

Press release

The Bender Group and Ingpuls enter into strategic cooperation

Start of joint activities in the production and development of ultra-fine wires made of shape memory alloys

Hagen and Bochum, October 30, 2024: The Bender Group and Ingpuls announce that they have entered into a strategic cooperation. The management boards of both companies signed a development and cooperation agreement on July 31, 2024.

Over the past two years, an intensive and successful cooperation has developed between the material and production specialists of both companies at various levels, from which both companies and their customers will benefit in the future. In future, the collaboration will be extended to other corporate areas, such as marketing, sales, digitalization and organizational development. The common goal is to pool strengths and expertise and prepare the companies for the changing requirements of the future through an open exchange of experience. One focus of the technical cooperation will be the development and production of increasingly delicate, high-purity wires made from nickel-titanium shape memory alloys. Millions of such wires are already being used in the autofocus systems of modern smartphones or as braided neurostents for the treatment of aneurysms in healthcare. Special quaternary shape memory alloys are also already being developed, which are expected to contribute to sustainable heat pumps and chillers in elastocaloric applications via endothermic solid-state phase transformation in the future.

“Over generations, our sites in the southern Ruhr region, the Sauerland region and the USA have made us the largest wire drawing plant independent of steel producers, and today we support the technical progress of many key technologies by manufacturing highly specialized wires from stainless steels with diameters from 15 mm to 0.011 mm. The collaboration with Ingpuls is a logical next step in the exciting development of our possibilities to push the limits of wire processing,” says Ingo Bender, Managing Partner of the Bender Group around Hagener Feinstahl GmbH. *“In Ingpuls, we have found a partner whose expertise in the field of shape memory alloys is groundbreaking worldwide and, together with our process knowledge, will lead to new milestones in wire technology. We are also united by our regional ties to the southern Ruhr area and the desire to be part of the structural change in our region.”*

Dr. Burkhard Maaß, founder and Managing Director of Ingpuls GmbH, comments on the collaboration as follows: *“From the customer perspective, we are observing a steady increase in demand for wires with diameters well below 100µm. Especially in the actuator market of shape memory alloys, smaller cross-sections result in higher dynamics for the applications, which greatly increases the technical possibilities and fields of application. In medical industry, on the other hand, the advance into ever smaller dimensions allows the production of ever more delicate instruments or stent implants, which significantly improves success in the treatment of neurovascular diseases. If we now look at the Bender Group with its long tradition and enormous experience in wire drawing and contrast this with the fact that we at Ingpuls were able to produce 75µm wires for the first time less than two years ago, the stainless steel wire experts “on our doorstep” are the ideal development and production partner from whose wealth of experience we can benefit incredibly. In other areas, however, we are already very advanced and here we would like to share our models, approaches and experience in return. This results in a perfect symbiosis between two very different regional companies.”*

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