

Title (en)

MULTIPLE-WAVELENGTH AMPLIFIED TELECOMMUNICATIONS SYSTEM WITH GAIN COMPENSATION

Title (de)

MULTIWELLENLÄNGEN-VERSTÄRKTES TELEKOMMUNIKATIONSSYSTEM MIT GEWINNAUSGLEICH

Title (fr)

SYSTEME DE TELECOMMUNICATIONS AMPLIFIE EN LONGUEURS D'ONDES MULTIPLES A COMPENSATION DU GAIN

Publication

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Application

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Abstract (en)

[origin: WO0027056A1] Optical telecommunications system, comprising: a station (1) for transmitting optical signals, comprising a transmission signal generator, capable of generating at least two signals at wavelengths lying within a band of predetermined width, and a multiplexer of the optical signals; a station for receiving the optical signals; and an optical fibre line connecting the said multiplexer of the transmission station to the receiving station. The optical fibre line includes at least one optical amplifier (7) comprising at least one fibre (12) doped with a rare earth, at least one source of pumping radiation (14) for the said doped fibre, and a gain stabilization circuit. The gain stabilization circuit comprises: a separator of the transmission signals from the spontaneous emission of the amplifier, for example an optical circulator with Bragg gratings to reject signal wavelengths connected after the doped fibre and capable of sending the transmission signals to the output of the amplifier and the spontaneous emission to a further output, and a loop circuit for the re-circulation of the said spontaneous emission collected from the said further output and re-injected before the said doped fibre of the amplifier.

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