LOADING - COIL CASES

(As this Instruction has been completely REVISED, individual paragraphs have not been "starred".)

CONTENTS

1 INTRODUCTION This instruction details the range of types and physical characteristics of loading coil cases containing Program A, Grade 1A or III AF coils. The changes referred to in para 2.3 *must* be carefully noted *before* ordering.

2 GENERAL

2.1 All cases are manufactured with tails of Poly Quad No. 5 .../0.5. The moisture barrier is, where appropriate, made continuous and is free from contacts with the case.

The stub tail lengths are indicated against each type of Loading Coil Case (LCC). Lengths in excess of these measurements should not be required and every effort should be made by planning officers to avoid excessive lengths of stub cable. Where exceptionally it is necessary to provide stub cable lengths in excess of the standard, approval must be obtained from the Regional HQ.

2.2 The choice between single or double stubs is dependent on the number of coils required and the layout of the associated jointing arrangements (Diagram CN 1268).

2.2.1 Double Stub Cases have a separate stub for the "up" and "down" sides.

Any pairs in the stubs not required for coils are jointed through to corresponding pairs in the other stub cable.

The "Nominal number of coils" are listed in Table 1 including pairs which may if required be used as unloaded pairs for PCM etc.

2.2.2 Single Stub Cases are arranged with down side coils connected to the centre pairs and upside coils to the following pairs; any pairs which are spare are left disconnected.

2.3 Unless special action is taken as described in para 6, it will be found on delivery that some cases will not pass down a manhole shaft unless the stub cables are first uncoiled. This will apply to all coiled stub cables of 402 pairs and over.

The feasibility of uncoiling the stubs to install the LCC should be carefully checked in each instance before ordering the coils.

2.4 When delivered the stubs are supported on a cradle. The cradle should be removed during installation.

2.5 Manhole, polemounted and chamber type cases are provided with two 20 mm channels on the surface on which they will stand or be supported. These channels have been taken into account when quoting the dimensions of cases.

2.6 Loading of up to 104 pairs should be carried out in joint in accordance with 4023 or N4218 as appropriate.

2.7 The use of building-out is described in C2021. Cases for capacitors are the same size or slightly smaller than similar cases for the same number of coils.

3 LOADING COIL CASE TYPES

3.1 Manhole Type

3.1.1 Two Stub Manhole Type Cases

Fig 1; Table 1; two stub cables 3 metres long.

Designed to be installed on an upright position, normally in manholes.

3.1.2 Single Stub Manhole Type Cases

Fig 2; Table 2; one stub cable 3 metres long.

Designed to be installed in an upright position, normally in manholes.

