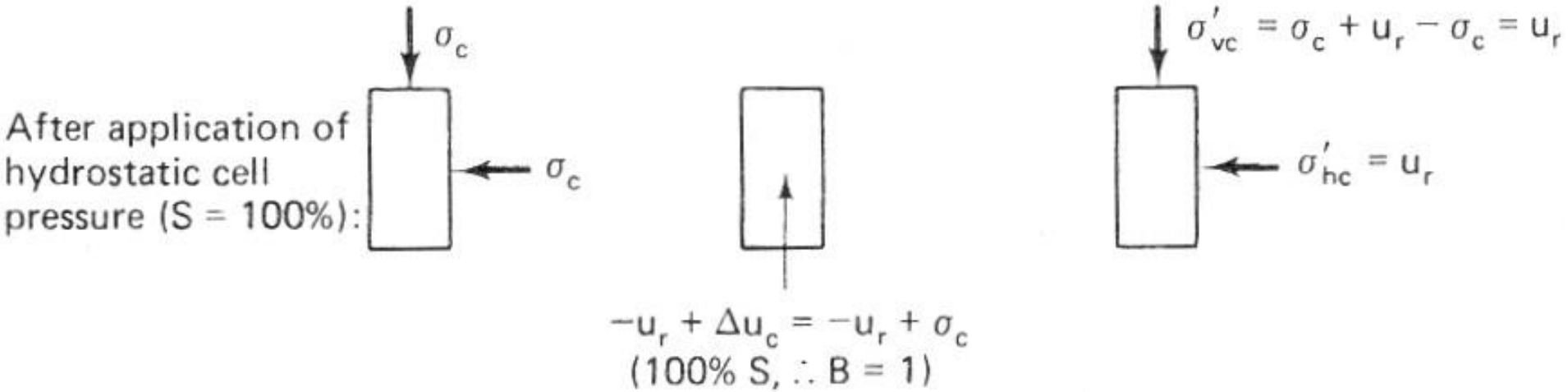
UU and UC Testing

TOTAL = NEUTRAL + EFFECTIVE



(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)

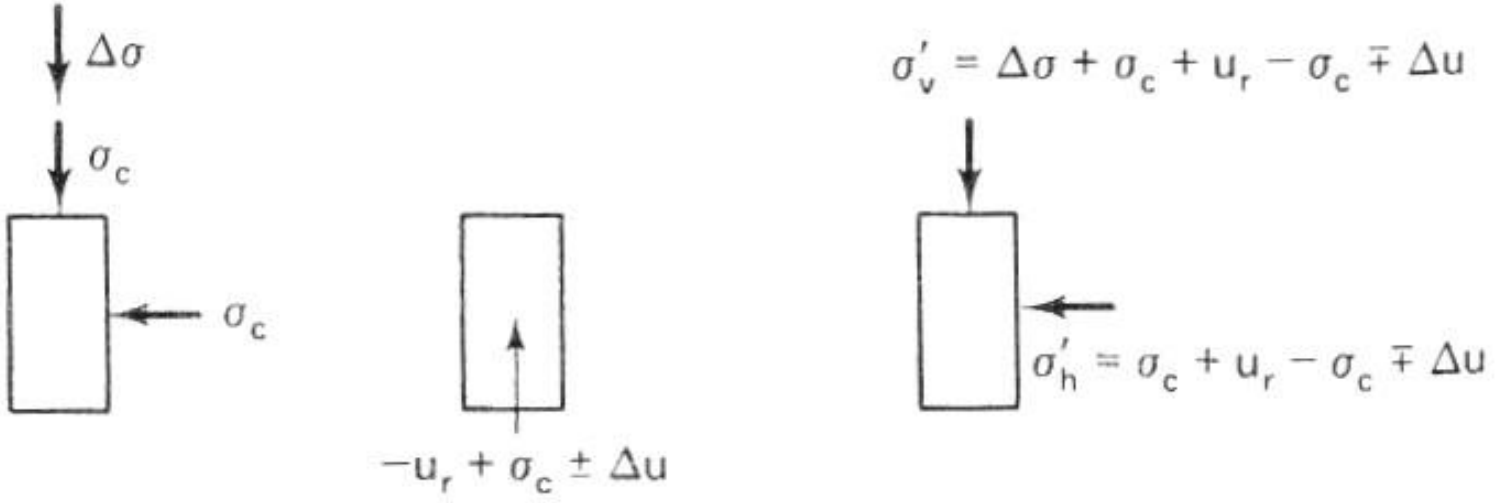
TOTAL = NEUTRAL + EFFECTIVE



(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)

