

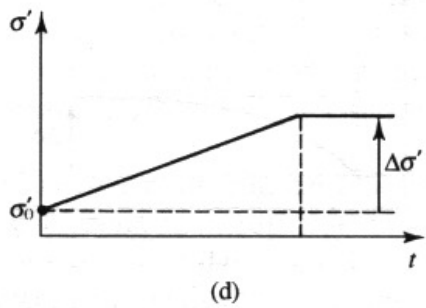
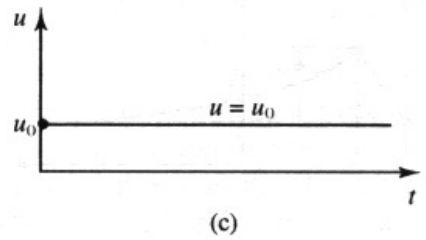
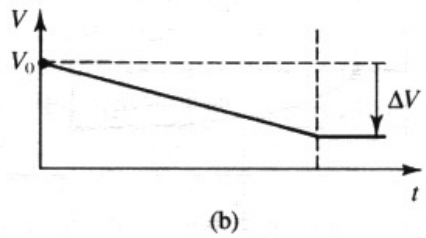
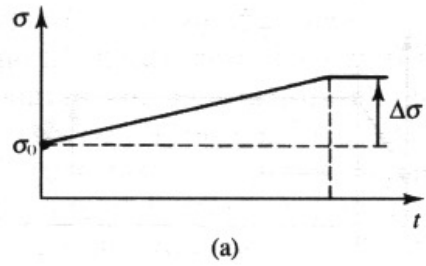
GEOTECNICA

ing. Nunziante Squeglia

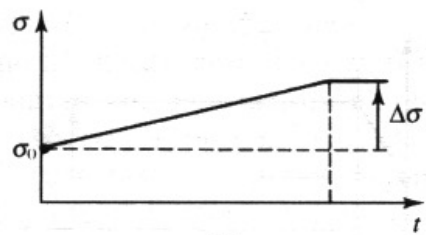
COMPORTAMENTO MECCANICO DEI TERRENI

CONDIZIONI DI DRENAGGIO

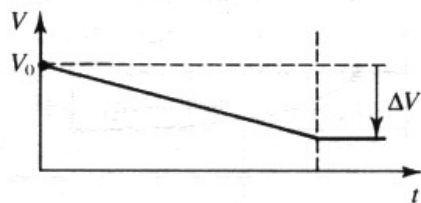
IN ASSENZA DI ACQUA



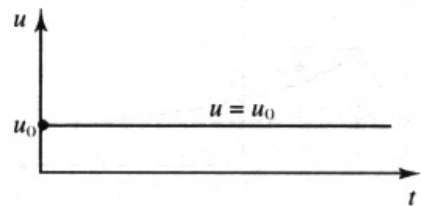
IN ASSENZA DI ACQUA



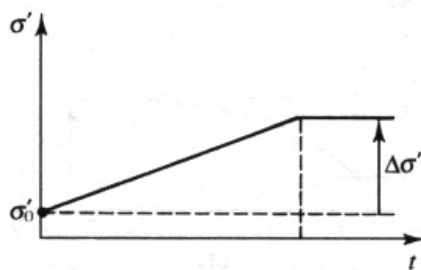
(a)



(b)

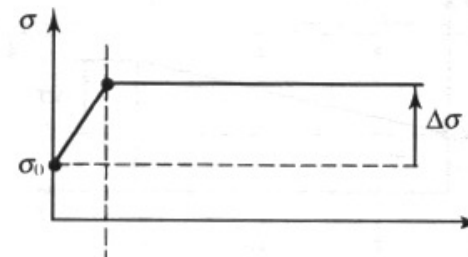


(c)

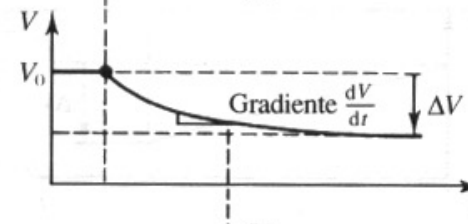


(d)

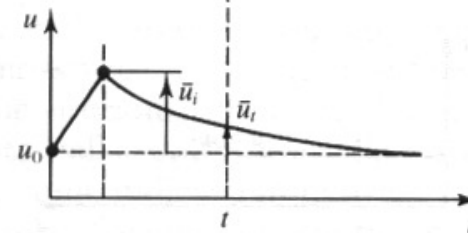
IN PRESENZA DI ACQUA



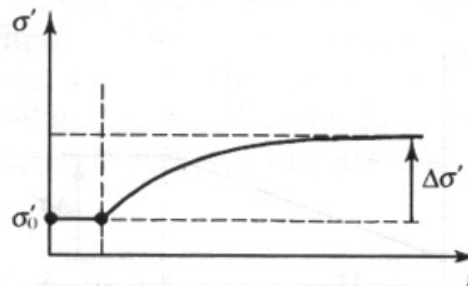
(a)



