

Dr.scient. Arild Palmstrøm, Norconsult as
Dr.ing. Olav Torgeir Blindheim, Dr O T Blindheim Ltd
Professor, dr.ing. Einar Broch, Inst. for geologi og bergteknikk, NTNU

Q-SYSTEMET - MULIGHETER OG BEGRENSNINGER **(The Q-system - possibilities and limitations)**

The paper is written in Norwegian

ENGLISH SUMMARY

The paper describes the history of the Q-system that was introduced in 1974, and its later development. The individual parameters are analysed in detail, and their relevance for the natural features they seek to simulate is discussed. This applies to both the original application for assessing rock mass quality with respect to stability and resulting extent of rock support, and the later attempts to make the method into a kind of general rock mass classification with many applications. This also includes the recently introduced Q_{TBM} , which shall allow estimates of penetration and advance rate for TBM, and attempts to apply Q to express the effects of pre-grouting.

It is concluded that the Q-system, used with awareness on its partly serious limitations, may be applied for classification of stability of tunnels and rock caverns, preferably in jointed rocks. Applied here, it may be used for planning purposes. It is less useful for prescription of rock support during construction and for permanent, and has in this case to be used with great caution. It is not likely that Q is suitable to express the effects of pre-grouting. Q_{TBM} is complex and partly misleading and is not recommended for use.