Fig 1; Table 1 follow

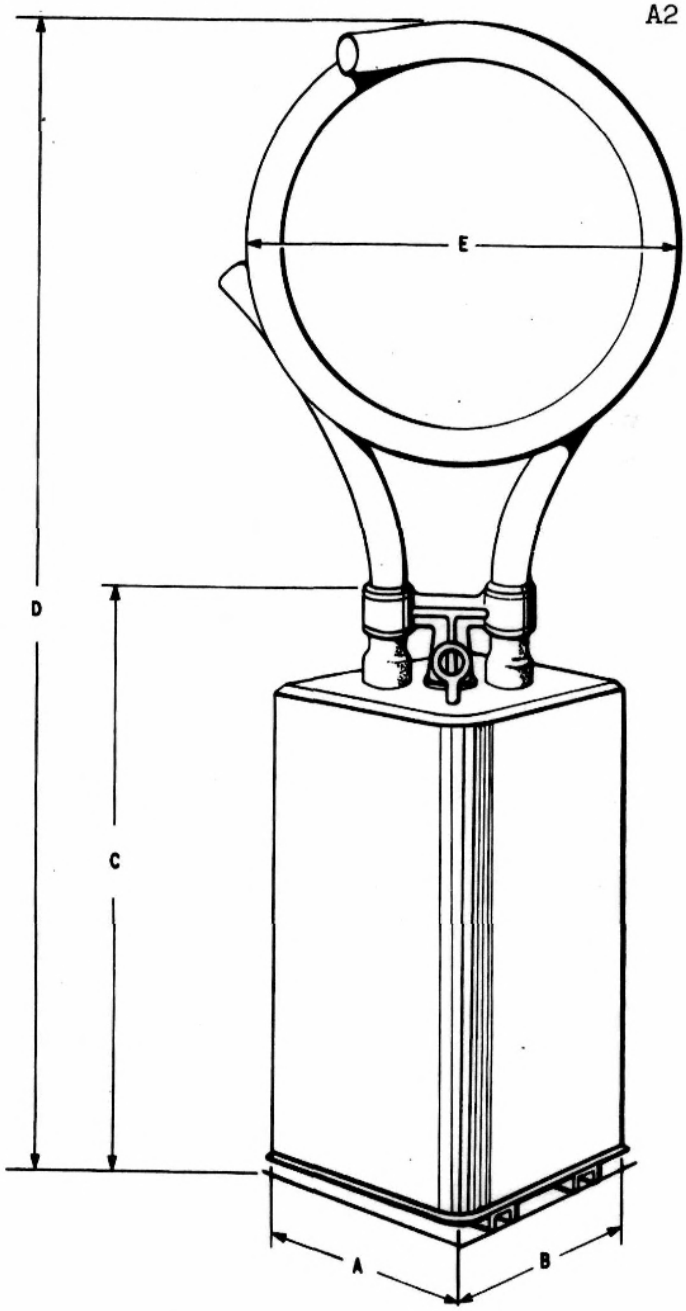

FIG. 1 MANHOLE & POLEMOUNTED TYPE LOADING COIL CASE WITH DOUBLE STUB CABLES.

TABLE 1 MANHOLE LOADING COIL CASES WITH DOUBLE STUB CABLES

STUB CABLE SIZE (PRS/0.5 mm)	NOMINAL NO. OF COILS	MAX DIMENSIONS (mm) SEE FIG 1					MAX WEIGHT APPROX (kg)
		A	B	D	D	E	
160	106 TO 160	220	220	460	1200	530	64
230	162 TO 228	220	220	610	1200	530	68
310	230 TO 308	280	330	510	1200	530	85
402	310 TO 400	280	330	610	1470	700	110
506	402 TO 504	350	350	510	1370	700	140
622	506 TO 620	350	350	610	1650	900	182
752	622 TO 748	420	420	560	1570	900	204
892	750 TO 888	420	420	610	1650	900	236
1044	890 TO 1040	420	420	610	1650	900	245