TOTAL = NEUTRAL + EFFECTIVE

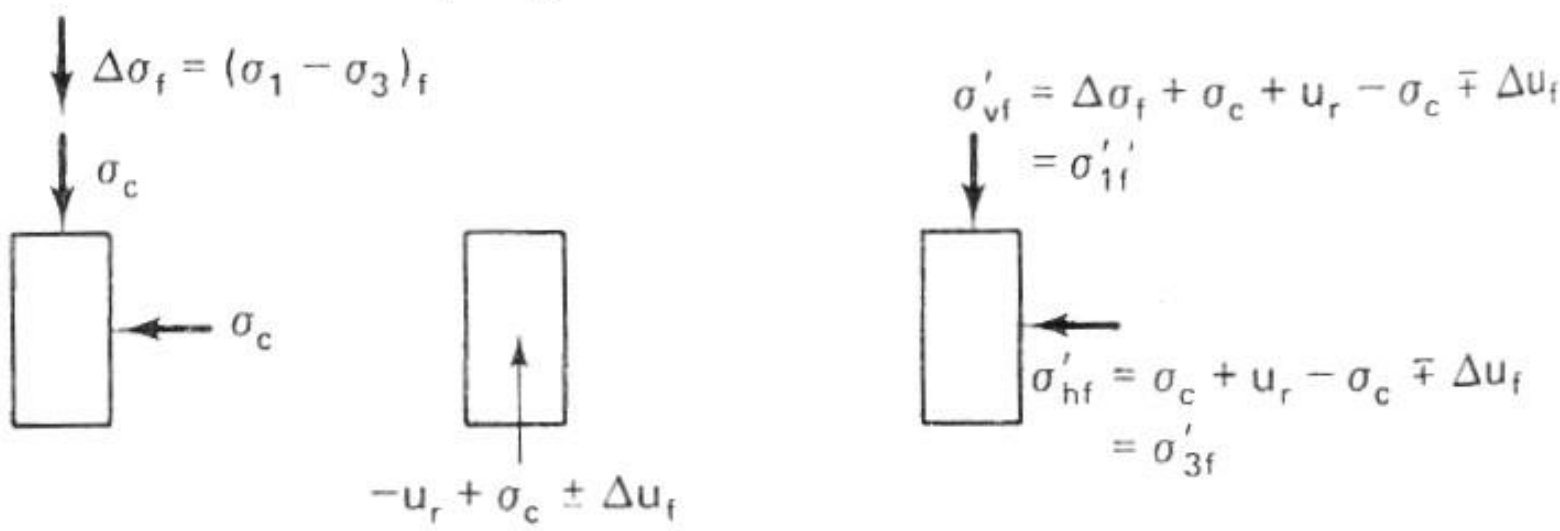
During application of axial load:



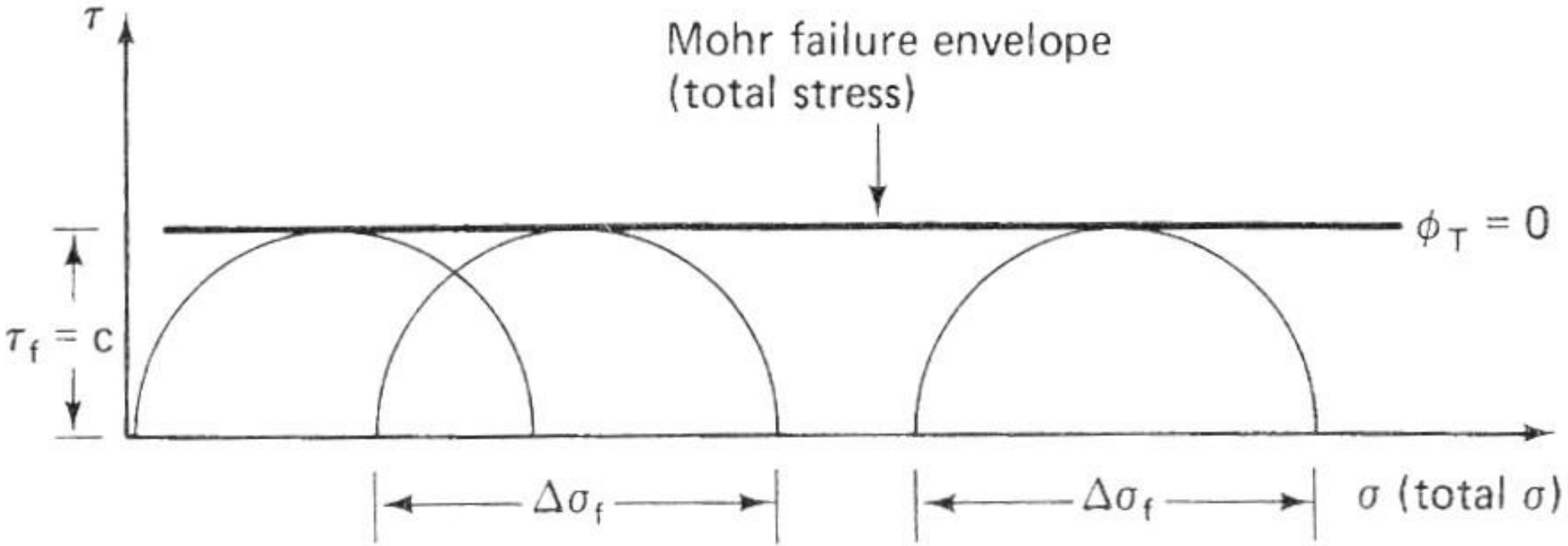
(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)

