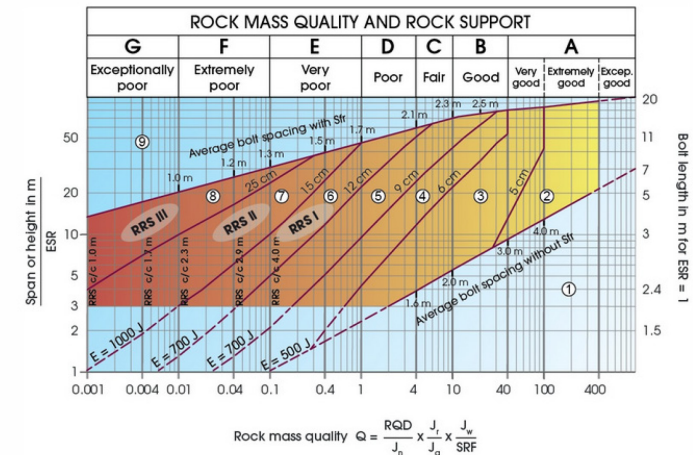


A numerical rock mass classification

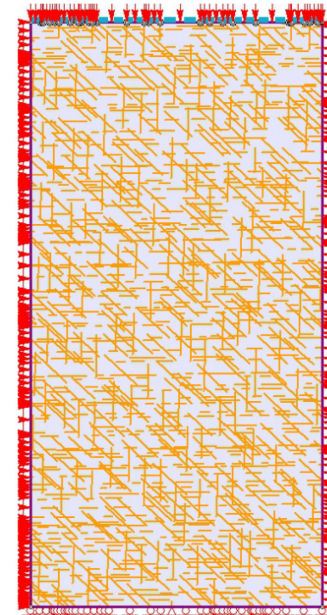
- There are several rock mass classification systems available
- All are related on empirical data and therefore not applicable in general
- Up to now the geotechnical design is based on the system of index values for the rock mass classification.
- The main focus is on determining the rock parameters and determining the appropriate index value (e.g. GSI).



Permanent support recommendations based on Q-values and span/ESR

A numerical rock mass classification

- The main focus of the present study has to be to determine in addition to intact rock properties the discontinuity parameters.
- Thus, in contrast to a method with index values, all input parameters are defined using standard and common tests (intrinsic) and can be determined.
- This completely eliminates the subjective factor that is inevitably present when determining the index values.



A numerical rock mass classification

- Identify cons of classical classification systems such as RMR, Q, RMi, (GSI)
- Perform numerical studies (DEM)
- Summarize pro and cons of a numerical rock mass classification approach



Status: Start anytime

Supervisor: Thomas Marcher

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