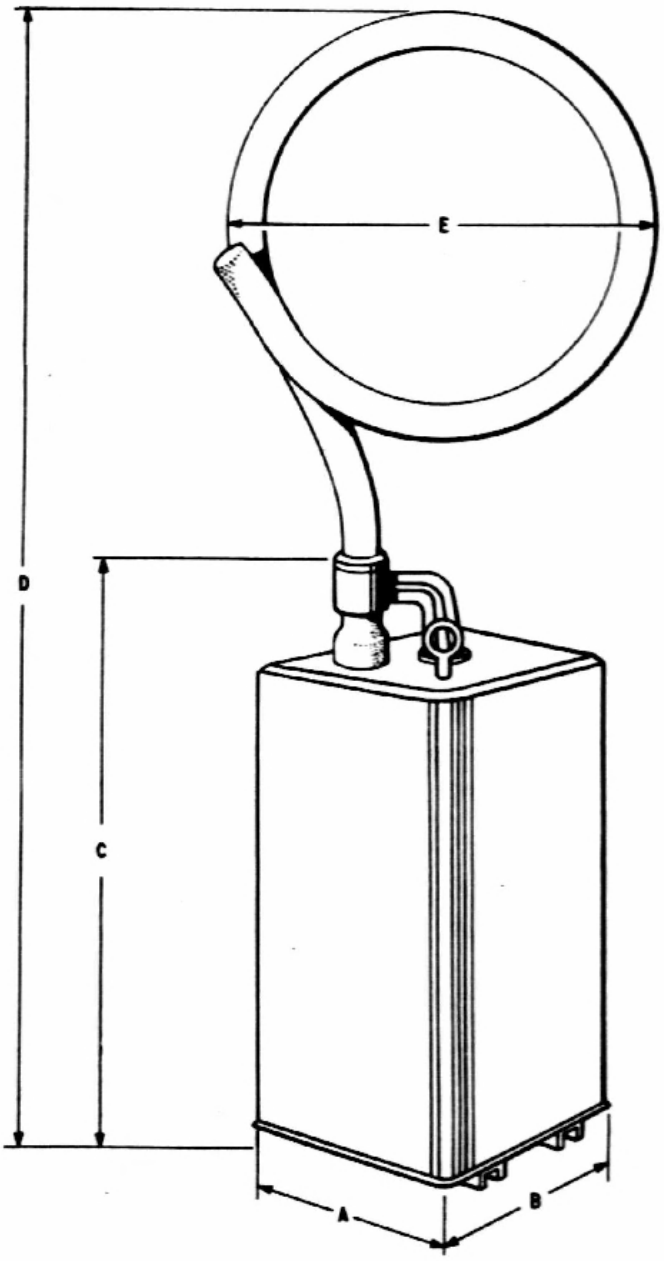

FIG. 2 MANHOLE & POLEMOUNTED TYPE LOADING COIL CASE WITH SINGLE STUB CABLE.

TABLE 2 MANHOLE LOADING COIL CASES WITH SINGLE STUB CABLE

STUB CABLE SIZE (PRS/0.5 mm)	NOMINAL NO. OF COILS	MAX DIMENSIONS (mm) SEE FIG 2 A	B	C	D	E	MAX WEIGHT APPROX (kg)
230	82 TO 114	220	220	460	1200	530	62
402	116 TO 200	220	220	610	1470	700	110
506	202 TO 252	280	330	510	1370	700	140
622	254 TO 308	280	330	510	1570	900	180

3.1.3 Chamber Type

Single Stub Only

Fig 3; Table 3; one stub 3 metres long.

Designed to enable it to be positioned horizontally on the floor or a manhole or footway jointing box beneath the lowest cable bearers. Some difficulty may be experienced if any but the smallest size of chamber type case is to be fitted in even the largest unmodified footway chamber.