(b)

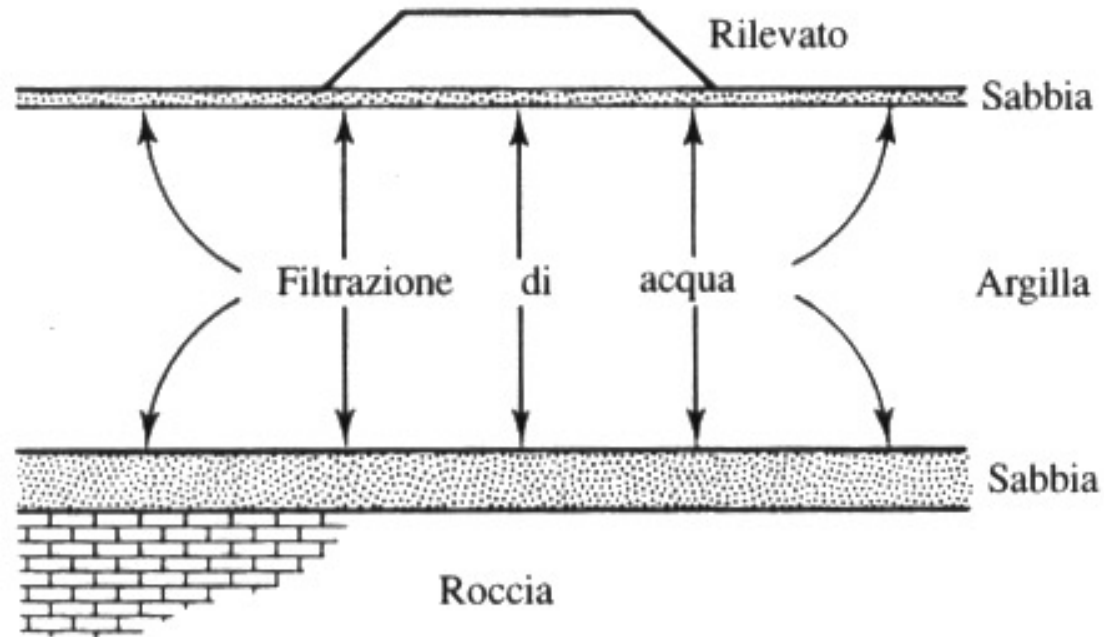


(c)

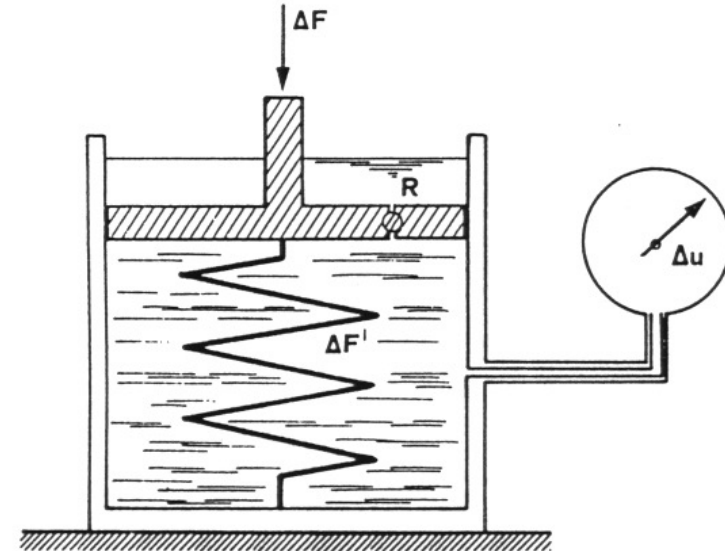


(d)

