BOPP

Engineering, Fabrication and Logistics

SWISS PRECISION

bopp.com

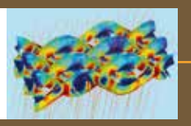
THE DIRECT ROUTE TO CUSTOMER SATISFACTION

ENGINEERING, CONSULTANCY

- CHOICE OF MATERIAL

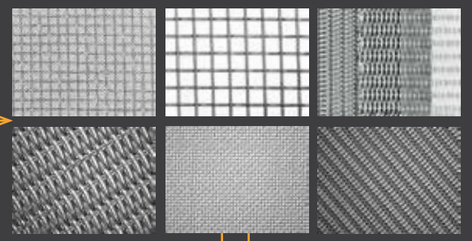
- APPLICATION TECHNOLOGY, COMPONENT DESIGN

- ANALYSES, OPTIMISATION



- CERTIFICATION, EXPERTISE

MESH SELECTION



- THERMAL AND CHEMICAL FINISHING

- MECHANICAL UNIT OPERATION

- SPECIALS

- PROTOTYPES, ONE-OFFS

- VOLUME PRODUCTION

- EQUIPMENT AND KNOWLEDGE BUILDING

- REPLACEMENT PARTS

- OEM PARTS

- ONSITE SUPPORT

CHALLENGES

CLIENTS

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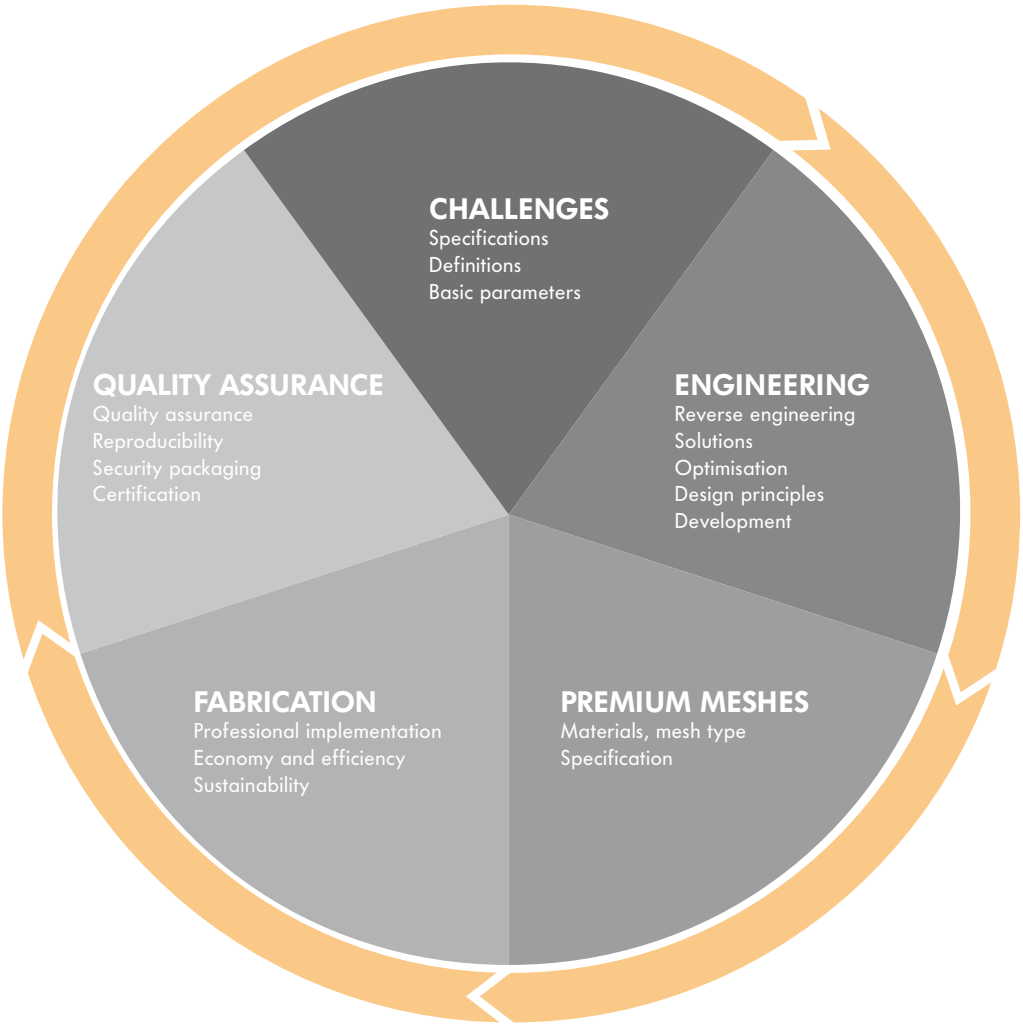
Bopp's core competence lies in the weaving of fine meshes using stainless steel, and over the years the company has established itself as a solutions provider for a range of industries. In addition to this, for applications in filtration, sieving, screen printing and design, close cooperation with countless customers in many different fields means the organisation can offer a valuable and comprehensive range of experience in every sphere.