TOTAL = NEUTRAL + EFFECTIVE

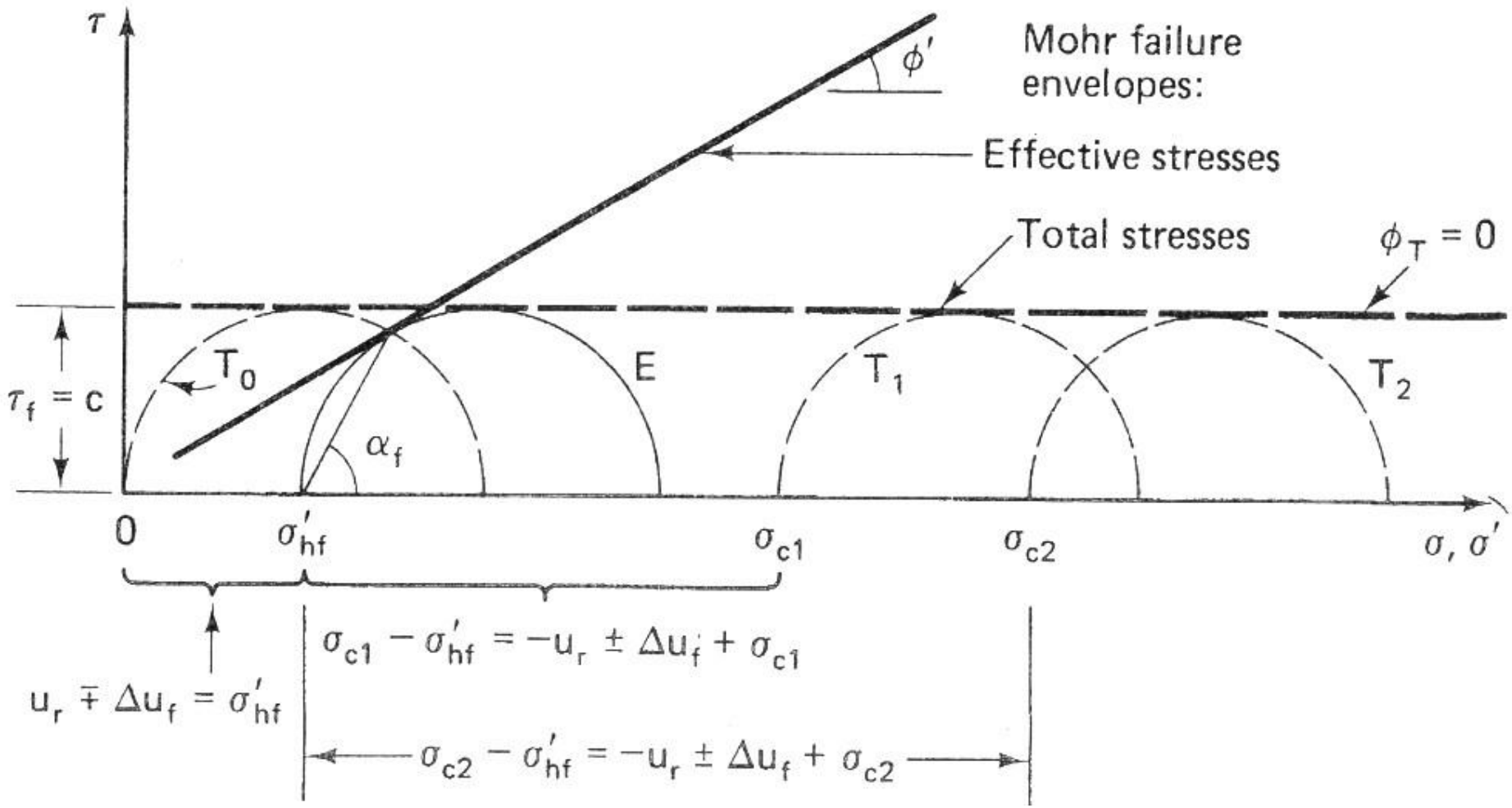
At failure:



