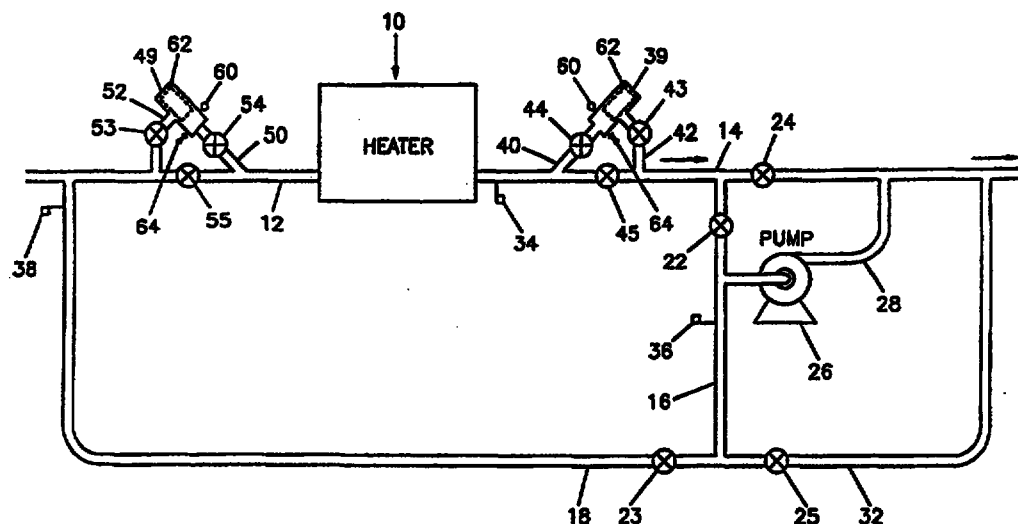




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : F28G 1/12, B08B 9/04		A1	(11) International Publication Number: WO 99/23438
			(43) International Publication Date: 14 May 1999 (14.05.99)
(21) International Application Number: PCT/CA98/01011		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 30 October 1998 (30.10.98)			
(30) Priority Data:			
08/961,574	31 October 1997 (31.10.97)	US	
09/160,228	24 September 1998 (24.09.98)	US	
09/160,235	24 September 1998 (24.09.98)	US	
(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Applications		Published With international search report.	
US 09/160,228 (CIP)			
Filed on	24 September 1998 (24.09.98)		
US 09/160,235 (CIP)			
Filed on	24 September 1998 (24.09.98)		
US 08/961,574 (CIP)			
Filed on	31 October 1997 (31.10.97)		
(71)(72) Applicant and Inventor: SIVACOE, Orlande [CA/CA]; #601, 4700 - 55 Street, Red Deer, Alberta T4N 2H8 (CA).			
(74) Agent: LAMBERT, Anthony, R.; Thompson Lambert, Suite 103, 10328 - 81 Avenue, Edmonton, Alberta T6E 1X2 (CA).			

(54) Title: PIG AND METHOD FOR CLEANING TUBES



(57) Abstract

A method of cleaning tubing in an operating heater (10), in which the tubing has an inlet (12) and an outlet (14). While the heater (10) is in operation, a hollow, metallic and/or tubular mesh pig (110) is run through the tubing from the inlet to the outlet. Cleaning should be done before contaminant has hardened. An improved pipe pig, preferably hollow, metallic and/or made from tubular mesh (110), has scraping edges made from longitudinal edges of a wire (111). The tubular mesh (110) may be a knit, weave or may be knotted. The pig is preferably radially expandable up to twice its fully compressed radius, and may have an expander (120) to force it radially outward. The pipe pig is preferably made of a resilient wire having a polygonal cross section.