- TEXTBOOK -

ROPE TRANSPORT SYSTEMS

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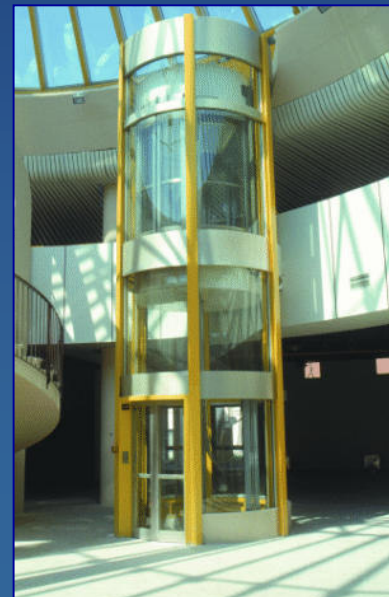**Politecnico di Torino**
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Topics

- Rope transport systems for ski-resort and urban areas

- Elevators

VOLUME ORGANIZATION
(INDEX: I/III)

- **1   GENERAL ASPECTS**
    - 1.1   Historical origins of rope transport systems
    - 1.2   Terminology and classifications
    - 1.3   Technical standards and administrative rules
    - 1.4   Components of the installations

- **2   DESIGN AND CALCULATION (PROJECT)**
    - 2.1   Configuration of the ropes on the line
    - 2.2   Calculation of the traction ropes and of motor strengths
    - 2.3   Analysis of loads, transport capacity,dimensioning of install.
    - 2.4   Calculation examples (exercises)
    - 2.5   Cable systems for public transport
    - 2.6   Elevators, mobile stairs and horizontal systems in public serv.
    - 2.7   Freight ropeways (telpherages)

VOLUME ORGANIZATION
(INDEX: II/III)

# VOLUME ORGANIZATION
(INDEX: III/III)

- **4 ELEVATORS: GENERAL ASPECTS, CALCULATION AD OPERATION**

  4.1   General aspect and main components

  4.2   Design and calculation (project)

  4.3   Safety rules concerning the construction and installation of new elevators in existing buildings

  4.4   Test and periodic controls

  4.5   Standards and rules

  4.6   Used symbols

- **5 ANNEX: STANDARDS TECHNICAL RULES**
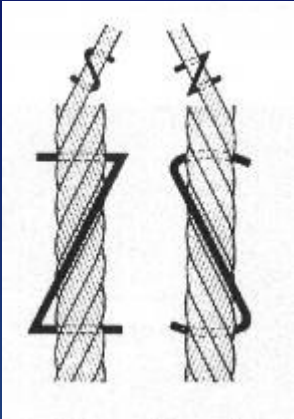
- **6 SPECIFIC TERMINOLOGY (UK/I/BIH)**

