

PIPE LINER

The invention relates to a pipe liner configuration.

In pipeline refurbishing (e.g. gas pipes) it is known to run a plastic liner pipe through an existing steel pipe. However there can be problems with insertion due to bends and other partial obstructions to the passage of the liner pipe.

According to the invention there is provided a liner pipe for lining an existing pipe comprising a first elongate portion of plastics material and including a second portion extending from the first portion and having a flexibility substantially greater than the first portion to assist in insertion through an existing pipe.

The second portion is preferably of corrugated construction.

The second portion preferably terminates in nose-cone configured to enable a seal to be formed between the liner pipe and the existing pipe and provided with stopper means temporarily to prevent fluid flow into the liner pipe.

The invention will be described with reference to the accompanying drawing.

In the figure a nose-cone 10, is welded onto corrugated pipe portion 11. The nose-cone 10, is of flexible plastic material e.g. polyethylene. The radial Vanes 12, form a seal between the two pipes 15 and 16, as the liner pipe is pushed down the service pipe 16, to be lined. A stopper 15, of plastic (e.g. in disc form) is inserted into the nose-cone 10, to prevent gas entering liner pipe 15, while it is being pushed along the pipe 16 to be lined.

The corrugated leading section 11, of the pipe 15, is welded to an elongated portion 14, which is of a more rigid polyethylene construction which forms the major length of the inserted pipe 15.

When the liner pipe 15 is in position a rod (not shown) is inserted down the bore of the liner pipe 15 from the right-hand side to push the stopper 13, out and let gas enter the liner pipe 15.



CLAIMS

THIS SHEET HAS BEEN
REPLACED

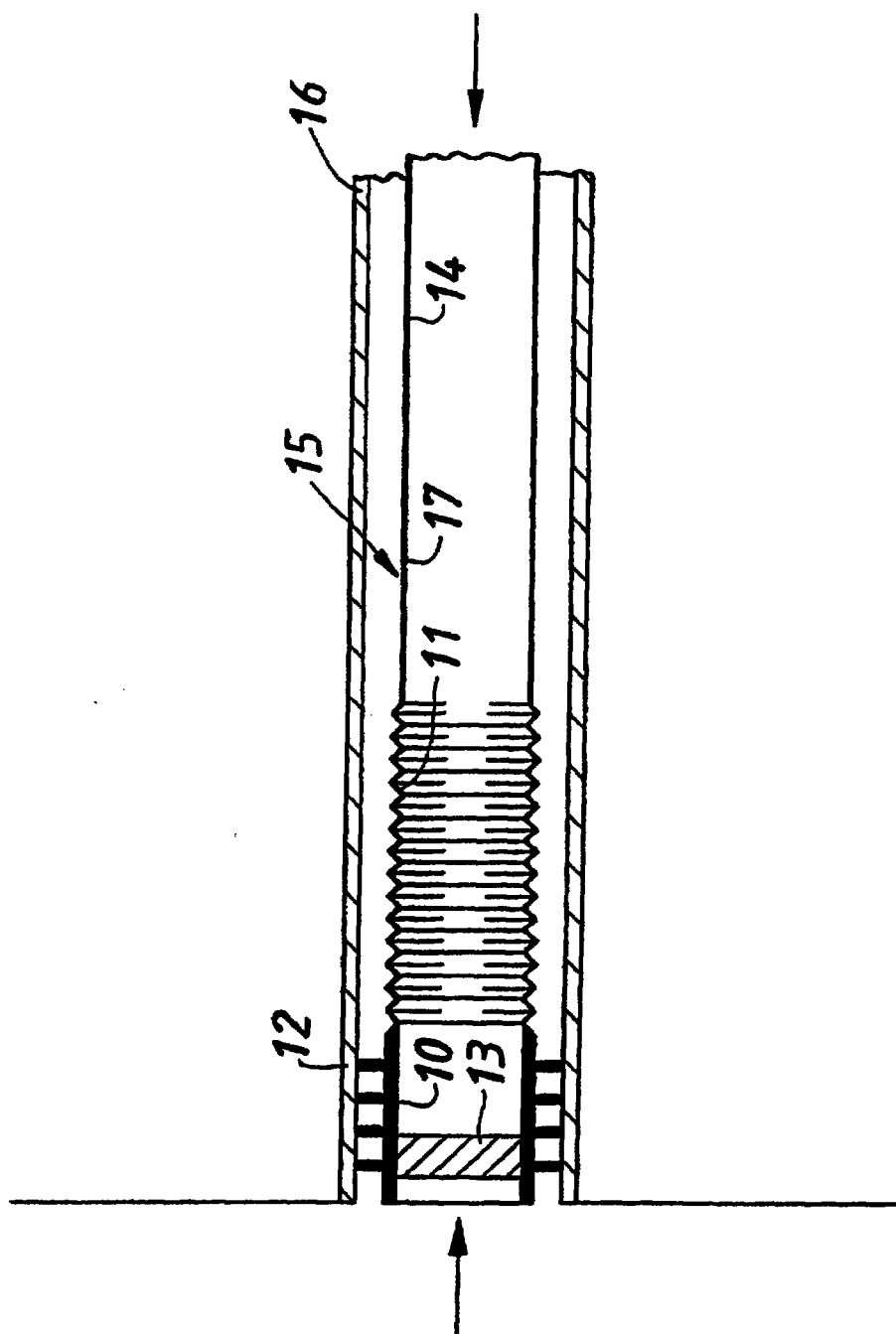
1. A liner pipe for lining an existing pipe comprising a first elongate portion of plastics material and including a second portion extending from the first portion and having a flexibility substantially greater than the first portion to assist in insertion through an existing pipe.
2. A liner pipe as claimed in claim 1 wherein the second portion is of corrugated construction.
3. A liner pipe as claimed in claim 1 or 2 wherein the second portion terminates in a nose-cone configured to enable a seal to be formed between the liner pipe and the existing pipe and provided with stopper means temporarily to prevent fluid flow into the liner pipe.
4. A liner pipe as claimed in claim 3 wherein the seal includes radial vanes.
5. A liner pipe as claimed in claim 3 or 4 wherein means are insertable to co-operate with the stopper to move the stopper to allow fluid flow to restart.
6. A liner pipe substantially as described herein with reference to the accompanying drawing.