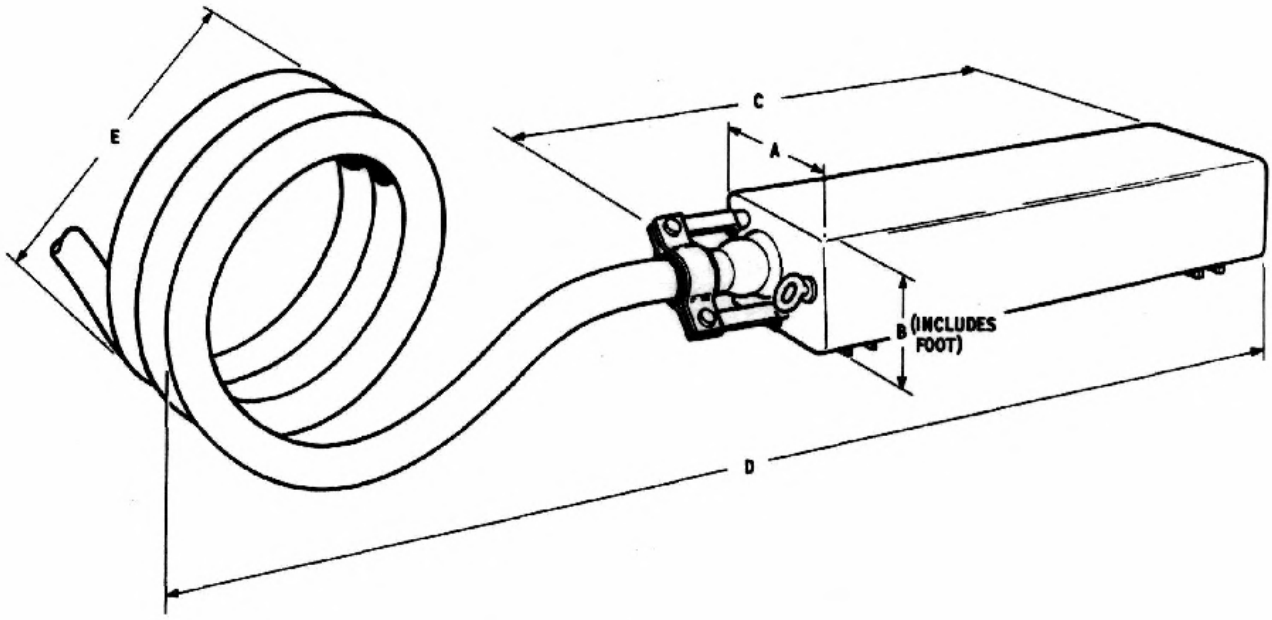

FIG. 3 CHAMBER TYPE LOADING COIL CASE.

TABLE 3 CHAMBER TYPE LOADING COIL CASES

STUB CABLE SIZE (PRS/0.5 mm)	NOMINAL NO. OF COILS	MAX DIMENSIONS (mm) SEE FIG 2					MAX WEIGHT APPROX (kg)
		A	B	C	D	E	
230	82 TO 114	220	240	440	1180	530	62
402	116 TO 200	220	240	590	1450	700	110
506	202 TO 252	280	350	490	1450	700	140
622	254 TO 308	280	350	490	1450	700	180

3.1.4 Tunnel Type

Two Stubs Only

Fig 4; Table 4; two stubs 1.2 metres long.

Designed to allow the case to be positioned on cable bearers in line with the run of the cable.