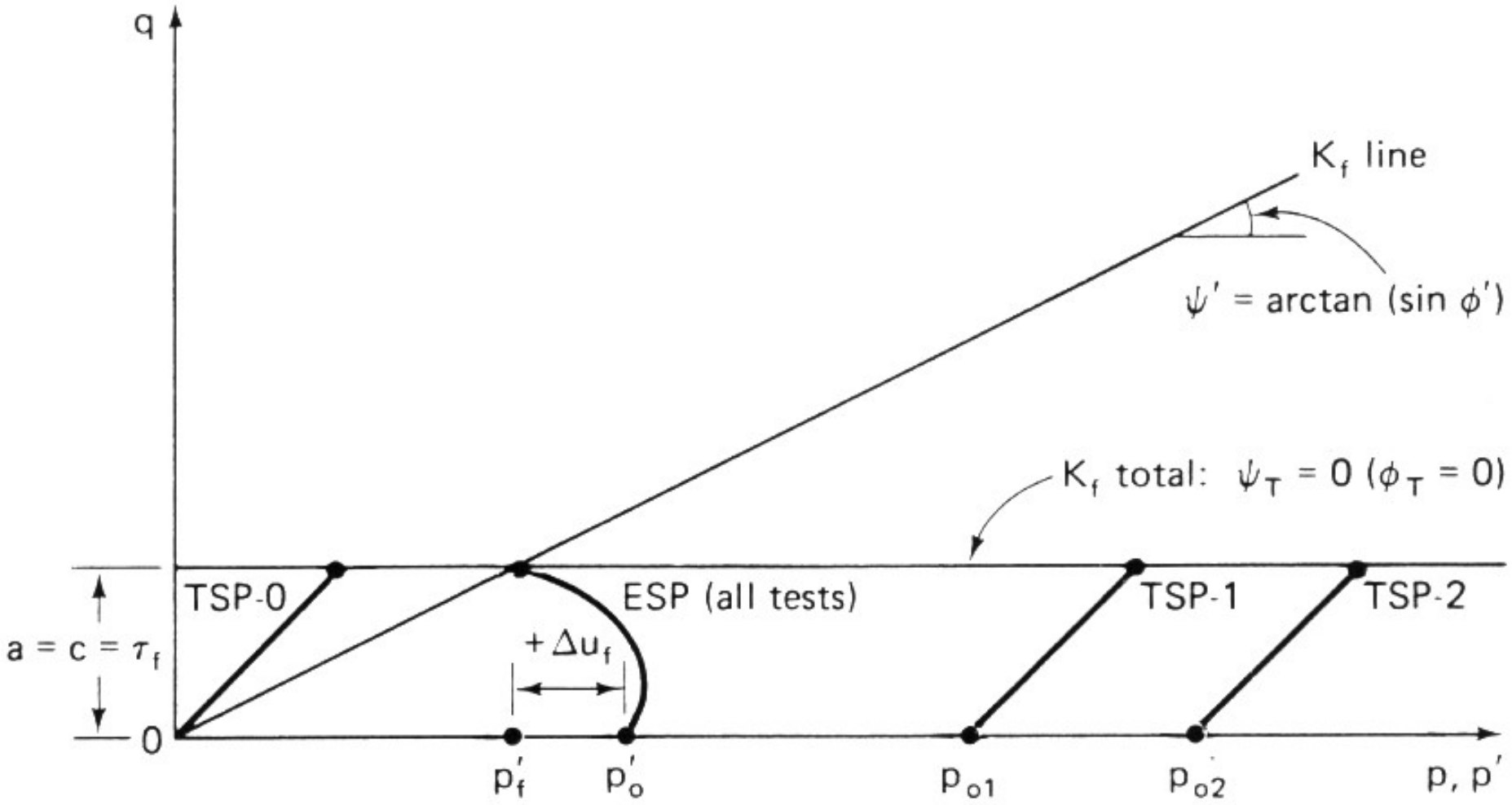
(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)



