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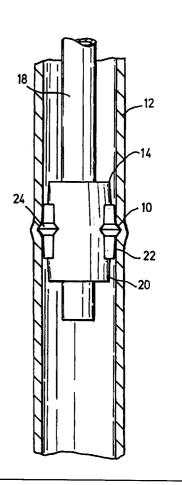
(88) Date of publication of the international search report:

26 October 2000 (26.10.00)

(54) Title: PROFILE FORMATION

(57) Abstract

A method of forming a profile (10) in a section of tubing (12) comprises: providing an expander device (14) having at least one radially extendable expander member (22); positioning the device (14) at a predetermined location in the tubing (12); and extending the member (22) to deform the tubing (12) to create a profile (10).



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INTERNATIONAL SEARCH REPORT

in. ational Application No PCT/GB 99/04248

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 E21B29/00 B21E B21D17/04 B21D39/04 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) E21B B21D Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X US 4 997 320 A (HWANG BIING-YIH) 1-3,6,7,5 March 1991 (1991-03-05) 9,11 abstract; figures 8,9 X US 3 820 370 A (DUFFY E) 1-3,6,7,28 June 1974 (1974-06-28) 9,11 column 4, line 29-47; figures 1-7 US 3 191 677 A (M. M. KINLEY) Α 12 29 June 1965 (1965-06-29) the whole document US 2 627 891 A (P.B. CLARK) A 12 10 February 1953 (1953-02-10) the whole document -/--Further documents are listed in the continuation of box C. X X Patent family members are listed in annex. ° Special categories of cited documents : 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 "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention citation or other special reason (as specified) cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or other means ments, such combination being obvious to a person skilled in the art. "P" document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 16.06.2000 19 April 2000 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo ni, Schouten, A Fax: (+31-70) 340-3016

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INTERNATIONAL SEARCH REPORT

Im ational Application No
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	tion) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 807 704 A (HSU FRANK H ET AL) 28 February 1989 (1989-02-28) figure 2	12
X	US 3 977 076 A (VIEIRA MANUEL ET AL) 31 August 1976 (1976-08-31) column 7, paragraph 3 figures 1-6	30,31
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International application No. PCT/GB 99/04248

INTERNATIONAL SEARCH REPORT

Box I	Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This Inte	ernational Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1.	Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2.	Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3.	Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II	Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This Inte	ernational Searching Authority found multiple inventions in this international application, as follows:
	see additional sheet
1. X	As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.	As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.	As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.	No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remar	The additional search fees were accompanied by the applicant's protest. X No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-11

A method of forming a profile in a section of tubing by deforming the tubing with a radially extendable expander member,

2. Claims: 12-29

A method of placing a ring of deformable material in a section of tubing,

3. Claims: 30-31

A method of cutting a section of tubing.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int Ational Application No PCT/GB 99/04248

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4997320	Α	05-03-1991	NONE	
US 3820370	A	28-06-1974	NONE	
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