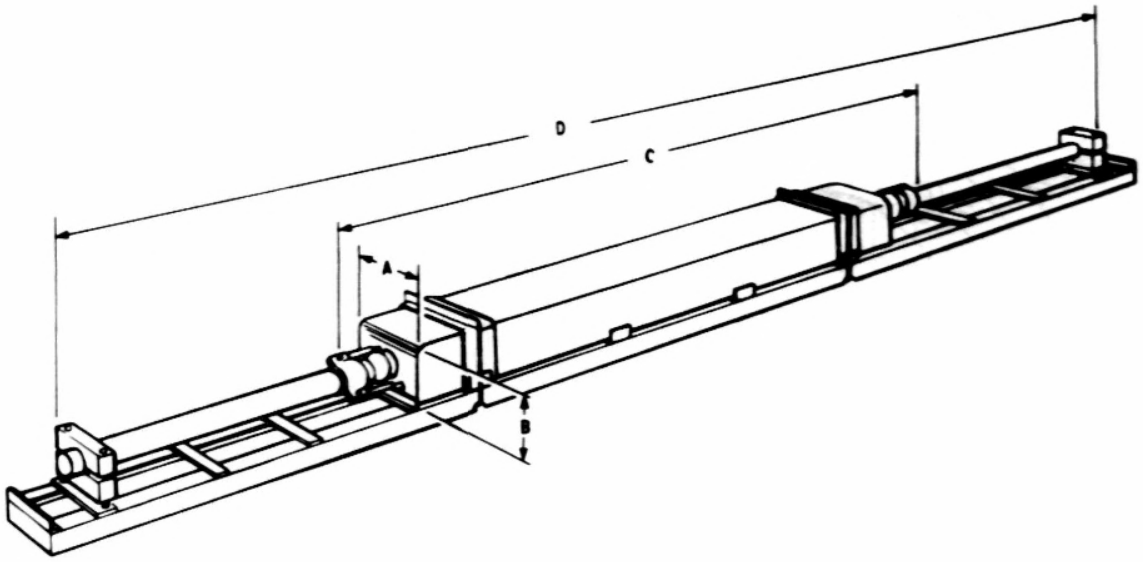

FIG. 4 TUNNEL TYPE LOADING COIL CASE

TABLE 4 TUNNEL TYPE LOADING COIL CASES

STUB CABLE SIZE (PRS/0.5 mm)	NOMINAL NO. OF COILS	MAX DIMENSIONS (mm) SEE FIG 4 A	B	C	D	MAX WEIGHT (kg)
160	104 TO 160	150	200	760	3200	145
310	162 TO 308	150	200	1150	3550	200
402	310 TO 400	150	200	1150	3550	220
622	402 TO 620	150	200	1580	4000	300
752	622 TO 748	150	200	1700	4100	380
892	750 TO 888	150	200	1930	4330	450
1044	890 TO 1040	150	200	2160	4560	500

3.2 Loading of Aerial Cables should be carried out in accordance with H4053 either with the use of in-joint loading or with chamber type LCCs.

4 OBSOLESCENT TYPES OF LOADING COIL CASE The following types of case are still in use but have been superseded for new work by the types described in para 3. Replacements for maintenance or rearrangement should be selected from the current range.

4.1 Buried Type (Fig 5) The case has two stubs and is buried directly in the ground. The cast iron outer case provides mechanical protection to a canister containing the coil assembly. Un-loaded pairs are jointed through within the case.

4.2 Torpedo Type (Fig 6) The case has two stubs and is buried directly in the ground. The coils (up to 74) are sealed in a steel cylinder which has a stub at each end. The stub cable joints are made close to the cylinder and the entire assembly enclosed in a split cast iron case.

4.3 Polemounted Type, similar to that illustrated in Figs 1 and 2 will no longer be supplied. Alternatives are referred to in N4053.

The cases differed from those described in 3.1 only in respect to the length of the stub cable/s which was 2 metres and the finish applied to the case.

