

The Relation Between Cable Sheath Thickness And Cable Quality

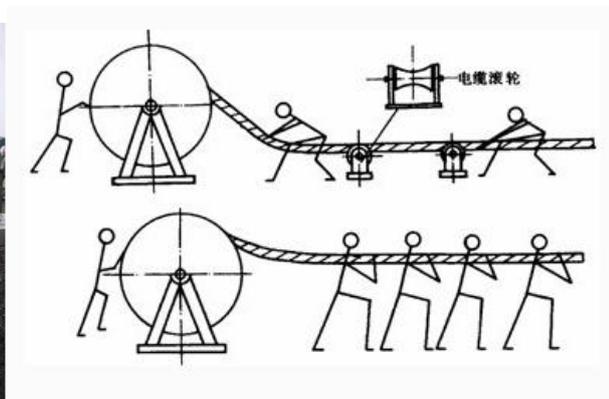


First of all, what the impact will be if power cable sheath thickness does not meet the standard?

1. Reduce the use life of cable products

This question is easy to understand. After the long time running, especially in the the environment that cable is directly buried, soaked in water, exposed in the open air or susceptible to corrosion, due to long time corrosion, the level of insulation and mechanical of sheath thinnest point will fall. Plus, routine sheath testing or the fault occurring of line grounding, the thinnest point may be breakdown, In that case, the protection will be lost. In addition, internal consumption also can not be ignored, long-term electric wire and cable will generate a lot of heat.

2. Increasing the difficulty in the process of laying



With the development of global industry, more and more environmental request high voltage cable should have small outer diameter, so keeping gaps need be considered in the process of laying, so that the heating of cable can be sent out. Over-thickness will increase the difficulty of laying. So the thickness of sheath must strictly comply with relevant standards, otherwise, the cable can not be protected. So it is not wise to blindly pursue the thickness.

In a word, product quality is firstly reflected from the appearance of products, whatever the product, or semi-finished products, the appearance quality must be paid attention, it need be strictly controlled and checked. Sheathing is the appearance of cable, it needs smooth and rounded, uniform luster, unbiased core (shall not exceed the stipulated deviation). No mechanical damage, flattening, without sundry, bubbles, sand holes, clear grain, bamboo, twist, etc. Besides, the sheath thickness will impact of the cable quality.

If the sheath thickness is less than the standard, cable is not qualified. Over standard thickness is also not qualified. For example, cable model is DLD-KYJV22 3*1.5MM², the average thickness of sheath is 1.7mm, this model refer to the requirement of GB9330-88, the thickness should be 1.2mm, how to control the cable sheath thickness?

1. According to the standard to calculate control sheath thickness, calculation formula: D (the outer diameter before extruding) * 0.035 + 1;

2. On-line measuring thickness of sheath: sheath thickness = (The perimeter after sheathing minus the perimeter before sheathing) / 2π

Or, sheath thickness = (The perimeter after sheathing minus the perimeter before sheathing) * 0.1592;

3. The thinnest point of single core sheathed: nominal value * 85% minus 0.1;

4. The thinnest point of multi-core sheath: nominal value * 80% minus 0.2;

5. Raise the temperature of low density polyethylene sheath extruding machine, improve the stress cracking strength, because of too high extrusion temperature, easy to make plastic charred, or "skid" phenomenon; In addition, the shape stability of the extruded layer is bad, shrinkage rate increases, even cause extrusion plastic layer discoloration and appear bubbles, etc.;

6. Do the extruder and screw cooling system to eliminate friction heat, in order to maintain the heat balance



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in the process of extrusion, stable extrusion pressure, plastic mix uniform, improve the quality of plasticizing.

To sum up, in the process of production, we only operation equipment carefully, according to the standard requires to strictly control of sheath thickness, both for the enterprise to save resources, reduce material consumption, increase profits, and can ensure the quality of cable, create a high quality and low price products.

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