OBITUARY

O. K. Fröhlich

1885–1964

Professor Dr O. K. Fröhlich died suddenly in Vienna on 20 January, 1964, shortly after the death of his old friend Karl Terzaghi.

Professor Fröhlich was born in 1885, in Jägerndorf in what today is Czechoslovakia. After completing his studies at the Technical University in Graz, he was actively engaged in civil engineering works in England, Germany, Holland, Russia, and Turkey. In 1940 he was appointed Terzaghi's successor to the chair of Foundation Engineering and Soil

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Professor Fröhlich

Mechanics at the Technical University, Vienna, where he remained until his retirement in 1956.

The scientific work of Professor Fröhlich was concerned mainly with the theoretical aspects of soil mechanics. Among the problems that he considered were the allowable loads on footings and piles, the stress distribution in foundations and the stability of earth slopes. He was the author of approximately sixty publications on these and related topics. His book "Druckverteilung im Baugrunde" was published in 1934, and "Theorie der Setzung von Tonschichten" (which he wrote in conjunction with Terzaghi), in 1936. Both books are today acknowledged to be classical works on soil mechanics.

As a consulting engineer in foundation problems, Professor Fröhlich dealt also with many significant engineering works in Europe and the Near East.

Professor Fröhlich was a member of the Austrian Academy of Sciences. His scientific activity was further recognized by the award of honorary doctorates by the Universities of Munich and Graz.

H. BOROWICKA*

*Professor Borowicka is Professor of Foundation Engineering and Soil Mechanics in the Technische Hochschule, Vienna.

CORRESPONDENCE

The Secretary,
The Institution of Civil Engineers.

DEAR SIR,

The accuracy of the information presented by Norbert Morgenstern in his Paper "Stability charts for earth slopes during rapid drawdown" (*Géotechnique*, 13:2:121-131) is related, in part, to his assumptions that (a) the flow is horizontal in the zone of rapid drawdown, and (b) the unit weight of soil is twice that of water. A recently completed computer analysis, designed to determine the flow net and pore pressures developed in a homogeneous slope with a horizontal water-table subjected to complete, instantaneous drawdown, provides insight into the magnitude of the error associated with the first assumption and provides a means for essentially eliminating the error associated with the second.

The results of the analysis have been obtained in the form of a new dimensionless parameter R_w defined by the following expression:

$$R_w = \frac{u - \gamma_w z'}{\gamma_w h}$$

where u is the pore-water pressure,

z' is the depth of the point in the soil mass below the free-water surface,

γ_w is the unit weight of water and

h is the depth of the point in the soil mass below the surface of the soil.

In Fig. 1, z' and h are indicated for clarity.

Fig. 1. Cross-section through typical slope