Anti-Vibration, Sound Attenuating & Heat Shield Components

KnitMesh Technologies® mesh has several features which give it a unique ability to absorb energy resulting in a material that is able to reduce vibration, attenuate sound and dissipate heat.

In the knitting process wire loops are created that act like tiny springs which return to their original shape after being subjected to compression.

How They Work

The loops are free to move in several directions allowing knitted materials to have natural resilience and to vibrate when sound energy hits the wires. When vibrating, the wires convert sound energy to thermal energy and so create a sound dampening effect. Compressing knitted wire mesh in a die creates an element that has a tortuous air path resulting in intricate passages that also attenuate sound by absorption. All these features enable the material in a variety of forms to perform all three of these functions and in some cases all of these functions in the same application. Commonly these components have applications in automotive exhaust systems, aerospace, marine and air tool industries.

Features and Benefits

- Highly effective absorber of heat, sound and vibration energy.
- Able to withstand very high shock loadings.
- Capable of operating in high temperature, corrosive and hostile environments that no other material can.
- Being manufactured from metal allows highly efficient heat conduction.
- Can be produced in circular, rectangular, and cylindrical form.
- Low cost tooling enables prototypes to be manufactured quickly and inexpensively.
- Fixed easily and cost effectively by riveting, spot welding, bolting or simply side wall friction.

Quality Assurance


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