General aspects (chapter 1)
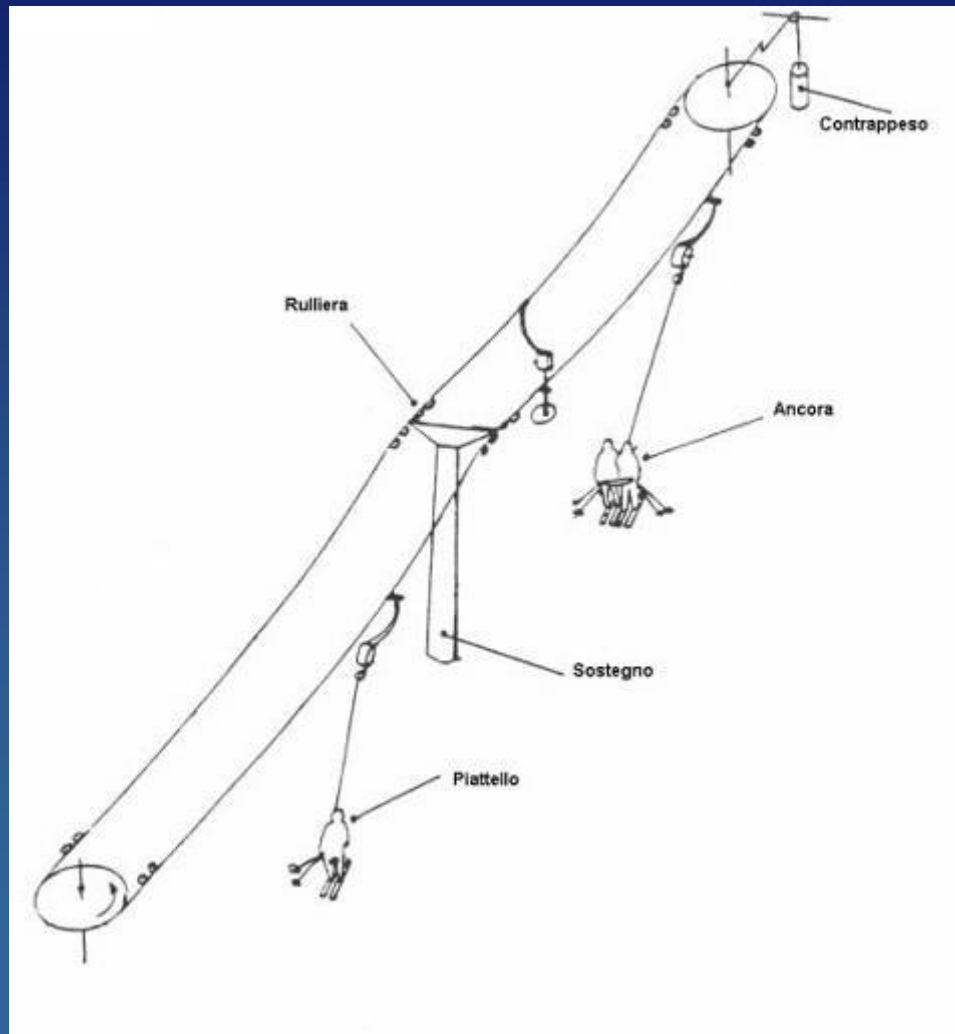
Example for a
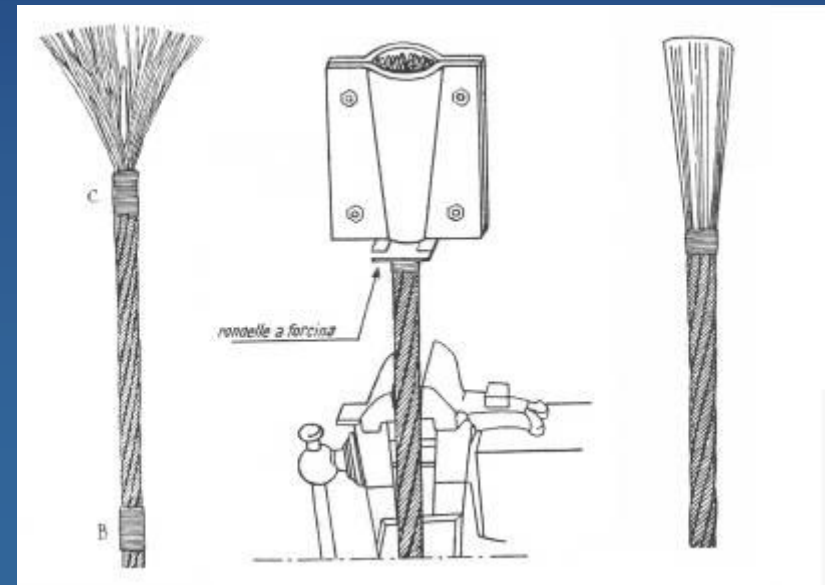