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JIS

JAPANESE INDUSTRIAL STANDARD

Vinylon ropes

JIS L 2703—1992

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JAPANESE INDUSTRIAL STANDARD J I S

Vinylon ropes L 2703-1992

1. Scope

This Japanese Industrial Standard specifies the vinylon ropes manufactured from vinylon spun yarns and polyester-blended vinylon spun yarn (hereafter referred to as the "ropes").

Remarks 1. The applicable standard to this Standard is as follows:

JIS L 1030-Testing Methods of Quantitative Analysis of Fibre Mixtures

2. The units and numerical values given in { } in this Standard are based on the traditional units and are appended for informative reference.

2. Classification

The ropes are classified into the following two categories:

(1) Pure vinylon rope

(2) Polyester-blended vinylon rope

3. Quality

3.1 Appearance The ropes shall be finished well without any remarkable stain and friction mark.

3.2 Linear density and mass The linear density and mass of the ropes shall be as specified in Attached Tables 1 or 2. The tolerances thereon shall be ± 5 % for 3-strand ropes and ± 7 % for 8-strand ropes.

The increase of linear density and mass due to dyeing process or resin finishment shall be within 15 % of the linear density and the mass specified in Attached Tables 1 or 2.

3.3 Length A line of the ropes shall have 200 m length, unless otherwise specified. When particularly designated, it shall have the specified length. The tolerance on minus side is not admitted.

Only when particularly specified, a margin length necessary for the tensile test (breaking test) shall be added.

3.4 Tensile strength The ropes shall prove that they have the tensile strength of the value specified in Attached Tables 1 or 2 or over, when subjected to the test specified in 6.7.

3.5 Elongation percentage The ropes shall show the elongation percentage not more than 35 %, when it is calculated by the formula given in 6.8.

4. Materials and manufacture

4.1 Materials The raw yarns used shall be as specified below.

(1) For the manufacture of the pure vinylon ropes, only raw spun yarns of pure vinylon suitable for the ropes shall be used.

The remade material shall not be used.

(2) For the manufacture of the polyester-blended vinylon ropes, the raw mixed spun yarns made from 60 % of vinylon and 40 % of polyester (the tolerance on blending ratio shall be ± 5 %) suitable for the ropes shall be used.

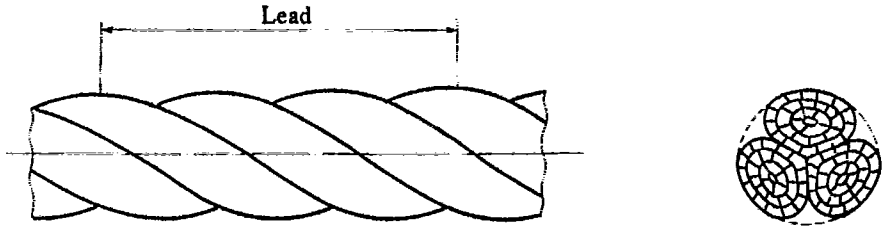
The remade material shall not be used.

4.2 Manufacture The ropes can be subjected to heat treatment, when required, and to dyeing process or resin finishing, when especially designated.

4.3 Plaiting The plaiting shall be done as specified below.

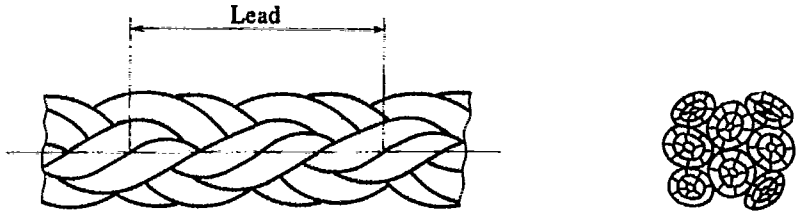
(1) The ropes shall be made to a form of three strands or of eight strands, and the former form shown in Fig. 1 shall be adopted, unless otherwise specified.

Fig. 1. Structure of 3-strand rope



(2) The 8-strand ropes shall consist of each two pairs of doubled four Z-twist strands and of doubled four S-twist strands, and the above two pairs shall be braided together as shown in Fig. 2.

Fig. 2. Structure of 8-strand rope



(3) The number of yarns constituting each strand of the ropes shall be the same with each other.

(4) The 3-strand ropes shall have Z-twist, unless otherwise specified.

(5) A lead([1]) of strands in the ropes shall be not more than 3.3 times the rope nominal thickness([2]) for 3-strand ropes and not more than 3.5 times for 8-strand ropes.

Notes ([1]) The lead is defined as a far-off of a strand generated by one time twisting.

([2]) The rope nominal thickness means the rope diameter, but the rope diameter itself is not specified.

Remarks: Plaiting herein stated implies twisting or braiding the strands.

5. Initial load

The initial load is defined as a load enough to stretch a rope without allowing it to elongate. For the test in which the result is liable to be affected by loading (for example, tests on length, lead and elongation percentage), the value given in Attached Tables 1 or 2 shall be applied as the initial load. The tolerance on initial load shall be ± 5 %.