Abstracts

Propagation Along a Braided Coaxial Cable Located Close to a Tunnel Wall (Short Papers)

D.A. Hill and J.R. Wait. "Propagation Along a Braided Coaxial Cable Located Close to a Tunnel Wall (Short Papers)." 1976 Transactions on Microwave Theory and Techniques 24.7 (Jul. 1976 [T-MTT]): 476-480.

A previous development is extended to permit attenuation calculations when a braided cable is located close to a tunnel wall. This is an important case in mine communications utilizing leaky feeders. Numerical results are presented to illustrate the effects of numerous parameters on mode attenuation. A principal finding is that the attenuation rate for the bifilar mode is hardly affected at all by the finite conductivity of the wall. On the other hand, the monofilar mode suffers a very high attenuation when the cable approaches the wall.

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