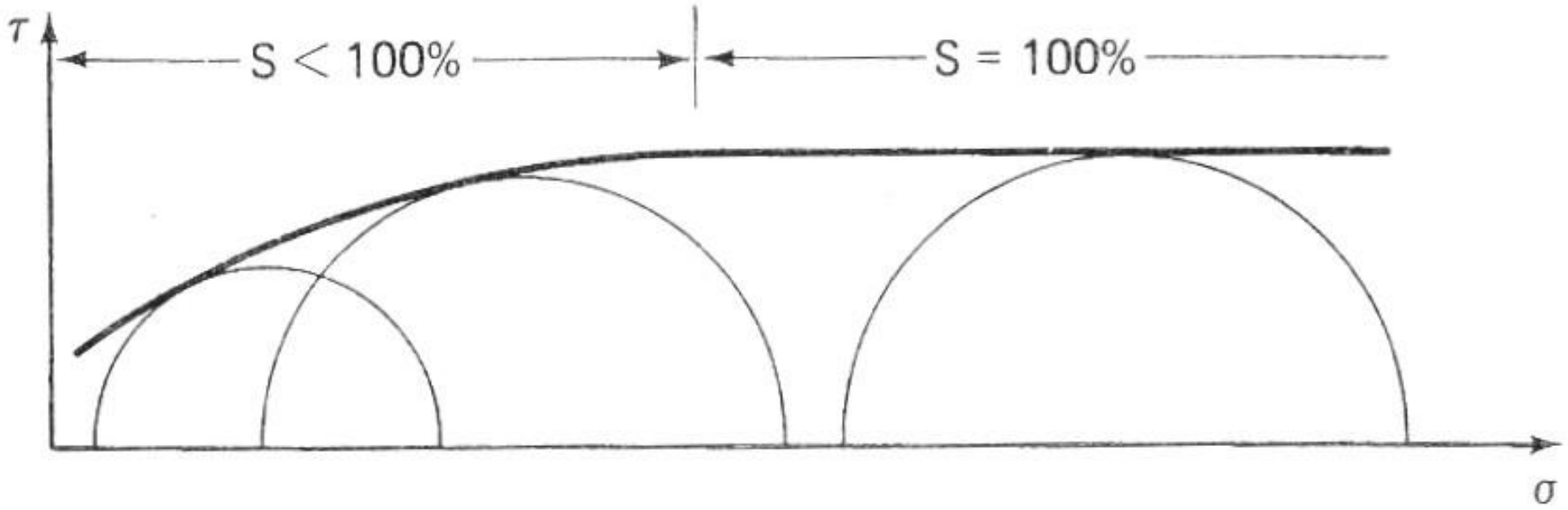
(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)



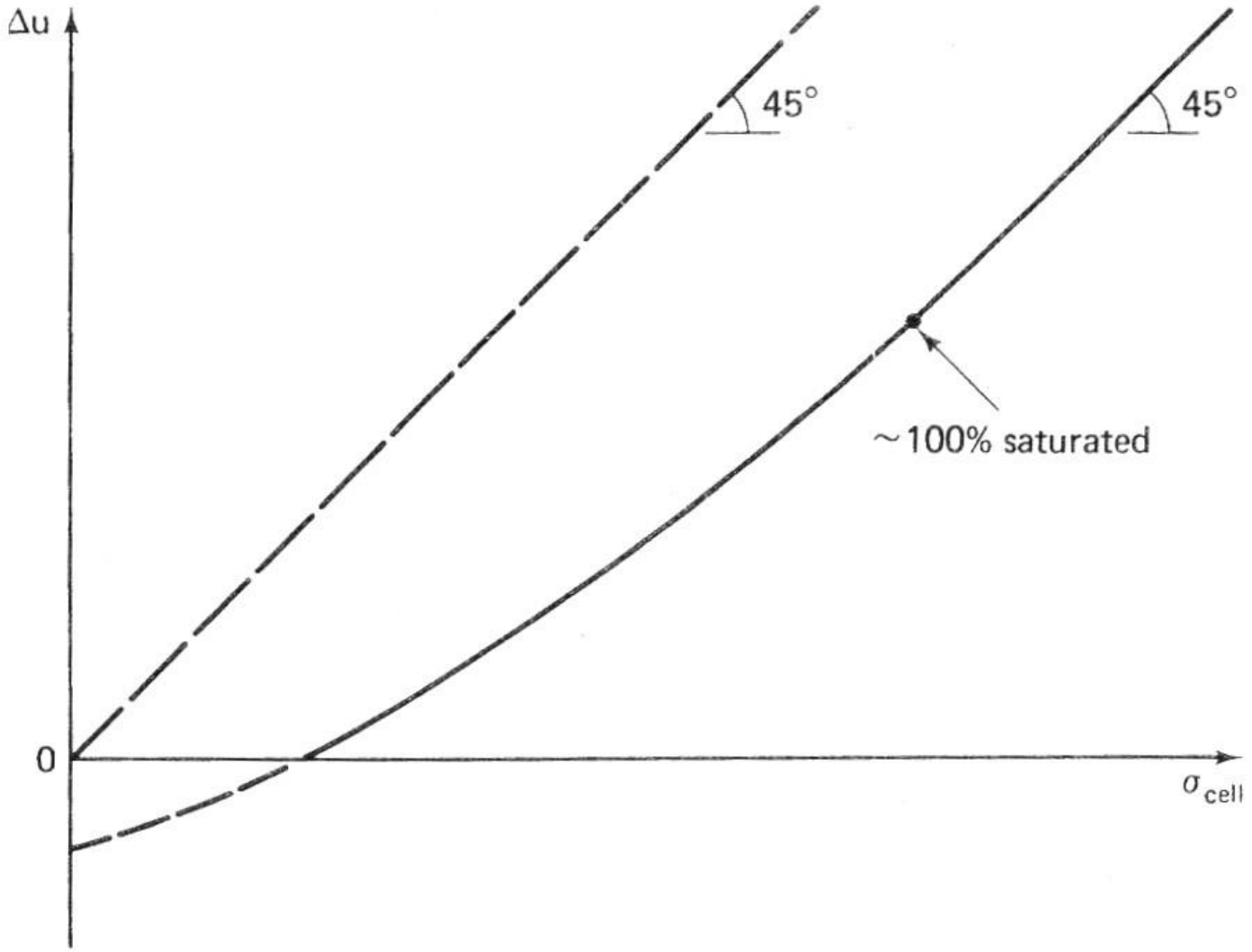
(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)



