

Title (en)  
DATA TRANSMISSION IN PIPELINE SYSTEMS

Title (de)  
DATENÜBERTRAGUNG IN EINEM ROHRSYSTEM

Title (fr)  
TRANSMISSION DE DONNEES DANS DES SYSTEMES DE PIPELINES

Publication  
**EP 1194678 A1 20020410 (EN)**

Application  
**EP 00942241 A 20000630**

Priority  
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Abstract (en)  
[origin: WO0104461A1] A first set of apparatus is arranged for transmitting data from a point in a cased section of a well (1, 3) to a remote location. The apparatus may be used as a relay station (6) to increase operational depth. Signals are applied to and received from the string (1) at the relay station (6) and a selected length of the string (1) is provided with insulating spacer means (9) on either side of the relay station to ensure that the string (1) and casing (3) are effectively isolated for a selected minimum distance. This enables potential differences to be both applied to and detected from the string (1), thus allowing data transmission and reception. A second set of apparatus (figure 8) is arranged for transmitting from an internal unit (408) inside a cased section of the well (401, 403) to the immediate surrounding area outside the casing (403). The internal unit (408) injects current into the string (401). A toroid (415) which surrounds the casing (403) is provided to pick up signals. Spaced connections between the string (401) and casing (403) are provided by conductive packers (411). A mismatch in the current flowing in the string (401) and casing (403) is generated so that a non-zero flux is seen by the toroid and hence a signal can be received.

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