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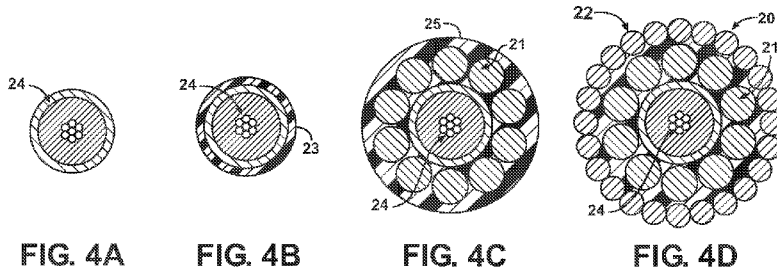
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[Continued on next page]

(54) Title: TORQUE-BALANCED, GAS-SEALED WIRELINE CABLES



(57) **Abstract:** A torque-balanced, gas-blocking wireline cable and a method of making the cable includes an electrically conductive cable core for transmitting electrical power and surrounding inner and outer layers of a plurality of armor wires. Gas blocking is achieved by placing a soft polymer layer over the core before the inner wires are cabled thereon. The inner wires imbed partially into the soft polymer layer such that no gaps are left between the inner wires and the core. A second soft polymer layer is optionally extruded over the inner wires before the outer wires are applied. The second soft polymer layer fills any spaces between the inner and outer wire layers and prevents pressurized gas from infiltrating between the wires. The inner wires have larger diameters than the outer wires such that the inner wires carry approximately 60 % of the load and torque imbalance is prevented.

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A. CLASSIFICATION OF SUBJECT MATTER		
<i>H01B 12/10(2006.01)i, H01B 12/00(2006.01)i</i>		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) H01B 12/10; H01B 7/14; H01B 7/04; H01B 7/18; H01B 9/02; G02B 6/44		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: torque, cable, armor		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2008-0156517 A1 (VARKEY JOSEPH et al.) 03 July 2008 See abstract, claim 16 and figures 1-8.	1-20
A	US 4250351 A1 (BRIDGES; ROBERT M.) 10 February 1981 See abstract, claims 1-10 and figure 1.	1-20
A	US 4131757 A1 (FELKEL; EDWARD M.) 26 December 1978 See abstract, claims 1-2 and figures 1-4.	1-20
A	US 4696542 A1 (THOMPSON; ROBERT E.) 29 September 1987 See abstract, claim 1 and figures 1-2.	1-20
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
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Information on patent family members

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