

Knitted Wire Mesh



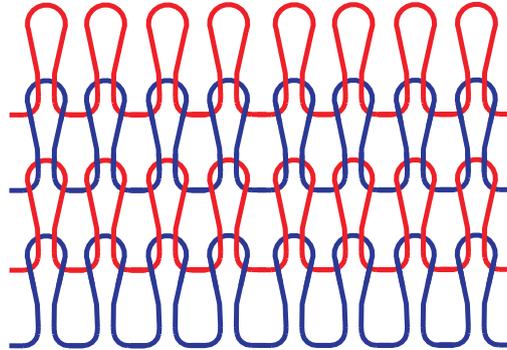
Release 5

© 2008/2



Knitted Wire Mesh

Knitted wire meshes have a typical structure. These meshes thanks to their great ductility, allow for making bodies of quite different geometry and density that grant them noticeable physical and technical qualities making them suitable to meet a wide range of (industrial) applications. Specific knitted structures are also called technical textiles.



Simplified schematic layout of knitted mesh (basic style)

Knitted wire mesh can be made from any material that can be drawn into wire form or shape. Materials that can be used for knitting are for example: Nylon™[*], polypropylene, (high density) polyethylene, polyester, aluminium, (tinned) copper, (galvanized or plain) steel, many stainless steel grades, exotic alloys like Inconel™[*], Monel™[*], Hastelloy™[*], etc.



Synthetic fibers, plastics and other materials can be co-knitted with one another to enhance product capabilities (strength, thickness, etc.), surface conditions and filtration characteristics. These materials can be knitted for example in parallel with a metal wire, thus increasing its effective surface area, which is an important characteristic in entrainment separation. In such cases, the metal wire acts as a structural support and binder.



Knitted structures consists of wires of various materials or combinations of other materials that have been knitted into a mesh structure. The knitted structure produces a matrix of interlocking loops that can move relative to each other in the same plane without distorting the mesh.

Each loop is actually free to move in three directions, and the finished knit permits two-way stretch. Also, each loop can act as a small spring when subjected to compressive stress. Thus, compressed knitted wire mesh yield to shock or vibration stresses, but immediately resume their original form when the force is relieved.

* Nylon™, Inconel™, Incoloy™, Monel™, and Hastelloy™ are registered product names of their respective trademark holders

Many knitting styles are possible; also 3-dimensional structures. Averinox delivers often as your application and derived specification.

Applications for knitted wire mesh in the industrial field are numerous:

Reinforcement or support in composite materials: to reinforce and give structure to components like non-wovens, tubing applications, rubber, tapes etc.

Entrainment separation / gas-liquid separators: generally applied to remove droplets carried by vapour streams in order to reduce the loss of expensive products, prevent the corrosion of downstream equipment, increase product purity, etc. Applications can be found in among others the (petro)chemical industry.

Spacing: to create a constant distance in between components (like filters or membranes).

Flow aids: enables and facilitates the flow of resin into a mould. application in industries where composites are processed and shaped.

Protection: to keep persons and body parts out of machines.

Signalisation: to indicate dangerous areas or to indicate location of cables/pipes etc.

Other industrial applications (mainly metal knitting structures) are for example gaskets, sealings, expansion joints, electronic EMI/RFI, shielding, power cable splicing, shock and vibration absorbing, etc.

More information is available on request.

Contact

We have pleasure in advising you by the application of knitted meshes.

Averinox BV

Wateringweg 32, 2031 EJ Haarlem, Netherlands
Postbus 2605, 2002 RC Haarlem, Netherlands
T +31 (0) 23 5379740 F +31 (0) 23 5389307
info@averinox.com www.averinox.com

