



Höganäs

ArcX

Technology Centers

SUPPORT YOUR SUCCESS IN SURFACE COATING

Your starting point for innovation



ArcX technology centers are committed to supplying the best technical services to the surface coating industry. Our technical offerings are for you who work with coating applications and the starting point for innovation. By creating ArcX in Höganäs, we have established a center point where your technical requests connect with our internal resources.

Driving your business

We strongly believe that the foundation of creating new business opportunities for you is in the power of developing close relationships, and supporting your visions and goals. At ArcX, our experts take your biggest technical challenges and help you with every step of the surface coating journey.

ArcX

Technology Center

ArcX Technology Centers – a global resource

Being the number-one powder producer in the world, Höganäs' brand has come to represent reliability, consistency, and innovation. Once you partner with any of our ArcX technology centers, you will stand to reap the benefits of a true global partnership.

We have five ArcX technology centers that are strategically located and able to serve customers across the world. The close cooperation between our technology centers makes ArcX your local resource, providing you access to expertise from all over the world.

- ArcX Europe
 - Sweden
 - Germany
- ArcX Asia
 - India
 - China
- ArcX North America
 - USA
- HRC - a subsidiary company of Höganäs in Brazil that also provides coating development support



A coating development partner



At Höganäs, we believe the maximised application performance comes from the combination of the right material and the right process. By working with us, you will have complete access to our world-class product portfolio, a multitude of processes, and application knowledge to identify the best coating application solutions for your needs.





We provide you with the right material, for the right process to the right application.

Our experts specialising in materials, processes, and customer applications make ArcX a development partner with full concept-to-market know-how. From concept development, prototyping, and process optimisation to taking them to the market.

Full end-to-end services



- Application development
- Process optimisation
- Training

Focus on customer satisfaction



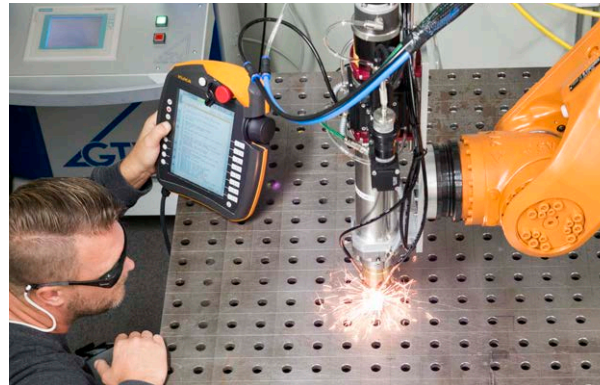
Application development to design the right solution for your needs

Pre-analysis: examine service conditions (operating environment, equipment, temperature, substrate properties) and translate them into coating requirements (wear and corrosion properties, clearance control, thermal insulation, etc)

Concept creation: identify the relevant chemical composition and coating properties

Prototyping: sample coatings, pilot production, and test for industrial production

Coating analysis: process feasibility examination (smoothness, weldability, efficacy), coating performance evaluation (physical, mechanical, wear and corrosion properties) and simulating realistic test conditions



Process optimisation to enhance coating performance

Process support: Guidance in finding the right process parameters for coating applications

Problem solving: On-site troubleshooting and failure analysis to solve operational challenges



Provide training to build a more professional workforce

Continuous learning: Tailored to specific needs, ArcX brings specialists to conduct seminars and workshops in materials, applications, processes, and industry knowledge. Either at ArcX facilities, or on site at customers and end users.

Material development & innovation

We get inspiration and input for material innovation from the cooperation between ArcX and our customers.

We research and develop next-generation material solutions tailored to both new and existing coating demands and trends. The concept from material innovation will be further validated by our ArcX surface coating technology centers. Every day, our first-in-class experts specialise in material science and engineering work across the world, connecting with external partners, customers, and end users to bring the best thinking and ideas together, then put them into practice.



Data-driven approach to develop new material concepts

With our multi-scale material modelling experts predicting the physical, mechanical, wear and corrosion properties of new products, we are capable of applying ICME (Integrated Computational Materials Engineering) for generating new product concepts. Instead of extensive traditional empirical alloy experimentations, we first screen out the most optimal solutions through Materials Genomic Databases and Process-Structure Modelling & Simulation, then proceed to practical experiments with time and cost efficiency.



Translate science into product through powder engineering

Thanks to our world-class manufacturing process and material characterisation and analysis experts, we produce the pilot powder based on the new material concept. Then we test and validate the new material whether it could fulfil defined physical, mechanical, wear and corrosion property requirements for the target application in ArcX.

Scale-up validation to achieve industrial production

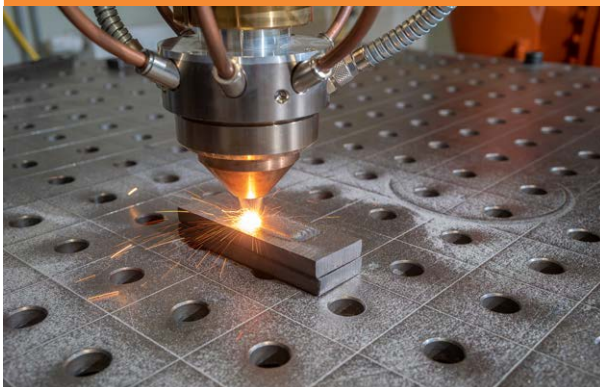
We are pushing the boundaries with continuous progress while optimising the material for real-life production. The collaboration between product development experts and manufacturing process experts, as well as the high-quality and consistent production route ensure the new materials are of the same properties and qualities in the industrial production environment as we had in the pilot test, with less operating cost and increased productivity. We are striving to create new materials that can achieve the best thinking and ideas in our vision for industrial production.



Multiple assets for coating development



There is no coating development without a state-of-the-art process. We have a wide range of advanced equipment to allow different coating processes to flourish.



Surface Welding

- Laser cladding (LC), including inner-diameter application (ID)
- High-speed laser cladding (EHLA)
- Plasma transferred arc (PTA)
- Powder welding

Thermal Spraying

- High-velocity oxygen fuel (HVOF), spray (liquid and gas fueled)
- High-velocity air fuel (HVOF), spray (incl ID spray)
- Atmospheric plasma spraying (APS), including cascaded plasma torch technology
- Powder flame spraying (with oven, flame, and induction fuse capabilities)



Tests and evaluations

Our rigorous testing and evaluation techniques facilitate the coating development, and ensure the solution fits our design purpose with the highest quality standard:

- Metallography
- Mechanical testing (bond strength, hardness)
- Wear testing (abrasion/impact, adhesion, galling/sliding, erosion)
- Corrosion testing
- Cavitation testing

Metal powder technology has the power to open up a world of opportunities. The inherent properties of metal powders provide unique possibilities to tailor solutions to match your exact requirements. Our ambition is to constantly widen and grow the range of metal powder applications. That's what we call the Power of Powder. With our leading position in metal powder technology, Höganäs is perfectly placed to help you explore these opportunities.

ArcX facilitates innovation, where we apply Höganäs' competences and invite you to interact with us to develop new and improve existing surface coating applications. Höganäs has the means to add value, from idea to full scale manufacturing processes. Our support can be anything from evaluating coating processes to making theoretical calculations. At ArcX we offer various services, where unique competence and expertise are available for all our existing and potential partners – because at Höganäs, we focus on customer success.

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