Fig 5 follows

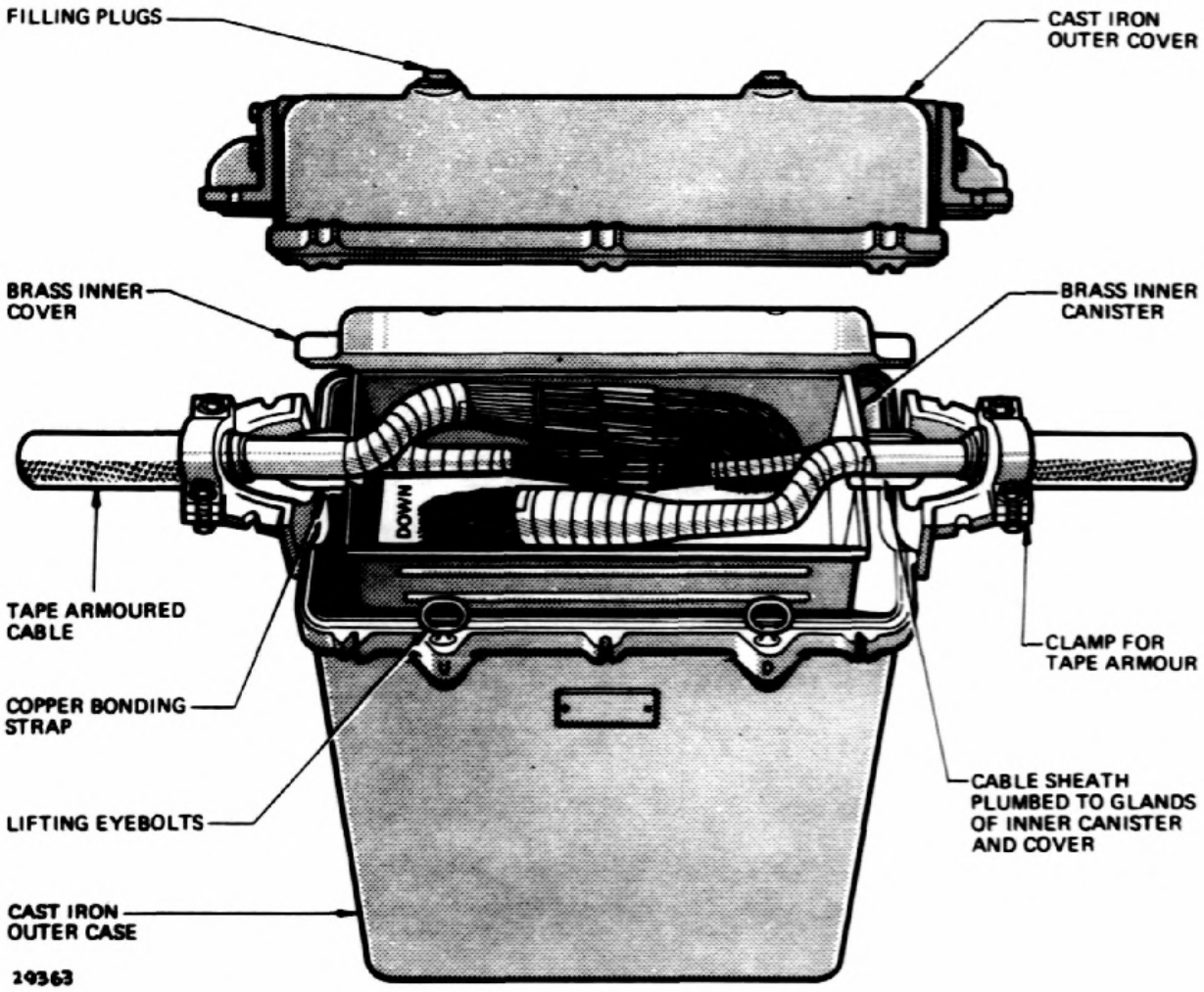

FIG. 5 BURIED TYPE LOADING COIL CASE.

