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Hudson

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(54) **GROUND SUPPORT DESIGN TOOL**

(56) **References Cited**

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Related U.S. Application Data

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(52) **U.S. Cl.**

CPC **G06F 17/5009** (2013.01); **E02D 1/025** (2013.01); **G01V 13/00** (2013.01); **G01V 99/005** (2013.01); **G06F 17/5004** (2013.01); **G06F 3/04847** (2013.01)

(57) **ABSTRACT**

A method of designing an underground excavation may involve the steps of: Developing a plurality of input parameters for the underground excavation; performing a first design iteration to determine an initial ground support system design; evaluating a kinematic stability of the initial ground support system design; determining whether the kinematic stability meets a predetermined factor of safety; and reiterating the initial ground support system design until the kinematic stability meets the predetermined factor of safety.

(58) **Field of Classification Search**

CPC E21D 11/00; E21D 11/155; B21F 27/128; E21F 17/00; E21C 35/20; G01N 1/26

29 Claims, 29 Drawing Sheets

See application file for complete search history.

