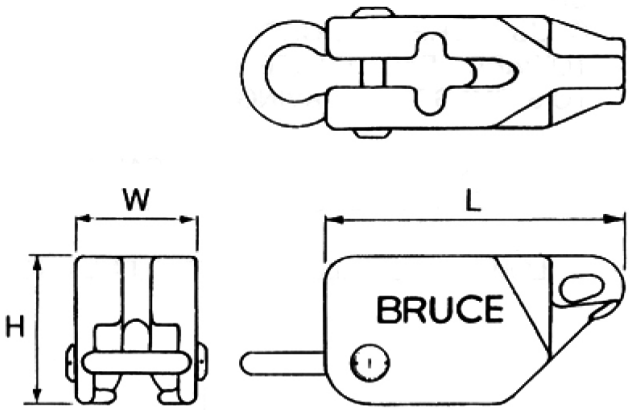
BRUCE ANCHOR

BRUCE® TENSIONER

(PATENTED)

A compact one-piece chain clutching device for pretensioning chains attached to opposed anchors or piles

- Acts effectively as a windlass at the seabed
- Can preset drag embedment anchors to the full design load of a mooring system
- May be operated by an AHV winch, eliminating the need for a crane barge
- Negotiates stern rollers easily
- Passes end links and kenter links easily
- Fully supports chain links internally to avoid stress damage
- Available in sizes to accommodate the chain size of the mooring line
- Cast Steel construction proven for over 20years



Chain size mm	Length (L) mm	Width (W) mm	Height (H) mm	Weight kg
76	1,135	485	520	900
95	1,418	607	650	2,000
114	1,702	728	780	3,500

Bruce Anchor, Tern Place House, Tern Place, Bridge of Don,
Aberdeen, AB23 8JX

Tel: **+44 7624 338 400**

Email: **sales@bruceanchor.co.uk** Website: **www.bruceanchor.co.uk**

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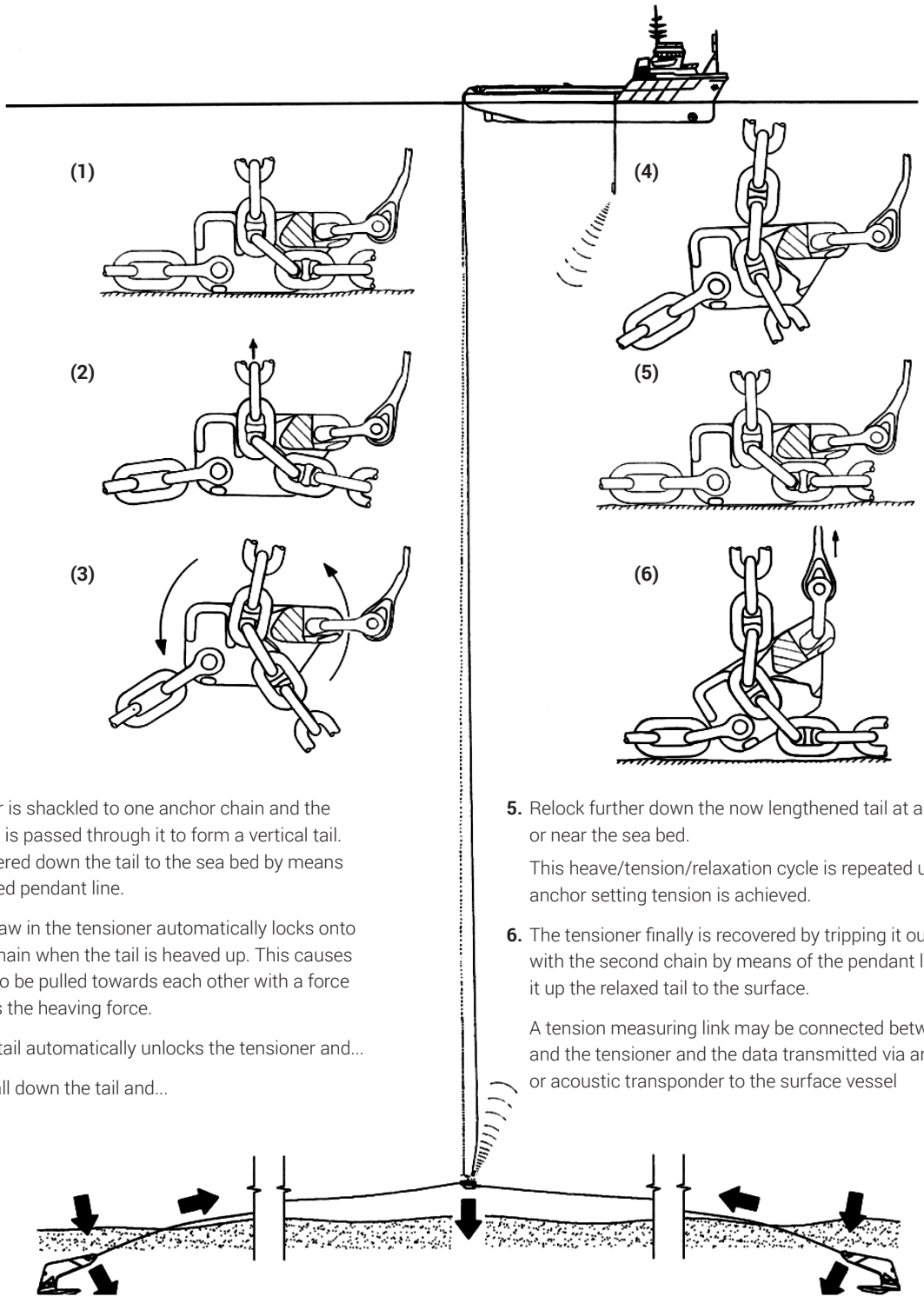
Anchor system pre-tensioning operation



1. The tensioner is shackled to one anchor chain and the second chain is passed through it to form a vertical tail. It is then lowered down the tail to the sea bed by means of the attached pendant line.
2. An internal claw in the tensioner automatically locks onto the second chain when the tail is heaved up. This causes the anchors to be pulled towards each other with a force 2.5 to 3 times the heaving force.
3. Relaxing the tail automatically unlocks the tensioner and...
4. Allows it to fall down the tail and...
5. Relock further down the now lengthened tail at a bight on or near the sea bed.

   This heave/tension/relaxation cycle is repeated until the desired anchor setting tension is achieved.
6. The tensioner finally is recovered by tripping it out of engagement with the second chain by means of the pendant line and hauling it up the relaxed tail to the surface.

   A tension measuring link may be connected between the first chain and the tensioner and the data transmitted via an umbilical cable or acoustic transponder to the surface vessel