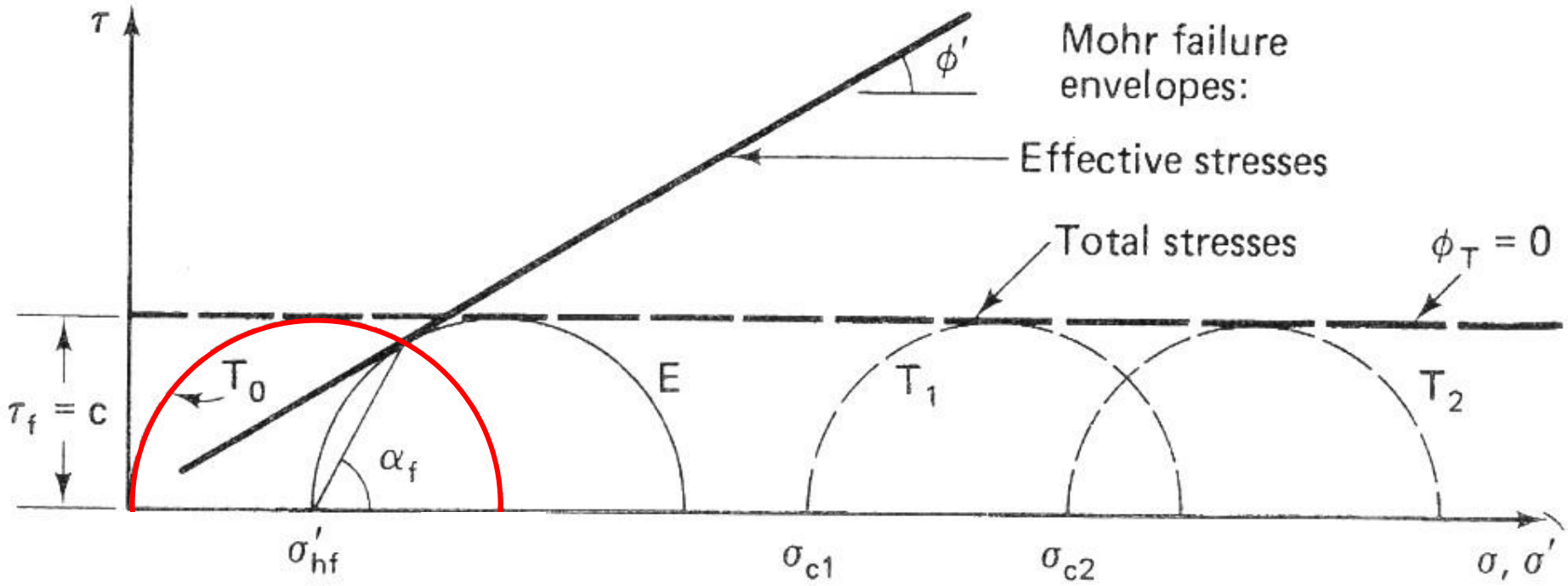
(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)