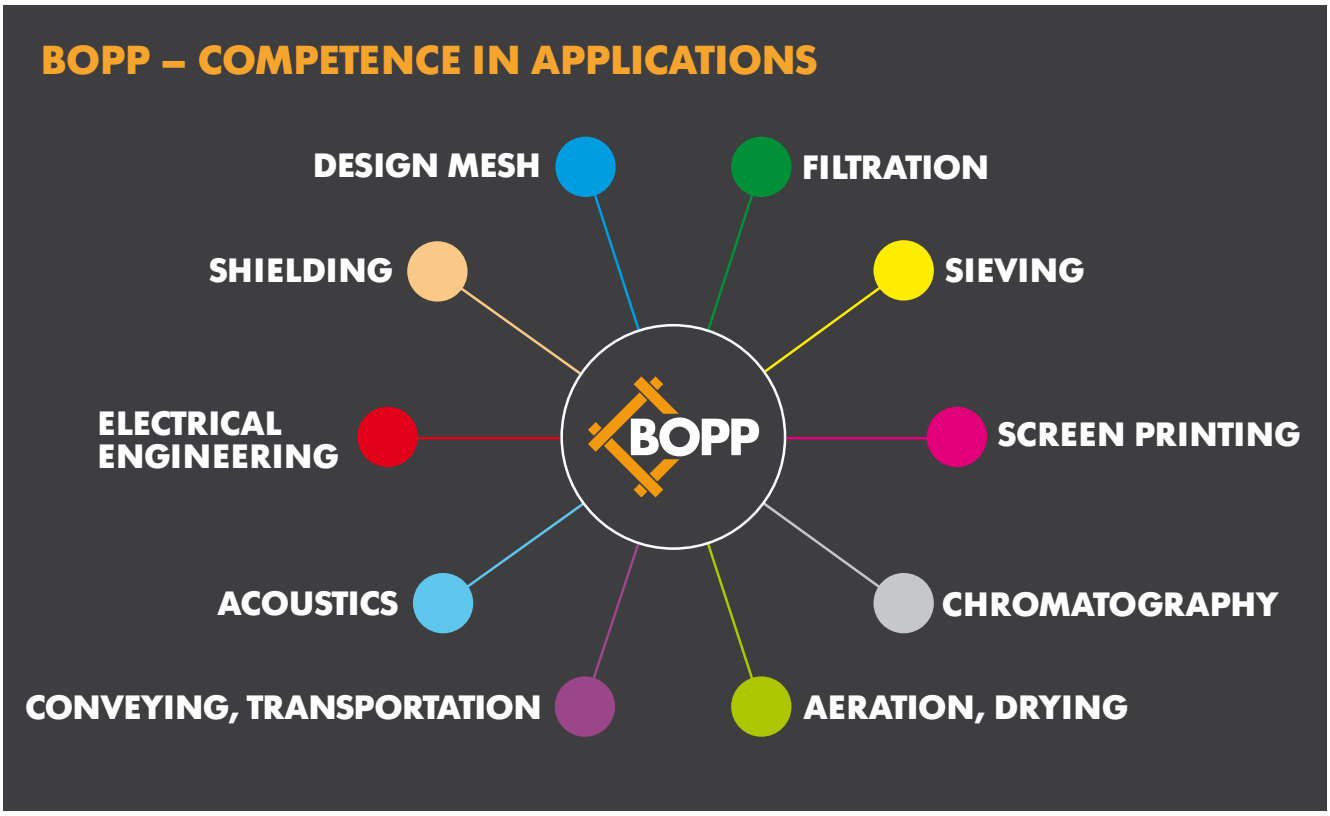
This knowledge and experience, based on practical applications, trials and improvements, has resulted in convincing solutions for many different projects and has had a lasting effect on many processes. Dependent upon specification, our meshes are advanced and highly technical products, and correct handling presents significant challenges when undertaking processes including cutting, stamping, welding, forming, stretching or edging. Specially designed equipment and decades of experience play a vital role in achieving optimum results.

