

~~X/F~~
Harrisonville

LINE WIRE VIBRATION DAMPERS.

Note: This interim E.I. outlines practices to be followed pending standardisation. Comment and criticism should be forwarded to the Engineer-in-Chief.

1. GENERAL.

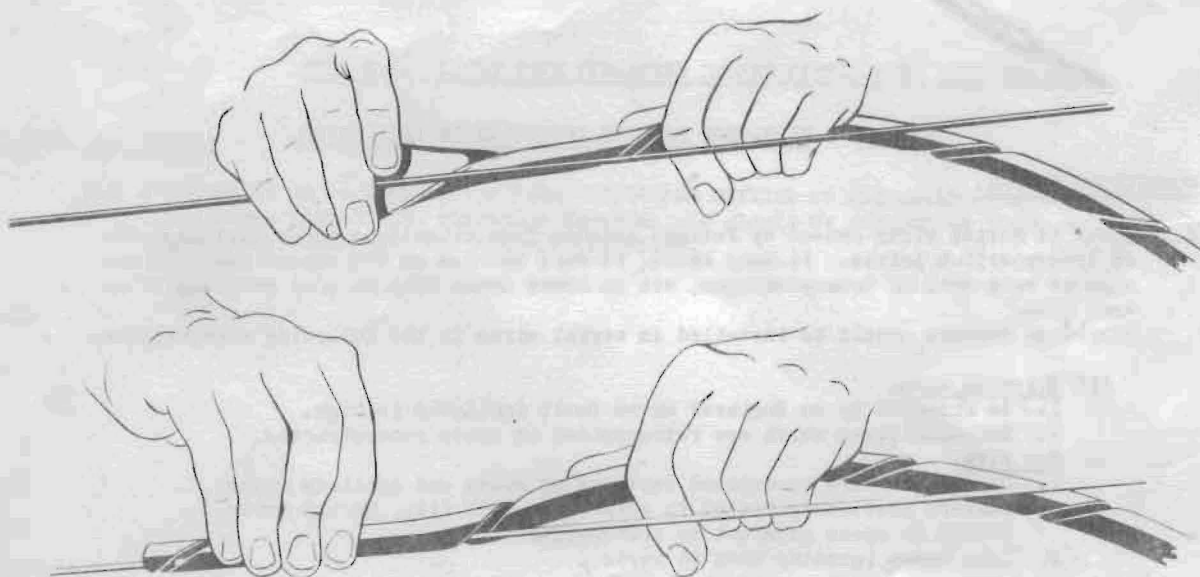
1.1 This E.I. describes a line wire Vibration Damper and indicates its uses.

1.2 Vibration of aerial line wires contribute markedly, in certain circumstances, to the development of fatigue breaks in wires. The Vibration Damper limits these vibrations and prevents faults on line wire circuits caused by broken wires.

2. DESCRIPTION AND INSTALLATION OF VIBRATION DAMPER.

2.1 A Vibration Damper (Serial 438 Item 1) consists of a black plastic tube, approximately 3/8 inch in diameter 4 feet in length, split spirally with approximately four turns to the foot.

2.2 The plastic Vibration Damper is readily installed by spiralling it on the line wire as illustrated in Fig. 1A and 1B.



FIGS. 1A AND 1B. SPIRALLING VIBRATION DAMPER ON LINE WIRE.

2.3 A Vibration Damper should be installed on an aerial line wire near the pole. About 2 feet of Vibration Damper (i.e. half of the Vibration Damper as supplied) should be used. (See Fig.2). As it is loose on the wire, the Vibration Damper will move in the span and come to rest at a suitable point.