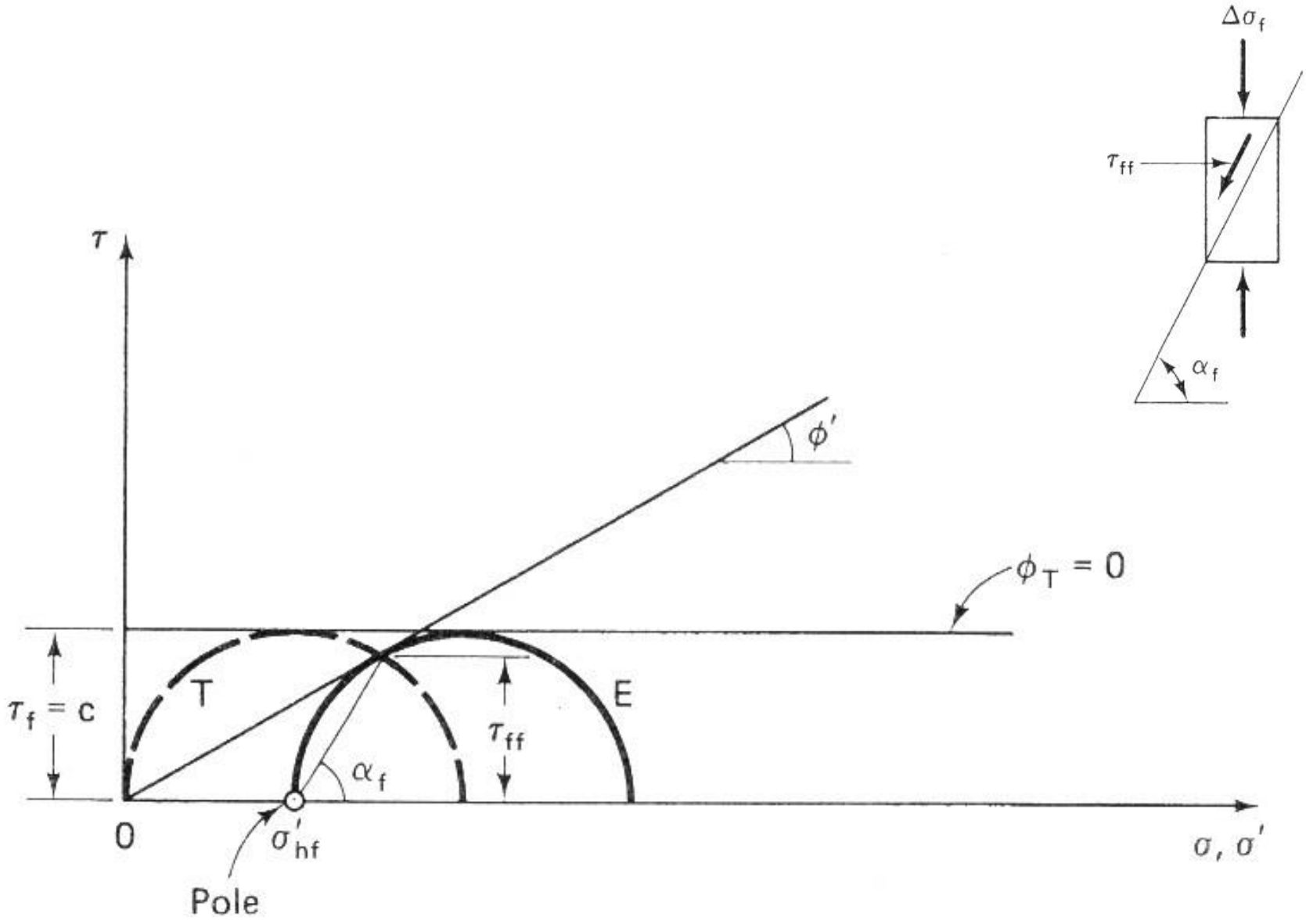
(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)



(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)



(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)



(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)

