

Ropes

- Rope structure

- Fibre

- Basic material

- Yarn

- Twisted fibres in one direction

- Strand

- Twisted yarns in opposite direction

Ropes

- Classification

Defined in 3 main groups according to the material

- Fibre ropes
- Wire ropes
- Synthetic ropes

Ropes

- **Measurements**

Some special measurement units are used to express ropes.

1 pus=1inch=2,54cm ;

1 feet=12pus ;

1 yard=3feet

Ropes

•Calculations

➤ Breaking Stress

$$BS \text{ (tonnes)} = C^2 / 3$$

➤ Safe Working load

$$BS \text{ (tonnes)} = C^2$$

➤ Safety Factor

Ropes

•Rope maintenance

It is important to handle and look after rope well

➤ Fibre ropes:

- ✓ Should be keckled
- ✓ Wash well after use
- ✓ Keep away from moisture

➤ Wire ropes

- ✓ Galvanize
- ✓ Lubricate
- ✓ Keep away from moisture and sea water

➤ Wire ropes

- ✓ Should be keckled
- ✓ Keep away from acidic vapor