

Title (en)

Black oxide-containing coaxial cable and method of making the same

Title (de)

Koaxialkabel mit schwarzem Oxid und zugehöriges Herstellungsverfahren

Title (fr)

Câble coaxial contenant de l'oxyde noire et sa méthode de fabrication

Publication

**EP 1146523 A2 20011017 (EN)**

Application

**EP 01303110 A 20010402**

Priority

US 54103700 A 20000331

Abstract (en)

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. <IMAGE>

IPC 1-7

**H01B 11/18**; **H01B 13/22**

IPC 8 full level

**H01B 11/18** (2006.01); **H01B 13/22** (2006.01)

CPC (source: EP)

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