

Training Section,
Postmaster-General's Department,
9 Spring Street,
Melbourne. C.1.

COURSE OF TECHNICAL INSTRUCTION.

AERIAL LINES II.

PAPER NO. 2.
PAGE 1.

TENSIONING AERIAL WIRES.

CONTENTS:

1. INTRODUCTION.
2. WIRE TENSIONING DEVICES.
3. TENSIONING WIRE.
4. MEASURING SAG.
5. BEAT TENSION.
6. TENSIONING WITH WEIGHTS.
7. TEST QUESTIONS.

1. INTRODUCTION.

- 1.1 The tensioning of aerial wires is one of the most important operations in the erection of lines. The transmission results depend to a large extent on the correct spacing of wires both laterally and vertically.
- 1.2 It is to be specially noted that the increasing use of multi-channel carrier systems and the generally improved grade of service calls for accurate and even regulation of the wires. The proper care and handling of the wires is essential to obviate as far as possible the future development of faults, each of which is likely to interrupt many working telephone and telegraph channels.
- 1.3 The lateral spacing is determined by the correct positions of the spindle hole centres in the arms.

In the vertical positions the spacing is determined by the arm spacing and the tension of the wires, that is, the amount of sag in a span of wire. The object is to have all wires correctly tensioned to the tables 1-6 shown in this paper. (Also see Lines Engineering Instruction Aerial W.2010.)
- 1.4 Several methods are used to obtain uniform tensioning, the method chosen being decided by the type of construction and the importance of the circuits.
- 1.5 Tensioning cannot be done correctly if a strong wind is blowing.