

## Quality Certificate – EN European Standard

The products below are inspected and produced according to the internal proceedings established by the Quality Department.

This is to certify that all products manufactured by J. Silva Moreira & Irmãos, Lda. use only wire and manufacturing methods that meet or exceed the requirements of:

- EN 10218: 2012\*     Steel wire and wire products – General
  - Part 1: Test Methods
  - Part 2: Wire Dimensions and Tolerances
- EN 10223:2012\*     Steel wire and wire products for fencing and netting
  - Part 1: Zinc and zinc alloy coated steel barbed wire
  - Part 5: Steel wire woven hinged joint and knotted mesh fencing
- EN 10244:2009\*     Steel wire and wire products - non-ferrous metallic coating on steel wire
  - Part 2: Zinc or zinc alloy coatings

\*According to the European Committee for Standardization

- **Product:** Xmor – 130-14-5 – Stiff Stay Knot Field Fence (see image)



- **Description:**

Extra-strong net, especially designed for the protection of hunting areas, forest reserves, motorways and, whenever necessary, highly resistant fencing. The horizontal wires measuring 2,5mm have a high carbon content, ensuring great rigidity combined with the natural flexibility of this alloy. Its special knots twist around the horizontal and vertical wires, making these wires totally fixed.

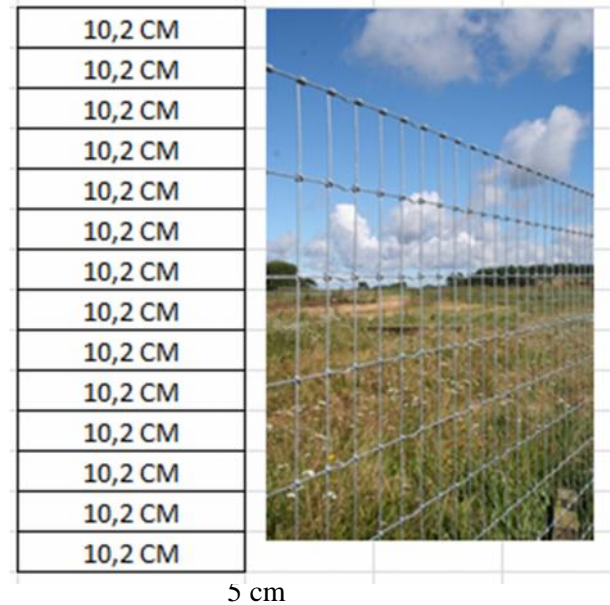
○ **Dimension**

Height: 1,3 m

Line wires:14

Spaces between stay wire: 5 cm

Spaces between horizontal wire 10CM



➤ **Presentation:** 50 or 100m (+/-0,15m) rolls

➤ **Wire diameters**

Selvedge wire: 2,50mm (+/-0,060mm)

Line wire: 2,50mm (+/-0,060mm)

Stay wire: 2,50mm (+/-0,060mm)

Knot Wire:2,5mm (+/-0,060 mm)

➤ **Technique information**

- Selvedge and line wire
  - Tensile strength: 1200/1400 Mpa\*
  - ALUZINC: 135grs/m<sup>2</sup> zinc + aluminium
  - Tensile strength: 700/900\*
  - ALUZINC: 135grs/m<sup>2</sup> zinc + aluminium
- Knot wire:
  - Tensile strength: 450/550 \*
  - ALUZINC: 135grs/m<sup>2</sup> zinc + aluminium

\*reference values



➤ **Force measurements obtained from the knot**

Force required to dislodge stay wire: 764.4N

Force required to dislodge line wire: 555.8N

➤ **Quality Control**

All wire that is supplied to JSM must be followed by quality and test certificate to that lot, and that certificate tension of wires and zinc coatings. Please see some of the certificates we get from our main supplier.

When we start the production of any specification we test a roll on field, making sure fence is well made and wires answer to the request. There is no better way to make sure fence is with necessary quality than to test it in the outside field, using tractors and all necessary tools.

When new fence is started, with new specifications, worker must follow internal rules of quality control:

- Check diameter of roll: machine must roll the fence following the diameters established, making sure roll don't have the look of telescope.
- He must check that during production, especially at knots and top and bottom, zinc of wire is not breaking.
- Worker must pay attention to all wires, making sure that are no broken wires or with bad twist (at knots and top and bottom). The machine fixed knot fence have an automatic quality control: when any knot is not well made or the wires break the machine stop automatically, giving on the computer of the machine about what is the problem and where on the fence is the problem.
- Knot must be pushed by the worker, randomly, during all production: beginning – middle-end, in order to test if they are fixed and cannot be moved by human hands.

**Quality Department**