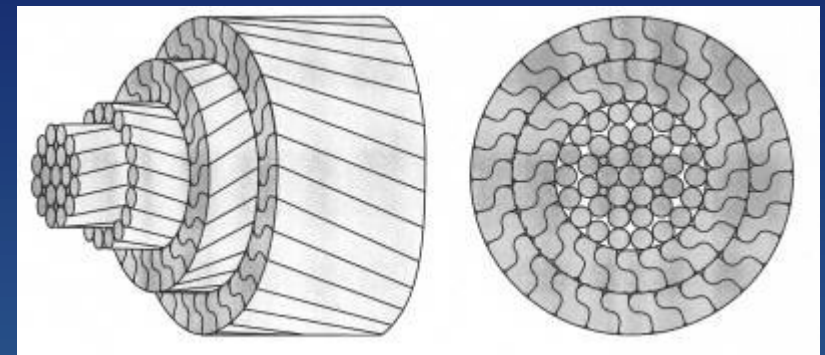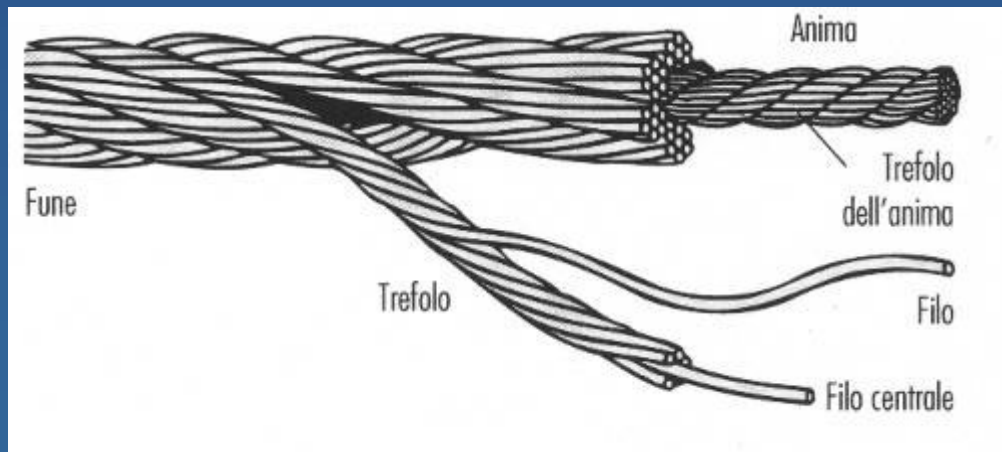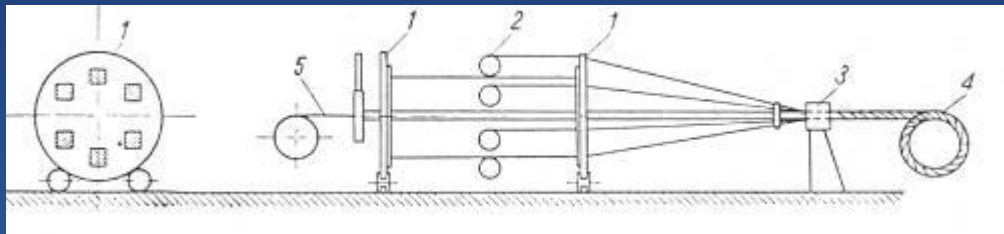ski-lift: scheme