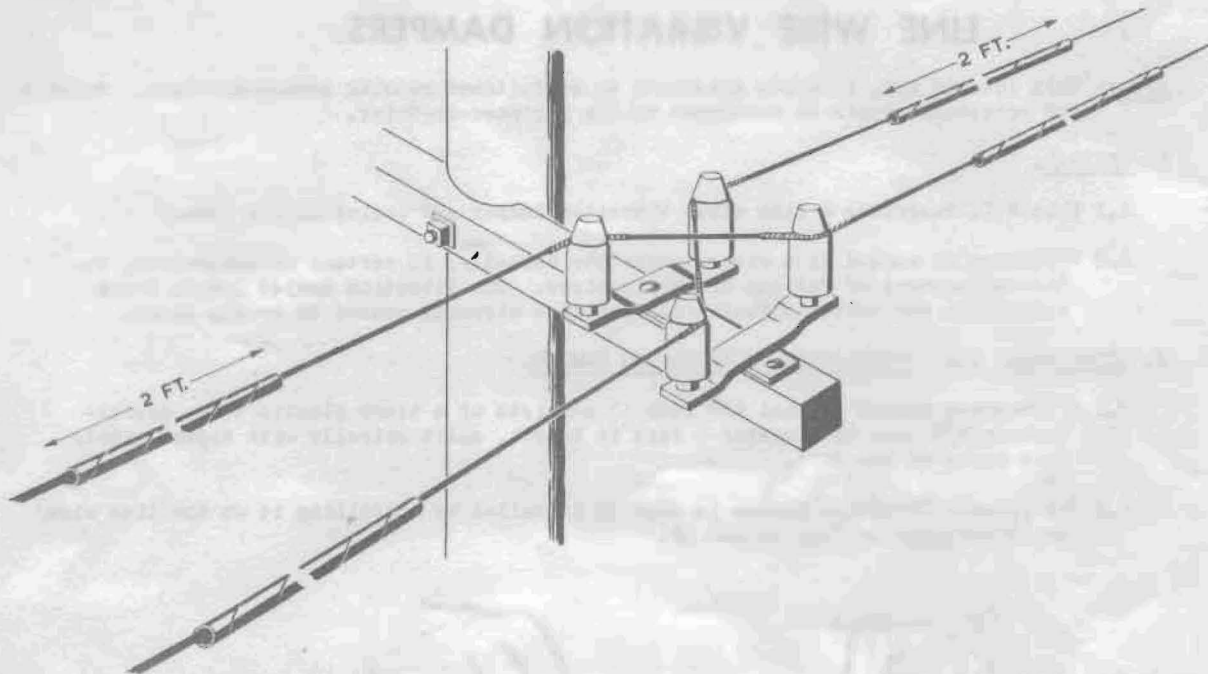


FIG. 2. VIBRATION DAMPERS INSTALLED ON LINE WIRES.

3. CONDITIONS OF USE.

3.1 Breaks in aerial wires caused by fatigue arising from vibrations occur most markedly at transposition points. In many cases, it will suffice to fit dampers only to the span on each side of transpositions, but in other cases dampers will be required in each span.

Vibration Dampers should be installed in aerial wires in the following circumstances

(i) Existing wire.

1. As directed by an Engineer where fault incidence is high.
2. Existing wires which are retransposed or route reconstructed.

(ii) New Wire.

1. On all new wire on exposed sections of route and sections where dampers previously fitted in accordance with (i). On all other routes on spans adjacent to transpositions.
2. Long spans (greater than 80 yards).

4. OTHER TYPES AND USES OF VIBRATION DAMPERS.

4.1 Installation of earlier types of Vibration Dampers fitted to line wires should not ordinarily be replaced with this type unless the condition of the Vibration Damper warrants early replacement or the efficiency of the existing type is considered inferior

4.2 Where it is experienced that the two foot length of Vibration Damper does not wholly damp out the vibrations, a complete Vibration Damper (i.e. 4 feet length) should be substituted.

- 4.3 Wires attached to buildings that give rise to objectionable humming can be effectively quietened by fitting a Vibration Damper (a 2 feet length on each wire will normally suffice).
- 4.4 A special use for Vibration Dampers is in connection with the installation of experimental types of line wires such as aluminium, which is very susceptible to vibration troubles. The wire in these cases is usually damped continuously throughout its length.
- 4.5 A light type of plastic damper has been purchased. When installing these, it is necessary to fix about 4 inches of adhesive tape (Serial 433/11) around each end of the Vibration Damper making sure that it remains free to move and that the adhesive tape is not adhering to both the damper and the wire (See Fig. 3).

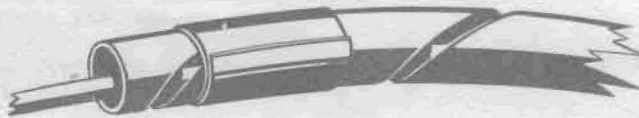


FIG. 3. LIGHT TYPE VIBRATING DAMPER FITTED WITH ADHESIVE TAPE.

5. RECORDING.

- 5.1 A record is to be kept by the FAULT RECORDING OFFICER of all sections of aerial line wires fitted with vibration dampers. He should be advised of these sections immediately vibration dampers are installed.

