# Contents

Acknowledgements iii

Foreword iv

Scope vi

1. Introduction 1

2. Definitions and symbols 2
   2.1 Definitions 2
   2.2 Symbols 5

3. Design and detailing 7
   3.1 General 7
   3.2 Design / sizing of cables 10
   3.3 Detailing and lightning protection 17
   3.4 Saddles 22
   3.5 Execution aspects 24
   3.6 Cable vibrations 25

4. Functional requirements for cables 28
   4.1 Evolution of cable technology 28
   4.2 General requirements 28
   4.3 Requirements for the free length 31
   4.4 Requirements for the transition zones 36
   4.5 Requirements for anchorages 42
   4.6 Requirements for saddles 44

5. Materials: properties, requirements, testing 47
   5.1 General 47
   5.2 High tensile steel for tensile elements (prestressing steel) 48
   5.3 Structural steel for anchorages, saddles, guiding devices, deviators and pipes 51
   5.4 Stainless steel components in cable system 51
   5.5 Filling materials 53