General aspects (chapter 1)
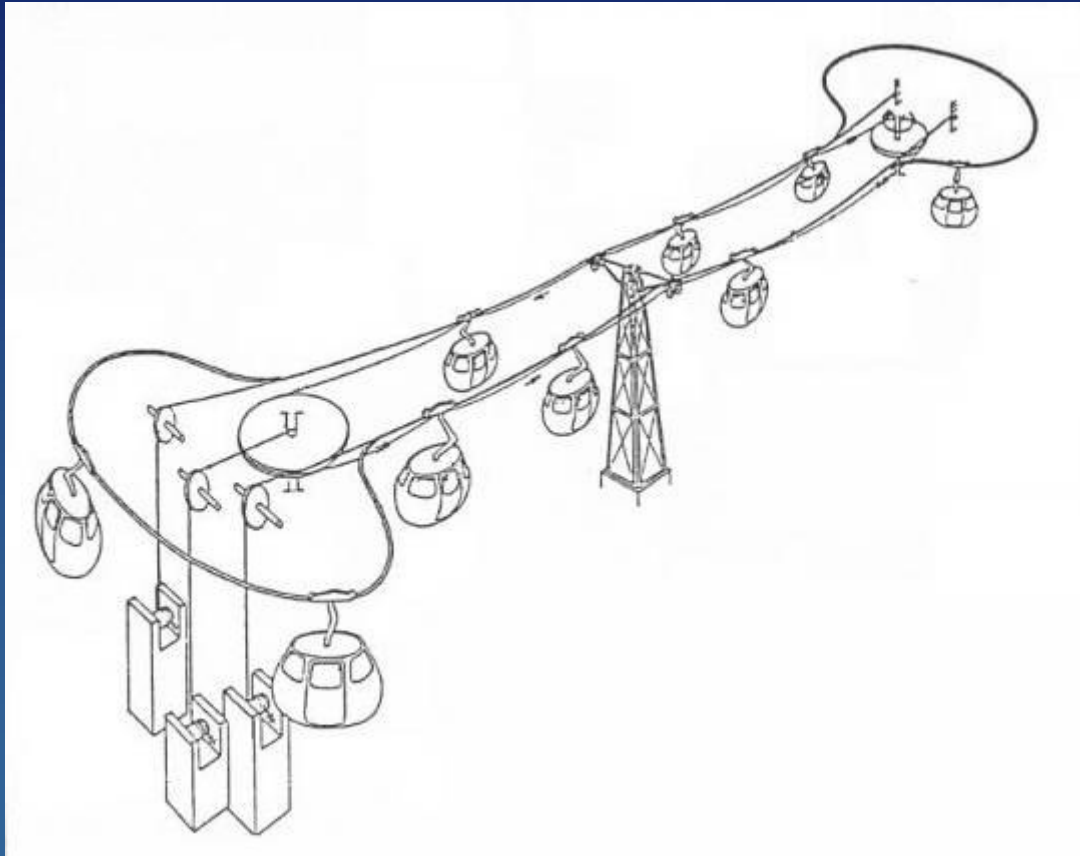
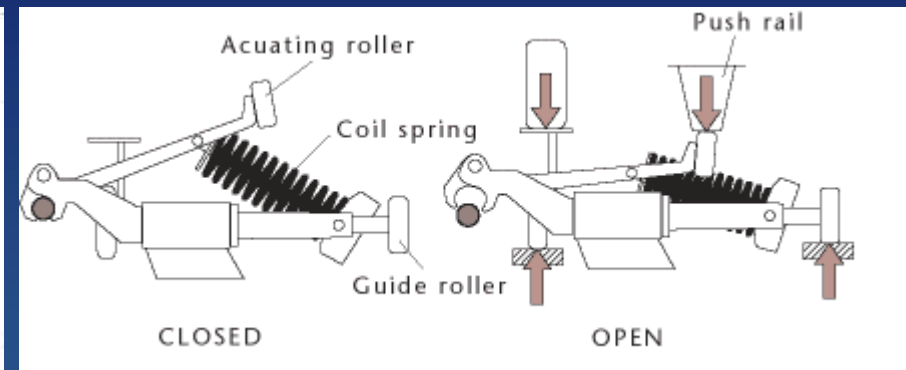