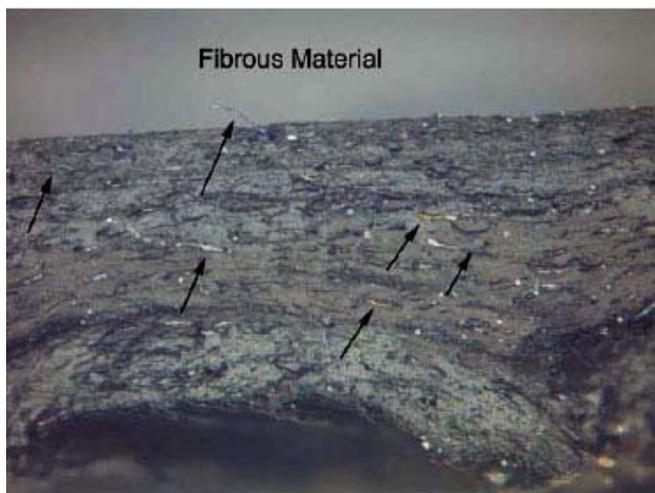


Fiber is a natural or synthetic substance that is known longer than it is wide. Fibrous materials have been used in various fields over the years. Fiber has often been used to manufacture other materials. The strongest engineering materials tend to put fiber to good use. Synthetic fibers, however, are cheaply produced compared to the natural ones. But when

it comes to clothing natural fibers are more comfortable.



Fibrous Materials and their Uses

The use of fibrous materials in civil engineering, both as structural reinforcement and in non-structural applications such as geo-textiles, is an important and fascinating development. Fibrous and composite materials for civil engineering applications analyze the types and properties of fibrous textile

and structures and their applications in reinforcement and civil engineering. Fibrous materials are known to capture the air within the fibers and this prevents heat transmission by convection and limits gaseous heat conduction by minimizing collisions between gas molecules. They are hence suitable or pretty much perfect materials for effective thermal insulation. Moreover, due to their porous structure, fibrous materials offer good sound absorption and are widely used in acoustic insulation. Fibrous materials are usually flexible, but made rigid, by means of additives, into desired shapes. Until the mid-twentieth century, most of the usage of fibrous materials reserved for clothing and other household uses. About the end of the twentieth century, high-performance fibers were available for use in a fabric form or as reinforcements for making composites. Synthetic fibers are a favorite for non-textile operations as they are generally very stiff and strong.

Fibers are often used in the form of a yarn because a multi-filament yarn is more flexible and pliable than a solid monofilament of the same diameter. Knitting is another way of producing fiber and it involves interlacing of yarn and it has high extensibility in all directions. Braiding involves interlocking of the yarn in a bias and it has high torsion stability. Production of these textiles involves a lot of low-density fibers, whether it is to produce yarn, cloth or clothing. The fibers can easily nest together and get stuck between pleats of conventional cartridge filter making them very difficult to remove during pulse cleaning and building up pressure drop on the filter. Even though there are difficulties related to it, the advantages are enough to overcome them.