END.

8½" each if bought from PMG.
Superintendent of Stores + Contracts, G.P.O., Hobart.
Vibration Dampers, serial 4471/

Suppliers are Stewart + Luggs.
G.P.O. Box 468A, Melbourne CI

According to Mr. Mann of PMG line yard 27/8/65

16 x 16 = 256 for main E/W wires,

8 x 4 = 32 " " N/S "

Total. 288

300 - 288 = 12 spares,

MHB:KKS.

22nd June, 1965.

Parfrey Plastics,
P.O. Box 27,
SUNSHINE VIC.

Dear Sirs,

We acknowledge your reply of 10 June to our enquiry for spiral split Polythene Tube for use as Vibration Dampers.

Unfortunately the sample which you said was enclosed was not in the envelope when we received the letter.

In order to judge the suitability of this product to our needs, we would be grateful if you would send us three pieces each 2 feet long and advise if this split tube comes in rolls, reels or cut to desired size.

We are considering placing an order for 1500 feet, or alternatively 5000 feet, and we would be grateful if you would let us have a firm quote for each of these quantities on a basis of freight paid to Hobart.

Yours faithfully,

(M.H. Bennett.)
Administrative Officer.



PARFREY PLASTICS DIVISION

OF

STEWARTS AND LLOYDS (AUSTRALIA) PTY. LIMITED

REGISTERED OFFICE: ST. ALBANS ROAD, SUNSHINE, VICTORIA

TELEPHONE: 311-0655, 0656, 3571 POST OFFICE BOX 27, SUNSHINE

CABLES AND TELEGRAPHIC ADDRESS: "PARPLAS", MELBOURNE

GMcQ/BC
199/65

10th June 1965

The Administrative Officer,
C.S.I.R.O.
Stowell Avenue,
HOBART Tasmania

Dear Sir,

We acknowledge your letter of the 28th May 1965 regarding spiral slit Polythene Tube and wish to advise that the product we produce is made under specific contract requirements from the P.M.G. Department and the size involved is 3/8" OD x 1/16" wall. The use in application of the Vibration Dampers has been established by the P.M.G. and we have no details of the method of that application.

A small sample is enclosed for your interest.

not received [signature]

The approximate price for quantities in excess of 5000 feet would be of the order of 2d. per foot.

Yours faithfully,
PARFREY PLASTICS DIVISION OF
STEWARTS AND LLOYDS (AUSTRALIA) PTY. LTD.

[Signature]
Works Manager

MHB/PS

Parfrey Plastics Pty. Ltd.,
St. Albans Road,
SUNSHINE,
Victoria.

28th May, 1965.

Dear Sirs,

On 10 May, 1965 we wrote to you asking for the following information about your polythene vibration dampeners for telephone lines :-

- (a) sizes or lengths available, including internal diameter of each type
- (b) prices
- (c) availability
- (d) any technical data connected with their use.

We would be pleased to have a reply to our enquiry.

Yours faithfully,

M.H. Bennett,
Administrative Officer.

MHB/PS

Parfrey Plastics Pty. Ltd.,
St. Albans Road,
SUNSHINE,
Victoria.

10th May, 1965.

Dear Sirs,

We have seen, in a copy of Polymer, No. 22, a reference to the use by the Post Office of your polythene vibration dampeners on the telephone lines between Melbourne and Adelaide.

We would appreciate it if you would let us have details of these polythene vibration dampeners under the headings of:-

- (a) sizes or lengths available, including internal diameters
- (b) prices
- (c) availability
- (d) any technical data connected with their use.

Yours faithfully,



M.H. Bennett,
Administrative Officer.

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NUMBER 22

AUTUMN 1965

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12 APR 1965
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POLYMER

NUMBER 22, AUTUMN, 1965

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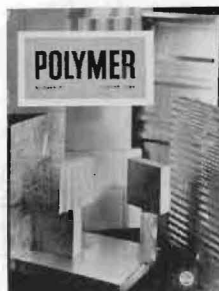
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COVER

An assortment of building panels incorporating rigid urethane foam, showing the variety of surfaces and profiles which can be made.