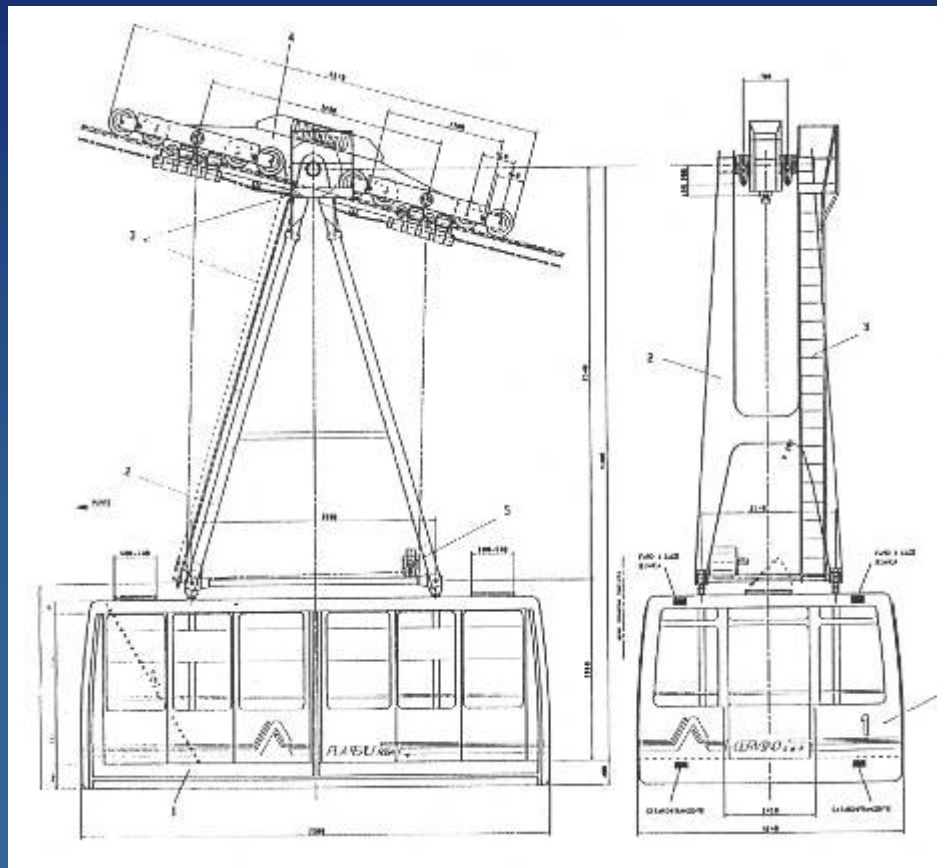Example for an aerial ropeway: scheme