APPLICAZIONE DI UN CARICO SU UNO STRATO OMOGENEO

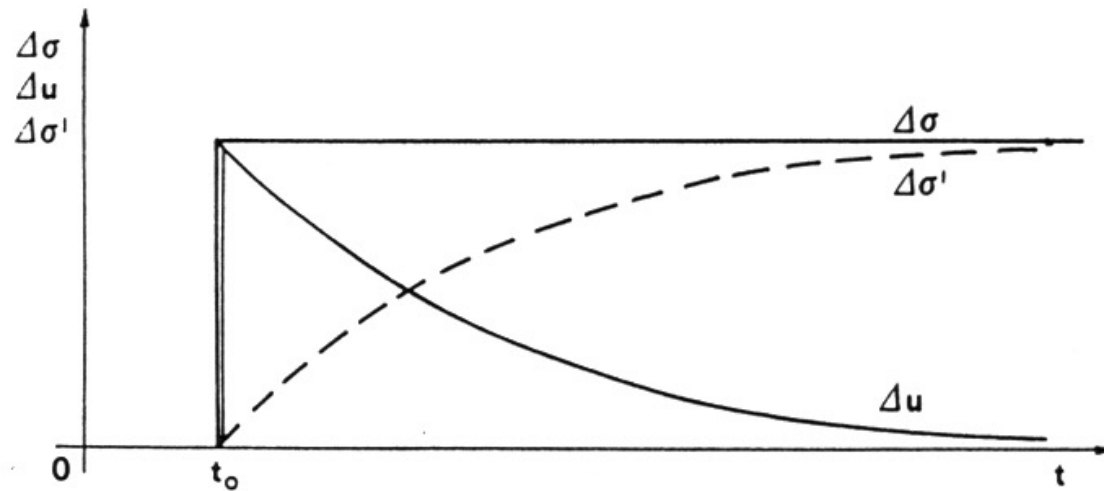


IL PROCESSO DI CONSOLIDAZIONE

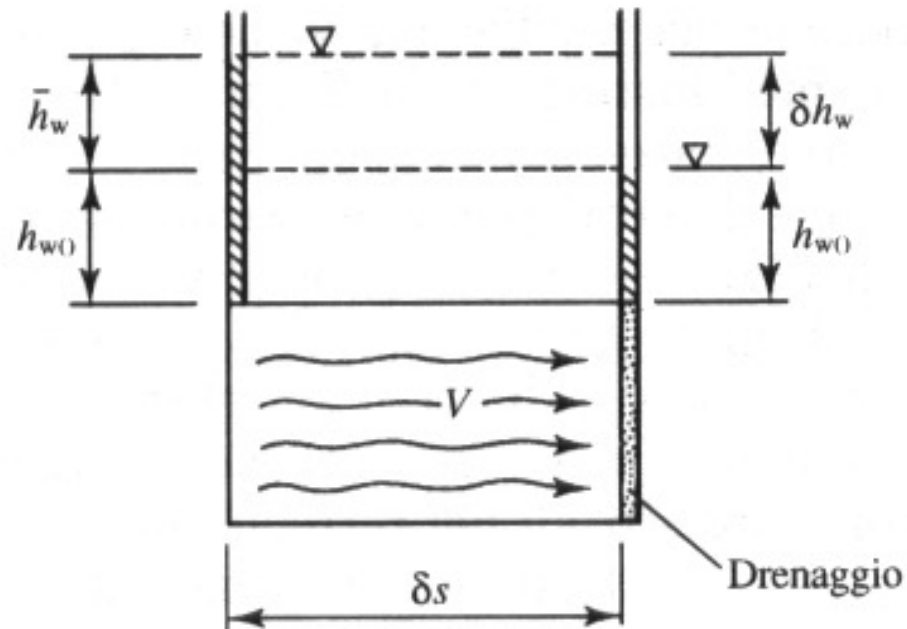


$$\Delta\sigma = \frac{\Delta F}{A}$$

$$\Delta\sigma' = \frac{\Delta F'}{A}$$



FILTRAZIONE IN UN MEZZO POROSO



$$v = -k \cdot i = -k \cdot \frac{\delta h_w}{\delta s}$$

COEFFICIENTE DI PERMEABILITÀ

Dimensioni delle particelle	k (m/s)
Ghiaia	$> 10^{-2}$
Sabbia	$10^{-2} - 10^{-5}$
Limo	$10^{-5} - 10^{-8}$
Argilla	$< 10^{-8}$

ESEMPLIFICAZIONE DELLA VELOCITÀ DI APPLICAZIONE DEI CARICHI

Evento	Durata
Impatto (terremoto, battitura di pali)	$< 1 \text{ s}$
Onda marina	10 s
Esecuzione di una trincea	$10^4 \text{ s} \approx 3 \text{ h}$
Carico di una piccola fondazione	$10^6 \text{ s} \approx 10 \text{ giorni}$
Esecuzione di uno scavo di grosse dimensioni	$10^7 \text{ s} \approx 3 \text{ mesi}$
Rilevato	$10^8 \text{ s} \approx 3 \text{ anni}$
Erosione	$10^9 \text{ s} \approx 30 \text{ anni}$

EFFETTI DI UN TERREMOTO

Sprofondamento di alcuni edifici, senza rotture (apparenti) della struttura





**EFFETTI DI UN
TERREMOTO
(EMILIA, 2012)**