This Sheet Has Been Replaced



SUBSTITUTE SHEET (RULE 26)

1/1





3

CLAIMS

REPLACEMENT SHEETS		SG
☐	Description : paged	to paged
☒	Claim(s) : paged 3	to paged 4
☐	Drawing(s) : paged	to paged
☐	Abstract : paged	to paged
DATE OF RECEIPT 29/10/99		

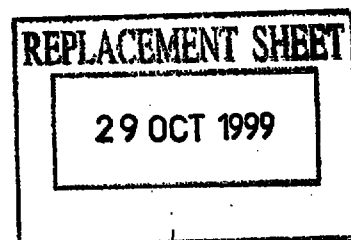
1. A liner pipe for lining an existing pipe comprising a first elongate portion of plastics material and including a second portion extending from the first portion and having a flexibility substantially greater than the first portion and configured to enter the pipe before the first portion to assist in insertion and passage of the liner pipe through an existing pipe.

2. A liner pipe as claimed in claim 1 wherein the second portion is of corrugated construction.

3. A liner pipe as claimed in claim 1 or 2 wherein the second portion terminates in an end piece for inserting into the existing pipe.

4. A liner pipe as claimed in claim 3 wherein the end piece includes a nose-cone configured to enable a seal to be formed between the liner pipe and the existing pipe and provided with stopper means temporarily to prevent fluid flow into the liner pipe.

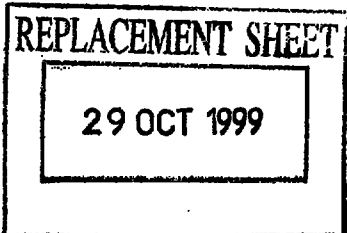
5. A liner pipe as claimed in claim 4 wherein the seal includes radial vanes.





4

6. A liner pipe as claimed in claim 4 or 5 wherein elongate means are insertable through the liner pipe to co-operate with the stopper to move the stopper to allow fluid flow to restart.



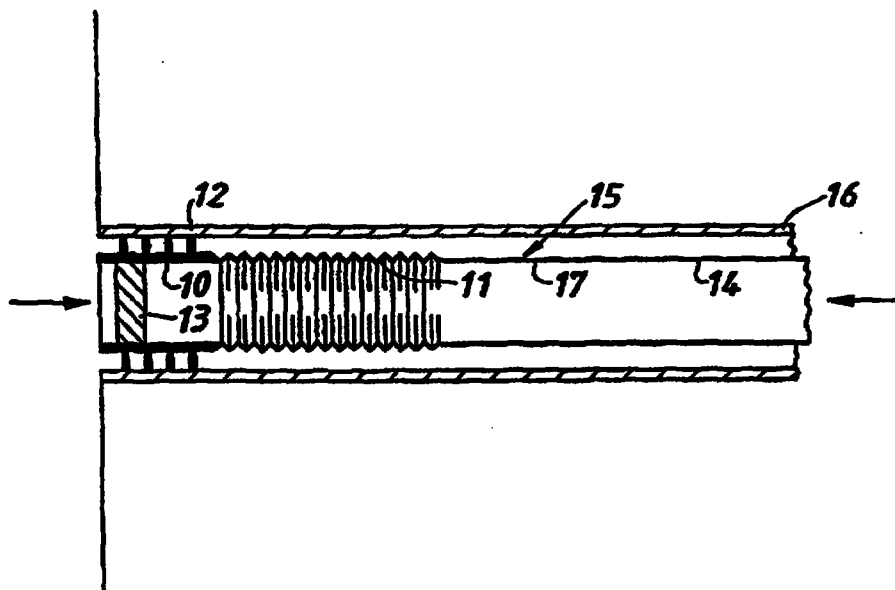
PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : F16L 55/165	A1	(11) International Publication Number: WO 97/49946 (43) International Publication Date: 31 December 1997 (31.12.97)
(21) International Application Number: PCT/GB97/01642 (22) International Filing Date: 19 June 1997 (19.06.97) (30) Priority Data: 9613009.1 21 June 1996 (21.06.96) GB (71) Applicant (for all designated States except US): BG PLC [GB/GB]; 100 Thames Valley Park Drive, Reading, Berk- shire RG6 1PT (GB). (72) Inventor; and (75) Inventor/Applicant (for US only): PARKES, Adrian, Sydney [GB/GB]; 35 Stavedown Road, South Winton, Hampshire SO21 3HA (GB). (74) Agent: MORGAN, David, J.; BG plc, Intellectual Property Dept., 100 Thames Valley Park, Reading, Berkshire RG6 1PT (GB).	(81) Designated States: AU, CA, CZ, HU, PL, RU, SG, SK, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>	

(54) Title: PIPE LINER



(57) Abstract

A liner pipe (15) for lining an existing pipe comprising a first elongate portion (14) of plastics material and including a second portion (11) extending from the first portion and having a flexibility substantially greater than the first portion to assist in insertion through an existing pipe.