(11) **EP 0 740 970 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 14.01.1998 Bulletin 1998/03

(51) Int Cl.6: **B21D 26/02**

(43) Date of publication A2: 06.11.1996 Bulletin 1996/45

(21) Application number: 96202318.0

(22) Date of filing: 10.04.1992

(84) Designated Contracting States:

AT BE CH DE DK ES FR GB GR IT LI LU MC NL
PT SE

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC: 92303228.8 / 0 564 732

(71) Applicant: TI Corporate Services Limited London W1Y 7PN (GB)

(72) Inventors:

- Klages, Gerrald A.
 Woodstock, Ontario N4S 8X5 (CA)
- Krasnicki, Frank S. c/o Stan Krasnicki London Ontario N5W 5B1 (CA)
- Mason, Murray R.
 Woodstock, Ontario N4S 7V8 (CA)
- (74) Representative: Watts, Peter Graham
 Anthony Cundy & Co.,
 1623 Warwick Road
 Knowle, Solihull, West Midlands B93 9LF (GB)

(54) Seal head for tube expansion apparatus

(57) An apparatus is provided for the filling and pressurisation of a tube (20) with fluid the apparatus having a high pressure connection including a shaft (1), and sealing means (11) for sealing the tube (20) when the shaft (1) is advanced into engagement with the tube (20), the shaft (1) being formed by a rod (2), a sleeve (3) located outwards of the rod (2), a rod ring (9) being

connected at a forward end of the rod (2) and a sleeve ring (10) being connected at a forward end of the sleeve (3), an elastomeric sealing ring (11) is located between the rod ring (9) and sleeve ring (10). Means is provided for moving the sleeve (3) axially with respect to the rod (2) to compress the elastomeric ring (11) so that it expands into engagement with the tube (2).

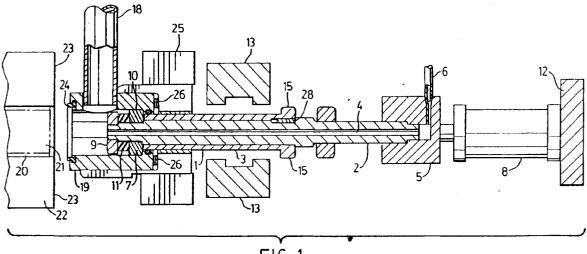


FIG. 1



EUROPEAN SEARCH REPORT

Application Number EP 96 20 2318

ategory	Citation of document with indication			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)	
A	us 2 837 810 A (EKHOLM) * column 4, line 5 - co figures *		1-3,9	B21D26/02	(IIII.G.I.G)
А	US 3 359 624 A (COURS) * column 3, line 34 - c figure *	olumn 4, line 52;	1		
Α	US 3 998 245 A (MARTIN	CARLYLE J)	1-3,9		
Α	US 3 963 054 A (MARTIN	CARLYLE J)	11,16		
A	US 2 299 434 A (SVIRSKY	· ·			
				750,000	
				TECHNICAL F SEARCHED	(Int.Cl.6)
				B21D F16J	
	The present search report has been o	drawn up for all claims			
Place of search		Date of completion of the search		Examiner	
	THE HAGUE	20 November 199	97 Bar	rrow, J	
X:pai Y:pai	CATEGORY OF CITED DOCUMENTS rticularly relevant if taken alone rticularly relevant if combined with another cument of the same category	E : earlier patent after the filing D : document cit	iciple underlying the document, but pub date ed in the application ad for other reasons	lished on, or	
A : ted O : no	chnological background on-written disclosure ermediate document		ne same patent fam	ily, corresponding	