General aspects (chapter 1)

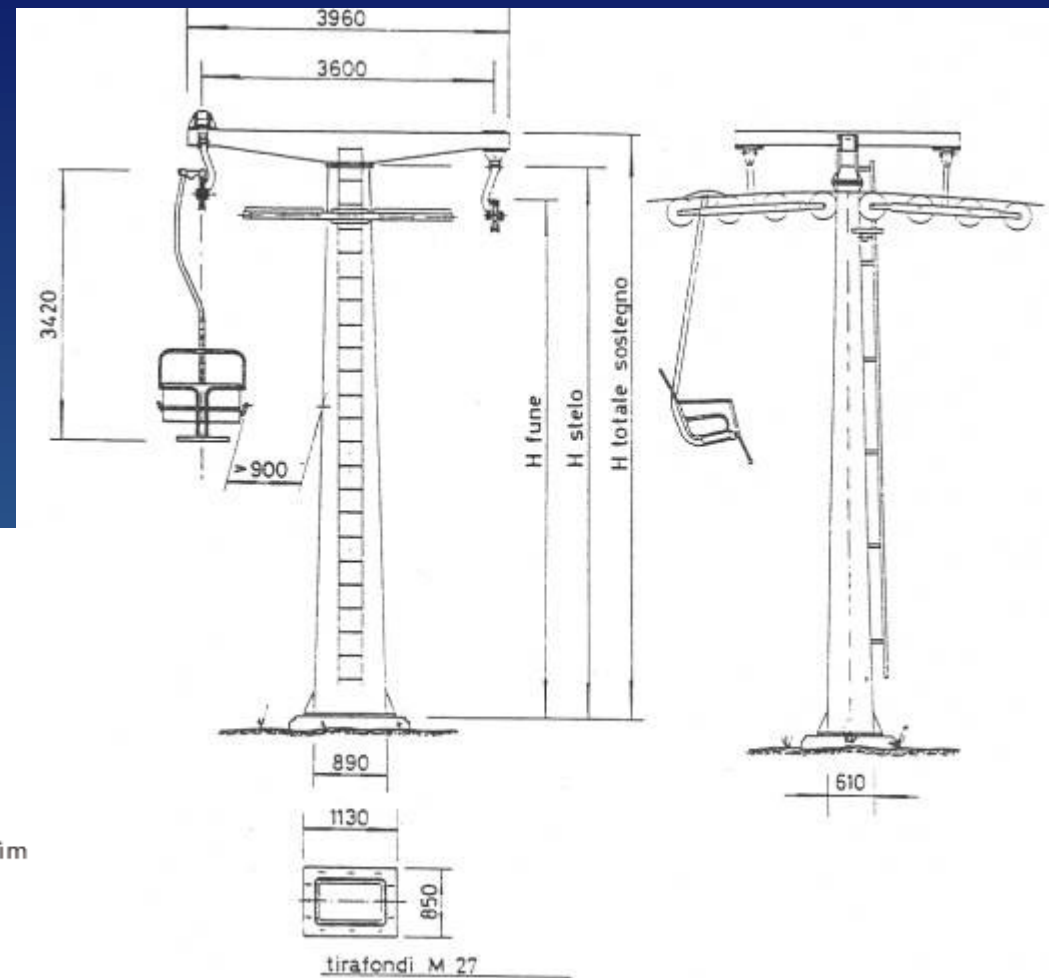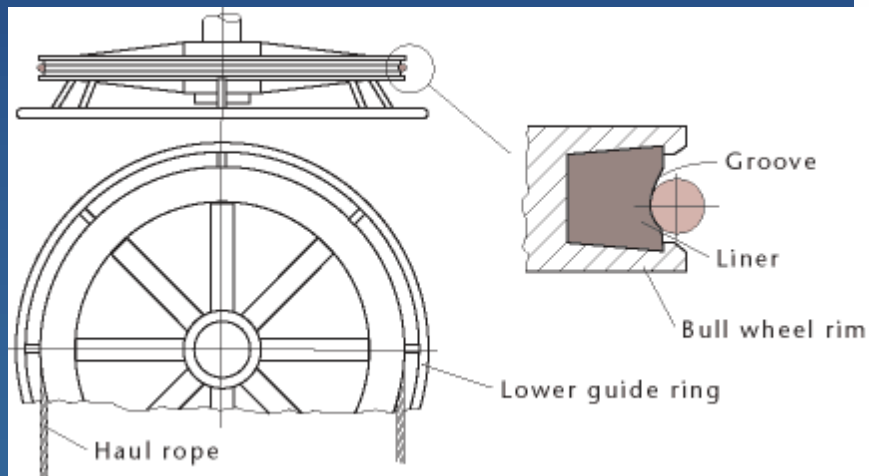- The construction of the steel wire ropes

