Plastic Layer

Ropes with a plastic layer

Ropes with a plastic layer between the steel core and the outer strands combine the advantages of a fibre core (the soft bed for the outer strands) with the benefits offered by full steel ropes (high geometric stability, greater metallic area and high breaking loads). Ropes with plastic layer are manufactured by taking an independent wire rope core that has been thoroughly lubricated and coating it with a plastic layer over which the outer strands are laid. The plastic layer forms a custom moulded cushion layer or a bed for the outer strands. It fixes the elements of the rope in relation to each other, acting rather like a corset which maintains the rope’s stability, even under the highest external forces. The most effective remedy against birdcaging is to use a CASAR rope with an internal plastic layer. By sealing the core, the plastic traps lubricant and ensures a maintenance free core with lifetime lubrication. At the same time as the plastic seals in lubricant, it also excludes water and abrasive elements that could penetrate conventional ropes. Plastic layering also prevents strand to strand contact and destruction. The stability of this type of rope also means that installation is far less problematic, even with langs lay constructions.
Under dynamic loads the plastic layer acts as a buffer or shock absorber and reduces peak loading of the rope.

Where large fleet angles occur, increasing the risk of birdcaging or where the rope is stressed by great external forces (e.g. multiple-layer spooling), or where high dynamic loadings are likely, a CASAR rope with a plastic coated core is the best possible choice.