Photograph by Val Foreman

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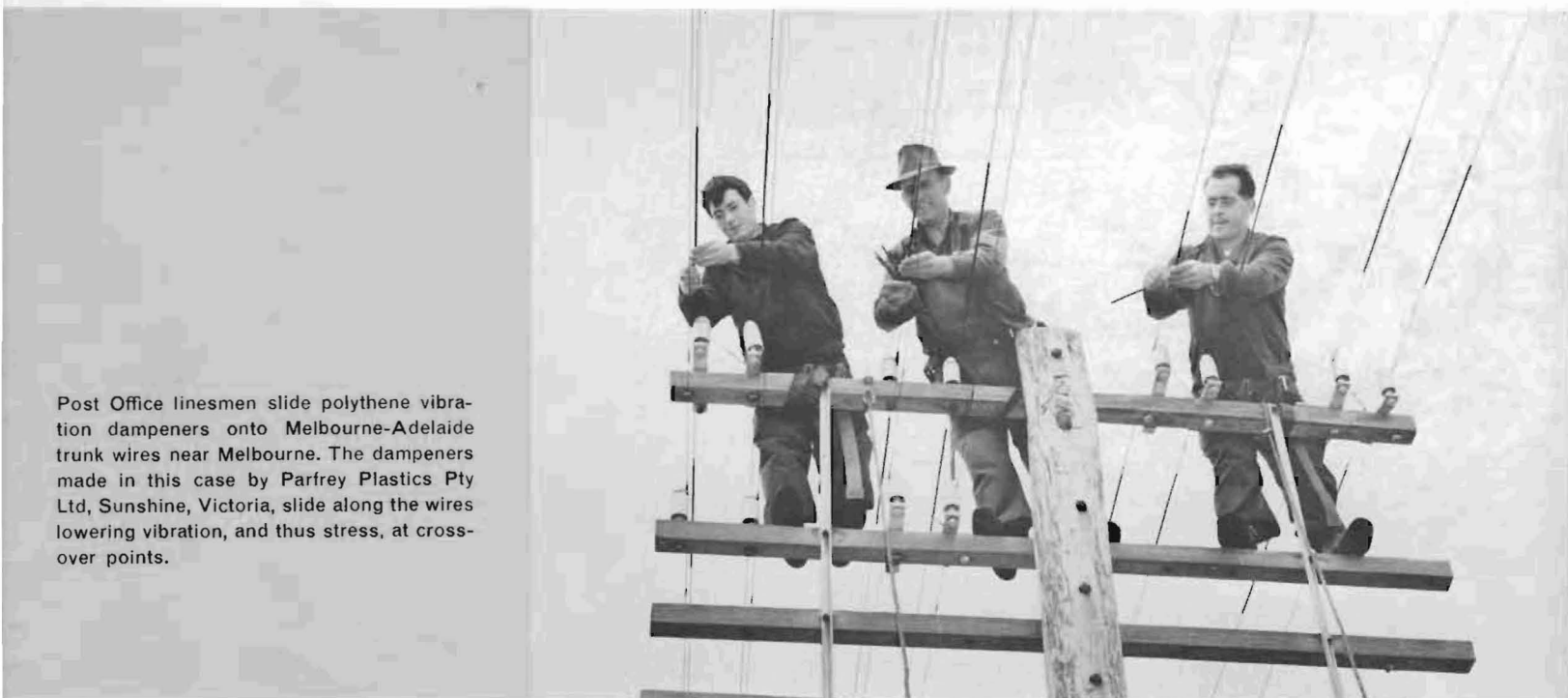
1 Nicholson Street, Melbourne 32 0201
69 Macquarie Street, Sydney 2 0525
363 Adelaide Street, Brisbane 31 1081
185 Victoria Square, Adelaide 51 5841
171 St George's Terrace, Perth 21 8741
10 Barrack Street, Hobart 2 5051
19 Paterson Street, Launceston 2 4631
432 Hunter Street, Newcastle 2 1322



A facelift for the interior lighting of Qantas House in Sydney was given by installing fittings made from 'Perspex' Diamond 030 acrylic sheet. Over 1,000 fittings were installed, mostly in the 4' x 2' size.