Anima

Trefolo dell'anima

Fune

Trefolo

Filo

Filo centrale

rondelle a forcina

General aspects (chapter 1)

- The vehicles and the gripping systems
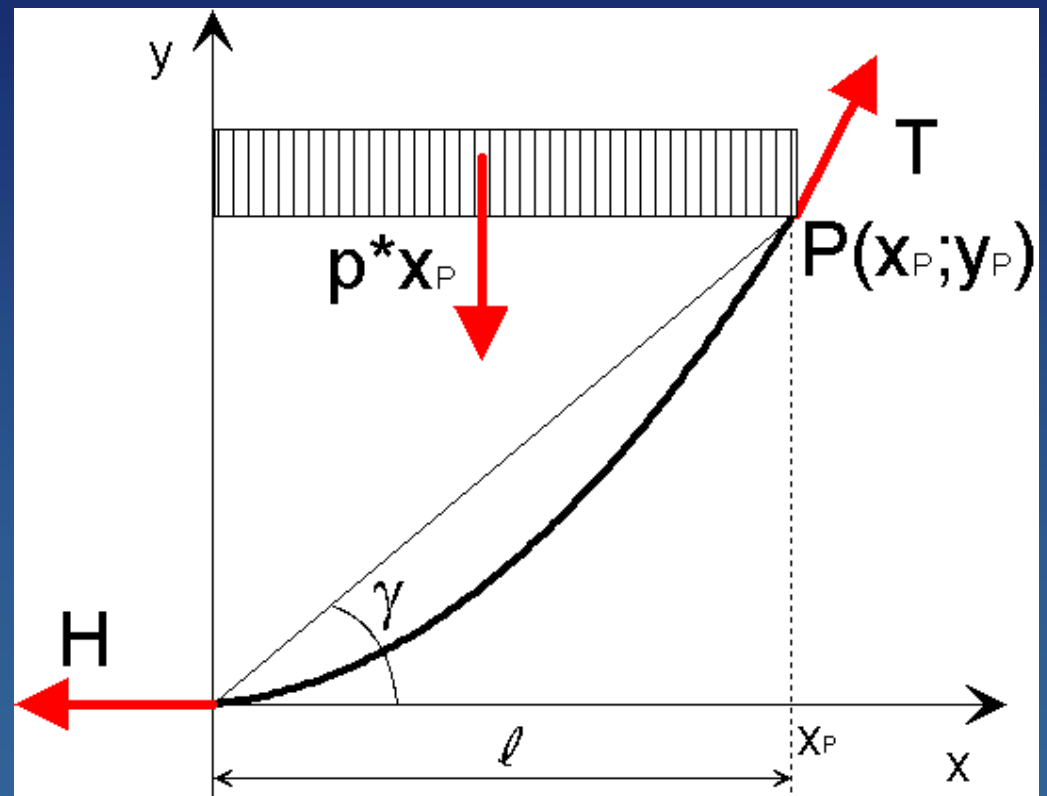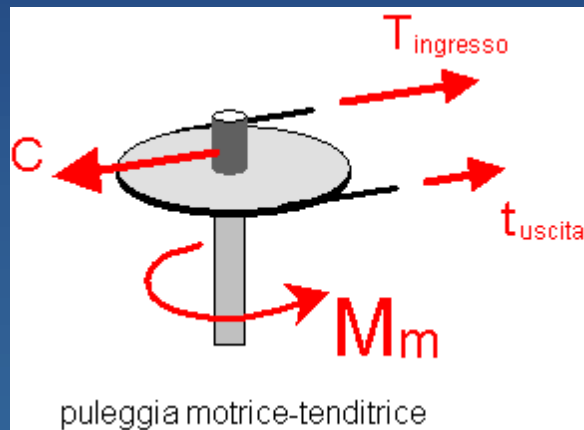

CLOSED   OPEN

General aspects (chapter 1)

- The line and towers

Design and calculation (chapter 2)