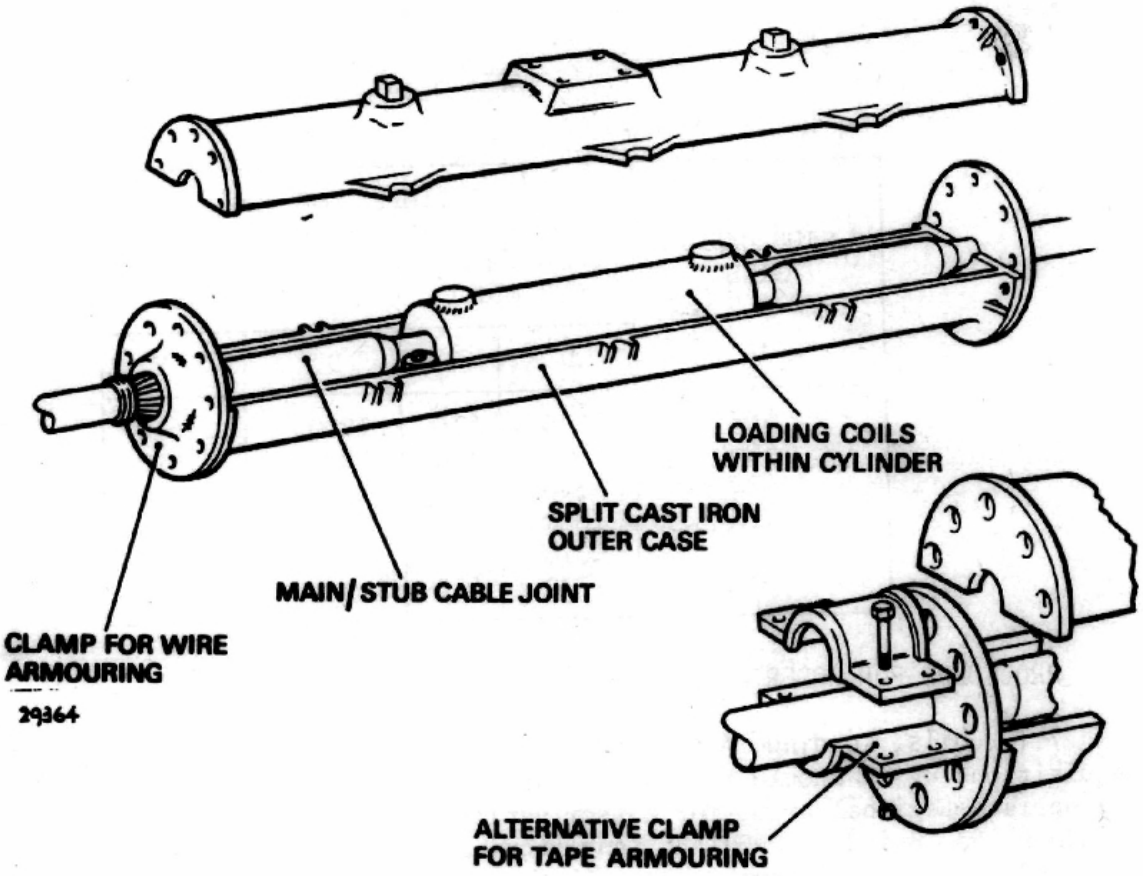

FIG. 6 TORPEDO TYPE LOADING COIL CASE.

5 CABLES CONTAINING SCREENED PAIRS LCCs with tails containing screened pairs will no longer be supplied. All screened pair cables will be in-joint loaded. LCCs with double stubs should be by-passed with cable Poly Twin No. 4.

6 REDUCED DIAMETER TAIL CABLE COILS When the site conditions make it necessary, then LCCs with reduced diameter stub cable coils must be specially ordered. With such LCCs some kinking of the stub cable sheath must be expected. Normally these should be accepted provided the stub cable sheath is undamaged and is free from electrical faults.

Table 5 refers to the dimensions of LCCs and stub cables coiled to a reduced diameter.

TABLE 5

STUB CABLE SIZE (PRS/0.5 mm)	MAX DIMENSIONS (mm)			
	DOUBLE STUB SEE FIG 1		SINGLE STUB SEE FIG 2 AND 3	
	D	E	D	E
402	1270	610	1200	610
506	1320	610	1200	610
622	1320	610	1200	610
752	1320	610		
892	1370	610		
1044	1370	610		

*7 PROCEDURE FOR ORDERING LOADING COIL CASES

7.1 Coils, Loading, Assembled in Cases These items are RD controlled and requisitions which should have an A83 attached should be submitted to the appropriate Regional group for authorisation before being forwarded to PE/M6.1.2.4A, 5 Dudmore Rd, Swindon, SN3 1AH. Any requisition received without the A83 will be returned to the originator. The A83 should be completed to include:-

(i) Type of Case (eg Manhole Single-Stub type).

(ii) Number, inductance and grade of coils (eg 160/88/111AF represents 160-88 mH grade IIIAF coil).

(iii) Stub cable size and lengths.

(iv) Stub cable pair numbers *not* to be loaded, pair numbers to be loaded with different kinds of coil, and details of any spare pairs. (H4011.)

(v) Name of Cable concerned.

(vi) The required by date (*minimum* lead time 6 months).

7.2 Coils, Loading, Unicoil Supplies should be requisitioned direct from PE/M6.1.2.4A.

BTHQ/NE/T8.3.1 E N D