Customer interest focuses not on the mesh, but rather on process qualities such as economy and efficiency. This is exactly where Bopp positions its range of services, covering new build, process improvements, redesign or replacement.

PROCESS QUALITY FOR PREMIUM RESULTS IN USE



BOPP – COMPETENCE IN APPLICATIONS



EXPERIENCE IN THE CONSTRUCTION OF COMPLEX COMPONENTS

We understand even the most challenging requirements from diverse industries across the world, and have achieved many often revolutionary solutions.

JOINT PRODUCT DEVELOPMENT WITH OUR CUSTOMERS

You understand your process, we undertand solutions that have proved their worth in similar situations. Knowledge transfer provides the best route to meet the challenges of the future.

ECONOMY AND EFFICIENCY IN MANUFACTURING

Solutions are particularly effective when they fulfill these challenges too. We utilise modular production units to achieve best value in terms of productivity and to reduce costs for our customers.

ENVIRONMENTAL CONSERVATION AND RESOURCE AWARENESS

Our technical facilities meet the latest standards in terms of energy consumption and environmental sustainability. We are active participants in programmes designed to reduce our energy requirement, and belong to the Cleantech organisation.

SINGLE SOURCING MEANS SECURITY

With significant potential for value creation from the original wire though to the finished product, interface problems and quality issues are kept to a minimum. Long tern relationships with our suppliers ensure optimum security of supply.

THE UNIVERSAL PRINCIPLE OF QUALITY

All our manufacturing businesses are accredited to recognised international quality standards. This also applies to all other areas including sales, administration, logistics and IT.

REPRODUCIBILITY MEANS PROCESS RELIABILITY

We maintain process-oriented procedures from development through to final production stage. All data is securely backed up and available at any time.

ENGINEERING, CONSULTANCY

In many cases, it is not simply a question of manufacturing a standard product or a replica, but rather a new development or the sustainable optimisation of an application result. To achieve this demands a real understanding of all the factors involved. What are the disadvantages of the current solution, what changes are absolutely necessary and which are simply preferable?

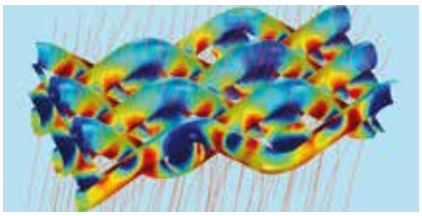
What challenges does the component face; physical, thermal, chemical? What are the installation and maintenance challenges? Based on these fundamental principles, factors such as material, mesh properties, styling and component design can be established; these are essential for the quality and efficiency of the processes in question. Our experience across thousands of applications in the most diverse industry sectors is the foundation stone for our consultancy services. Our technical infrastructure and our advanced test and analysis procedures enable us to establish and rectify the reasons behind issues and failures.

