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(54) **Black oxide-containing coaxial cable and method of making the same**

(57) The coaxial cable (10) has a metallic signal-transmitting core (12), a dielectric component (14) which is resistant to temperatures of at least about 1000 degrees C., preferably 1000-1100 degrees C., surrounding the core, and a sheath (16) of stainless steel surrounding the dielectric component and core. The outer surface (20) of the sheath (16) has an adherent protective black oxide layer (22) which comprises chromium oxide, preferably in the form of chromic oxide, with essentially the remainder of the black oxide layer being iron oxide. The

stainless steel sheath (16) preferably has about 18-20 weight percent of chromium with essentially the remainder being iron. The black oxide layer (22) is formed on the outer surface (20) of the assembled coaxial cable (18), in accordance with the present method, by passing the coaxial cable through a furnace having a hydrogen-free, wet-nitrogen atmosphere, at a temperature of at least about 1000 degrees C., preferably about 1000-1100 degrees C., and for a residence time in the furnace of about two to about five minutes.

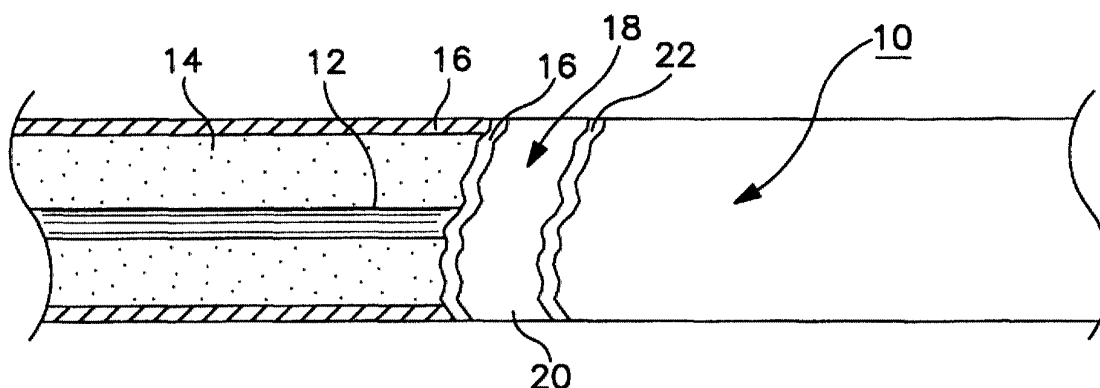


FIG. 1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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			H01B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		21 December 2001	Demolder, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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