Skempton's Pore Pressure Coefficients

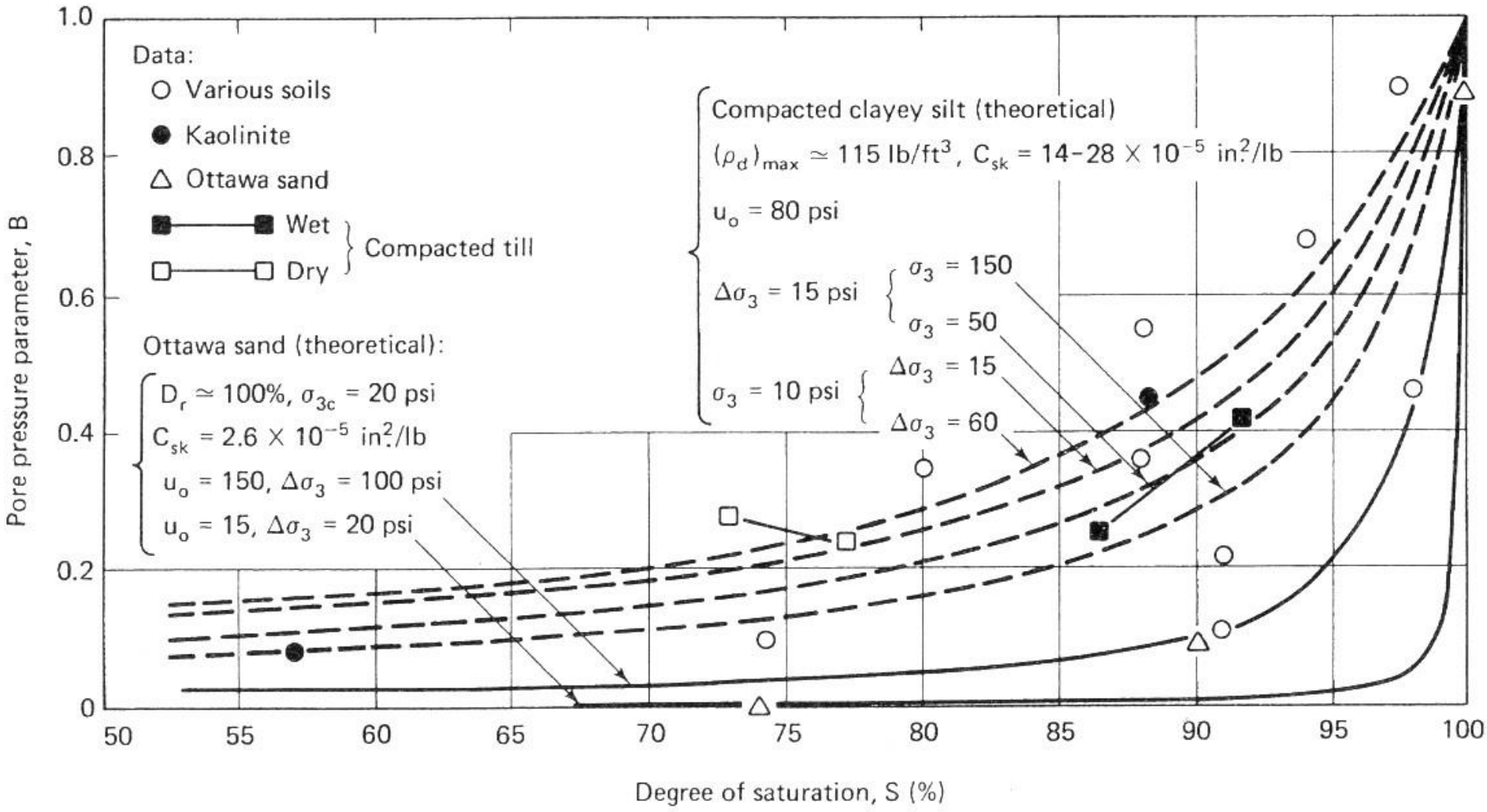


Fig. 11.67 The pore pressure parameter *B* as a function of the degree of saturation for several soils (after Black and Lee, 1973).

(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)

TABLE 11-8 Theoretical *B*-Values for Different Soils at Complete or Nearly Complete Saturation*

Soil Type	$S = 100\%$	$S = 99\%$
Soft, normally consolidated clays	0.9998	0.986
Compacted silts and clays; lightly over consolidated clays	0.9988	0.930
Overconsolidated stiff clays; sands at most densities	0.9877	0.51
Very dense sands; very stiff clays at high confining pressures	0.9130	0.10

*After Black and Lee (1973).

(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)

TABLE 11-9 Values of A_f for Various Soil Types*

Type of Clay	A_f
Highly sensitive clays	$+\frac{3}{4}$ to $+1\frac{1}{2}$
Normally consolidated clays	$+\frac{1}{2}$ to $+1$
Compacted sandy clays	$+\frac{1}{4}$ to $+\frac{3}{4}$
Lightly overconsolidated clays	0 to $+\frac{1}{2}$
Compacted clay-gravels	$-\frac{1}{4}$ to $+\frac{1}{4}$
Heavily overconsolidated clays	$-\frac{1}{2}$ to 0

*After Skempton (1954).

(Holtz & Kovacs, *An Introduction to Geotechnical Engineering*, 1981)