

Micro & Fine Technology made of stainless steel wires

Finer than a hair, yet as strong as steel: Nippon Seisen adopts 'Micro & Fine Technology' to develop the world's thinnest stainless-steel super-fine wires and metal fibers, which have a range of applications across several industries

Japan is seen as a hub for high-performance, cutting-edge technologies, and this is also true in the stainless steel wire and metal fiber industry, where companies are now required to make thinner, stronger and more precise materials for a range of demanding hi-tech industries such as automotive, IT, energy and healthcare.

A global leader in the manufacturing of stainless steel wires and metal fibers, Nippon Seisen is building on the technology it has developed over its 66-year history to supply high-quality, next-generation materials that support the high performance of its customer's end products.

The company's product portfolio of what it calls 'Micro & Fine Technology' includes: the world's thinnest stainless-steel super-fine wires (which the company boasts are finer than a strain of hair); high-strength, heat-resistant stainless-steel spring wires; and its 'NASLON' stainless steel metal fibers. Available in cloth, felt, knit, tape and other variations, these metal fibers have the same level of workability and flexibility as

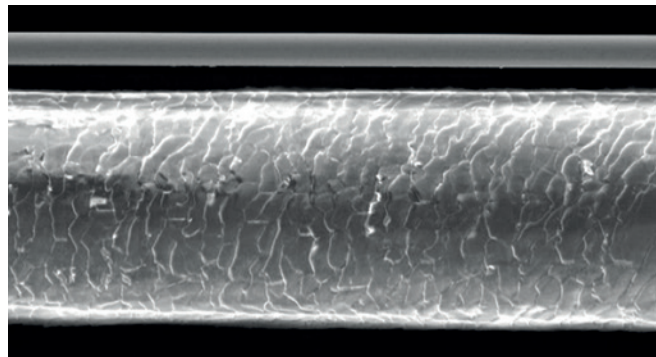
a textile fiber, but with the added strength of stainless steel.

Employing its superior stainless-steel fibers such as 'NASLON', Nippon Seisen also manufactures metal filters used in carbon-fiber manufacturing and ultra-high-purity gas filters used for semiconductor production equipment, which are characterized by superior particle removal capability and low pressure drop.

A special steel manufacturing engineer by trade, the company's president, Mr. Motoshi Shinkai is unequivocal about the competitive advantages of his company and Japanese manufacturing in general over its regional competitors such as China and Korea.

"When producing products that requires compactness, lightness and high performance, it is a prerequisite to have a high level of skill and cutting-edge technology that includes material, processing technology, components performance, production machinery, tools and molds. Japanese manufacturing superiority is in the high level of communication and mutually supportive culture that exists between extremely competent, specialty-focused small to mid-sized companies specialized in material processing," he says.

The competitive strengths of Nippon Seisen in particular lies in its 'Micro & Fine Technology' and cutting-edge product development carried out in collaboration with its customers, as well as its high-quality raw materials. These materials are sourced from the best



Nippon Seisen's stainless-steel super-fine wires are almost eight times thinner than a strain of hair

special steel and alloy suppliers in Japan, including its parent company Daido Steel.

Indeed, Nippon Seisen's cutting-edge products are the result of the painstaking work of its R&D department, which has recently developed a hydrogen separation membrane (HSM) for high-purity hydrogen gas production and purification. This innovation is already drawing interest from those in the automobile industry developing hydrogen fuel cell vehicles, and also has applications in the oil & gas and semiconductor industries.

"Our R&D is market-oriented as we develop materials required by society. Our target market is firstly the automotive sector, then the environment and IT, and finally the medical sector," says Mr. Shinkai.

"Even though stainless steel, metal fiber and Micro & Fine Technology is a limited field, the range of applications these products have is huge. We have a wide range of high-performance, exclusive products and we want to become a leader in a global niche market."



"Even though stainless steel, metal fiber and Micro & Fine Technology is a limited field, the range of applications these products have is huge. We have a wide range of high-performance, exclusive products and we want to become a leader in a global niche market"

Motoshi Shinkai,
President, Nippon Seisen

NIPPON SEISEN CO., LTD. **Micro&Fine Technology**

Since 1951, Nippon Seisen has been supplying value-added items such as stainless steel wire-based NASLON (metal fiber) and high alloy steel wires to customers all over the world. As the leading supplier of stainless steel wires, we will continue to lead the industry by developing next-generation materials based on our "Micro & Fine Technology".