DEMAND ANALYSIS, MATERIAL SELECTION

- Process performance requirements
- Type of loading; mechanical, thermal, chemical; stability, corrosion
- Cleanability properties of the selected mesh
- Materials, mesh and component costs
- Costs involved in the downtime required for maintenance
- Coatings, laminates
- Visual requirements

ANALYSES, OPTIMISATION

- Failure Mode and Effects Analysis (FMEA)
- Investigation of reasons behind damage or malfunction
- Performance optimisation, efficiency gains, extending service life, improvements in economy
- Comparative measurement of filter fineness, mesh type, stability
- Laboratory testing, trials, software simulation
- Microscopic analysis, material analysis
- Environmental sustainability

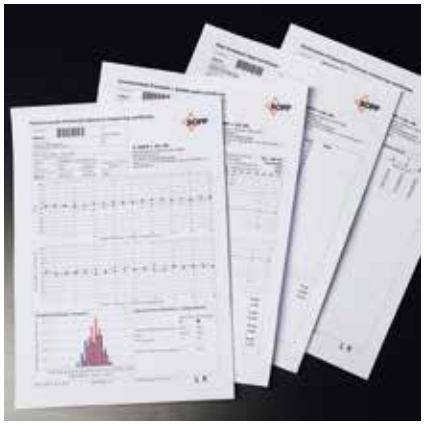


APPLICATION TECHNOLOGY, COMPONENT DESIGN, CONSTRUCTION

- Technical implementation
- Production/verification of technical drawings
- Design, styling
- Surface finish
- Compression ratios, angle of incidence
- Component cleanability properties, backwashing capability
- Production methodology, reproducibility
- Quality control

CERTIFICATION, EXPERTISE

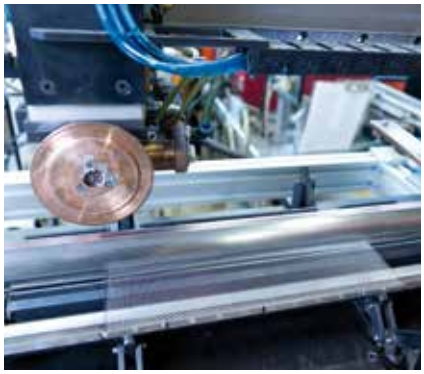
- Certification
- Measurement reports
- Inspection reports
- Declarations of no objection
- Technical advice
- Proof of origin
- SPC Statistical Process Control



PRODUCT DEVELOPMENT, PRODUCTION

MECHANICAL UNIT OPERATION

- Cutting: CAD controlled fine cutting, mechanical cutting, laser cutting
- Stamping
- Drawing and forming
- Binding, synthetic coating
- Stretching
- Welding: spot, roll seam and plasma welding
- Soldering
- Calendering



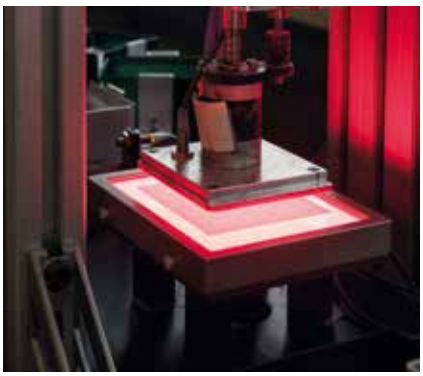
THERMAL AND CHEMICAL FINISHING

- Sintering
- Tension free bonding
- Surface treatments
- Coatings
- Electropolishing

SPECIALS

- Multi layer sintered meshes, diffusion welded sintered meshes
- Bespoke coatings, i.e hydrophobic meshes
- Optically monitored precision cutting, CAD controlled fine blanking
- Calendering, rolls in standard widths and strips
- Pleating
- Stamping
- Optotechnical quality assurance