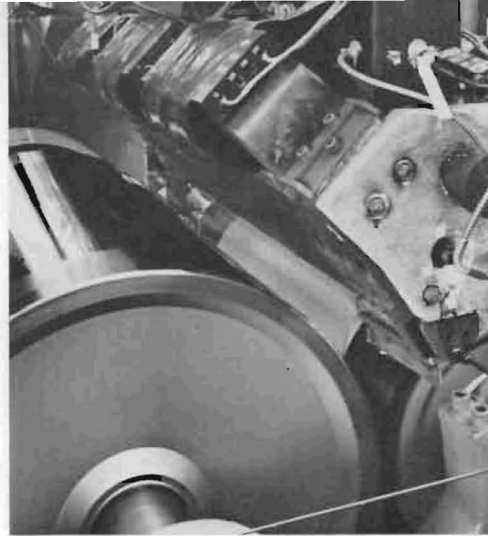
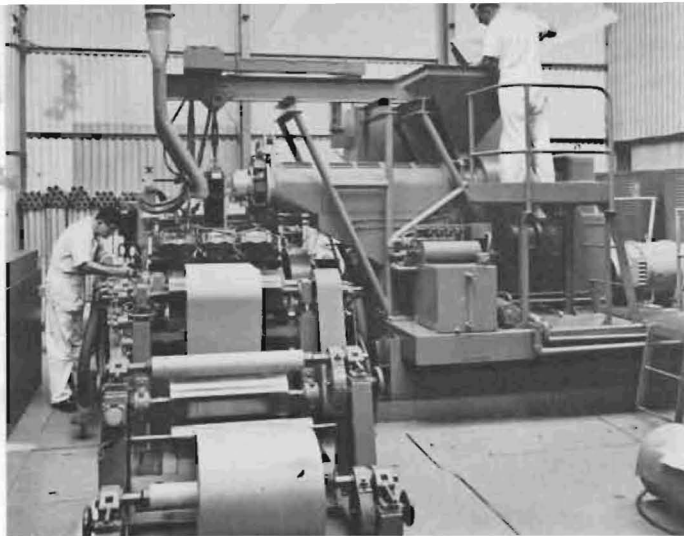
A master cylinder replacement unit, marketed by Adelaide Brake Service, incorporates a reservoir moulded from 'Maranyl' F103 nylon. The reservoir is rustproof and the fluid level can easily be seen. The mouldings are supplied by Wingfield Plastics Ltd.



Post Office linesmen slide polythene vibration dampeners onto Melbourne-Adelaide trunk wires near Melbourne. The dampeners made in this case by Parfrey Plastics Pty Ltd, Sunshine, Victoria, slide along the wires lowering vibration, and thus stress, at cross-over points.

Familiar service station signs made from 'Perspex' acrylic sheet are fitted in an improved mounting (left) devised by the makers of the signs, M.M. Acrylic Industries Pty Ltd of Melbourne.





POLYTHENE

COATINGS

AND

LAMINATES

One of the many important and fast growing uses for polythene is in coatings and laminates. A wide variety of materials are coated or laminated with polythene, and the uses fall mostly into two major fields: packaging, and building papers.

The main advantage of using polythene in these applications is that it improves the base materials or substrates by adding an effective and economic moisture barrier. At the same time it can serve as a laminating adhesive or provide excellent heat sealing properties for packaging applications.

Whether the polythene is being used as a coating or as a laminating adhesive between two other materials, the method of application is the same. The polymer is converted from a granular to a molten state in a screw extruder and then "extrusion coated" onto the substrate. The substrate is normally fed in a continuous web from a roll and the molten polythene may be pressure or vacuum combined to the base sheet before the product is wound up into large rolls. Where printing inks or glues are to be used subsequently the polythene surface is given a corona discharge surface treatment to make it receptive to the ink or glue.

At the present time the most common substrate in use is paper. Polythene is being coated on paper of almost any type from thin bleached grades to heavy weight kraft papers.

One of these types of coated paper is used in the 'Tetra-Pak' for packing fruit juices and milk. Here the paper is coated with polythene on one side and wax on the other, with extra layers of paper and polythene for larger sized packs.

New uses in this field are bags for ice blocks, specialized wrapping papers where the contents must be protected from moisture, and black polythene on black paper for wrapping photographic papers and film. As the heavy papers move into the class of paperboards, there is again a wide field of application in Australia. Packs made from polythene coated board are used for breakfast cereals, ice cream bricks, frozen foods, and powder detergents. In all these applications the polythene provides an excellent moisture barrier. With cereals and detergents it allows easier pouring, and with frozen products it gives better release when the contents are being removed from the packets. Growing applications in Australia are for ready-made cake trays, and in the packaging of cooked meats and sausages for self-service stores. Here the polythene gives easy release and sufficient grease resistance. In the United States, one of the biggest growth fields is in the packaging of milk.

Some Australian car manufacturers are using polythene-coated paper to line car door panels. The barrier