$$y = \frac{c}{2} \cdot \left(e^{\frac{x}{c}} + e^{-\frac{x}{c}} \right) = c \cdot \cosh \frac{x}{c}$$
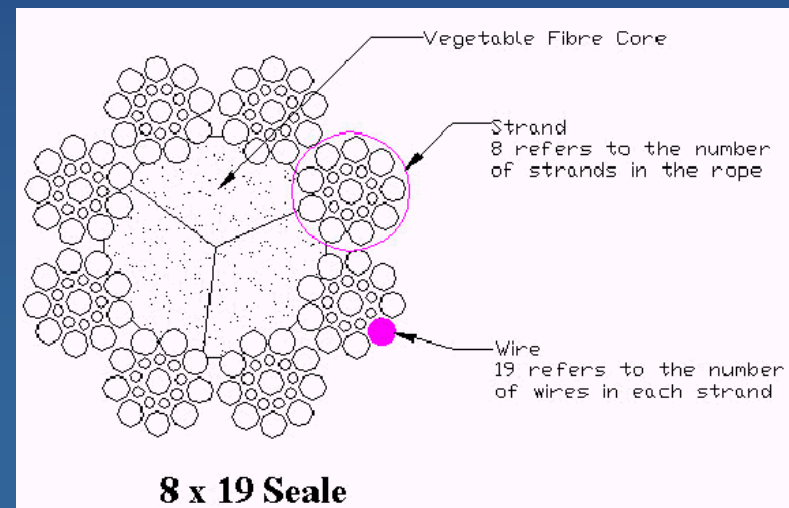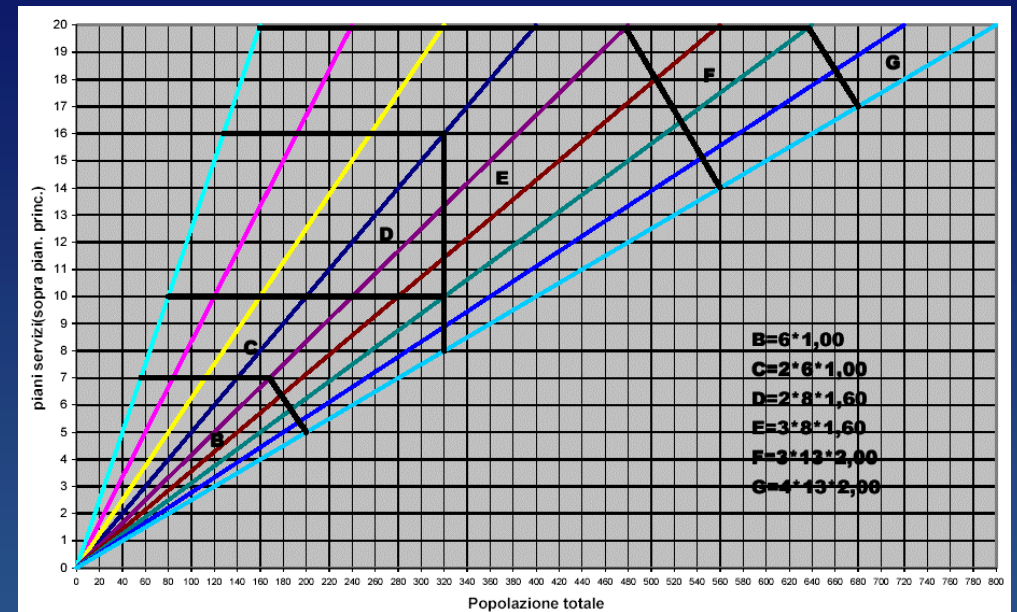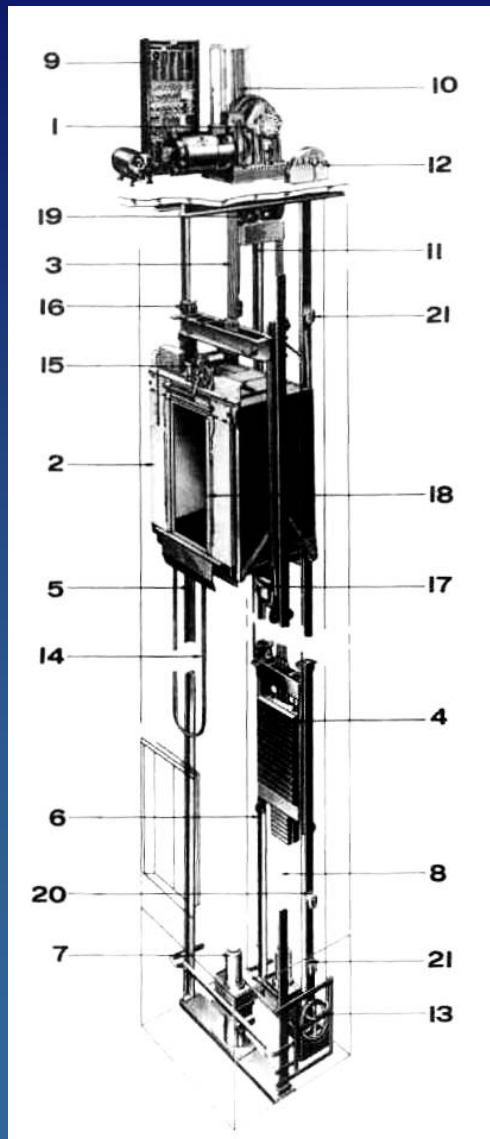

puleggia motrice-tenditrice

Management and operation (chapter 3)

- Example: non desctructive tests on operating ropes

Elevators (chapter 4)

B=6*1,00
C=2*6*1,00
D=2*8*1,60
E=3*8*1,60
F=3*13*2,00
G=4*13*2,00

piani servizi(sopra pian. princ.)

Popolazione totale

Vegetable Fibre Core

Strand
8 refers to the number
of strands in the rope

Wire
19 refers to the number
of wires in each strand

8 x 19 Seale

Elevators (chapter 4)

Design and calculation