PRODUCT DEVELOPMENT, PRODUCTION

PROTOTYPES, ONE OFFS

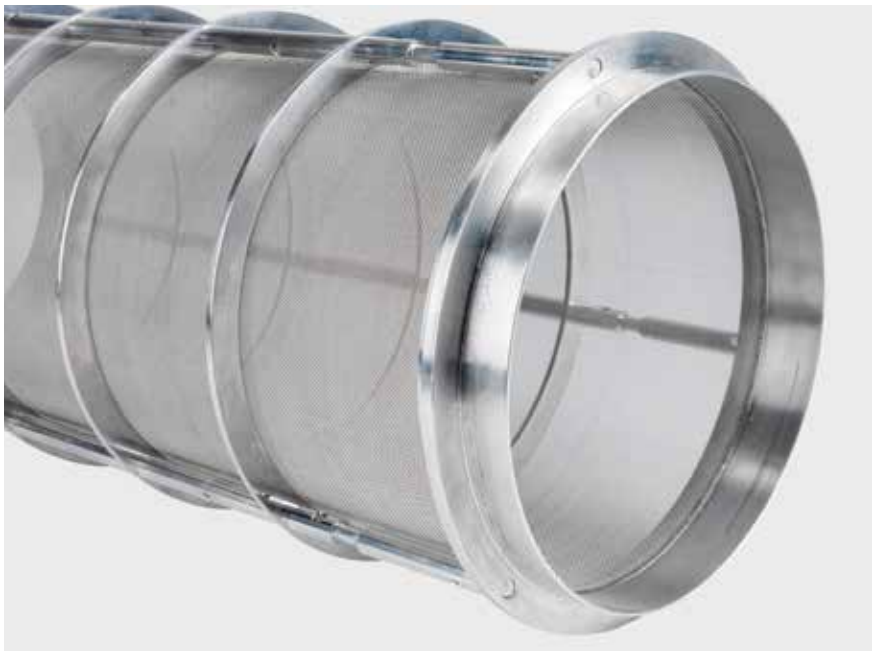
- Developing new solutions working in cooperation with customers
- Replicas, reproductions
- Made to order single components

VOLUME PRODUCTION

- Fully or semi-automated volume production for maximum economy

REPLACEMENT PARTS

- Reconditioning of wearing parts
- Exchange of damaged meshes
- Reverse engineering
- Modifications to customer specifications
- Call-off storage and delivery



OEM PARTS

- Manufacture of materials and semi-finished goods such as rings, flanges, reinforcements, supports
- Reconditioning of used components

EX-WORKS

- Application appraisals
- Installation surveys
- Installation and operational testing

LOGISTICS

COMPUTERISED STOCK CONTROL

Our fully automated stock control system is integrated with our enterprise-wide IT infrastructure. The system is designed to provide advanced levels of efficiency and reliability.

CONSIGNMENT STORE

On request, we can provide you with a consignment store, guaranteeing optimum security of supply.

PROFESSIONAL PACKAGING

To ensure our deliveries arrive safely with our customers, we have our own modern, fully equipped joinery workshop, where we manufacture packaging cases to exact specifications.

JUST IN TIME DELIVERY

We deliver in accordance with agreed deadlines to support our customers' processes and activities.

ECONOMICAL MODES OF TRANSPORT

Our logistics professionals know the most reliable carriers, the best modes of transport and understand all relevant rules and regulations for smooth and timely deliveries.

INFRASTRUCTURE AND FACILITIES

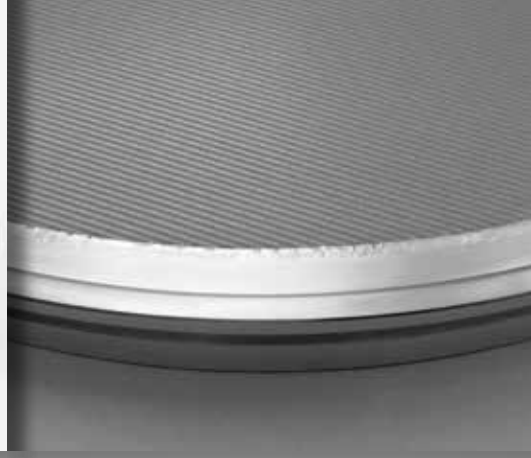
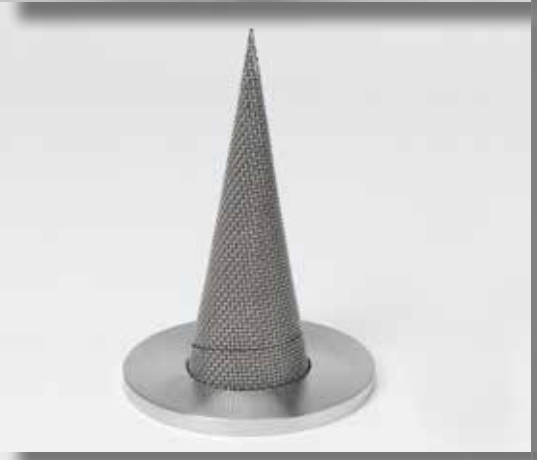
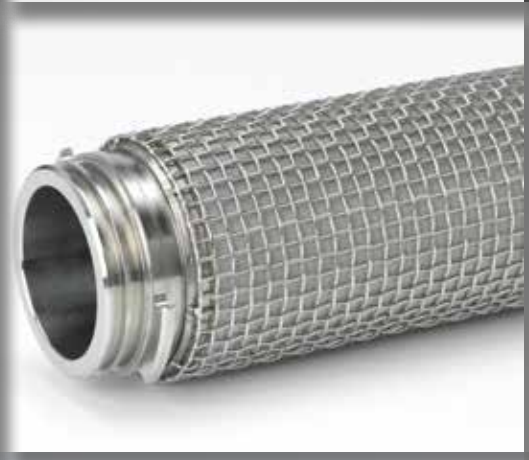
The equipment and facilities used in our businesses are purpose designed for handling and processing fine meshes and sintered mesh laminates. In the main, these have been designed and built by ourselves and continuously developed and improved over the years. This investment enables us to achieve above average levels of productivity to the highest quality standards, without risking damaging or stressing the sensitive meshes, guaranteeing reproducibility for years to come. We are well equipped for prototyping builds up to high level serial production.

	Mesh	Fabrication	Engineering Consultancy	Specials
BOPP CH	Weaving of fine meshes	Completed fabrications, from prototype to volume production, Laser cutting equipment	R&D department, sales advisory service through to consultancy for complex projects, laboratories	Own wire drawing facility, calendering machine, CAD cutting machine, microplasma welding equipment
BOPP UK	Mesh stocks	Specialised fabrication for pre-cut parts and screen printing applications	Sales advice and applications consultancy	Synthetic meshes
BOPP Italy	Limited mesh stocks	Pre-cut parts, some fabrications	Sales advice and applications consultancy	
BOPP Utildi	Mesh stocks	Completed fabrications	Sales advice and applications consultancy	Synthetic meshes, conveyor belts, special applications
BOPP USA	Mesh stocks	Pre-cut parts, specialised fabrication	Sales advice and applications consultancy	
BOPP Asia China & Korea	Intermediate storage		Sales advice and applications consultancy	
Spörl Germany	Weaving of medium to coarse meshes, backing	Completed fabrications, large blanking facility	R&D department, sales advisory service through to consultancy for complex projects, high level serial production	

EXAMPLES OF APPLICATIONS IN DIFFERING INDUSTRIES:

- **Chemical/pharmaceutical industries;** Nutsche filter floors, filter candles, chromatography, centrifuge filters from mesh/sintered materials, sieves, filter cones, fluidisation
- **Engineering industry:** oil, water and air filters
- **Automotive industry:** oil and fuel filters, catalytic converters, ABS filters
- **Aviation industry:** fuel filters, jet engine sound suppression, RFI screening, lightning strike protection, composite materials for airfoils
- **Shipping:** ballast water filters, hydraulic filters
- **Power generation:** star filters for nuclear power plant; filter candles
- **Food industry:** sieves, cleaning baskets, filter cartridges, test sieves, fluidisation
- **Electronics industry:** blanks for electronic components and displays, acoustics elements
- **Petrochemicals:** Filter elements
- **Medical Engineering:** Special filters for medical devices
- **Environmental Technology:** Filters for liquid gases and air, sieves for recycling applications, coated meshes (nanotechnology), solar heat (Stirling technologies), fuel cells, wind farmse











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