

**INJECTION MOLDING
FOR THE AUTOMOTIVE INDUSTRY —
STATE OF THE ART**

WE CREATE ADDED VALUE FOR OUR CUSTOMERS



CHALLENGING MULTI-COMPONENT PARTS IN LARGE VOLUMES



Sealing-off

These two-component part produced by AWM, consisting of a rigid polyamide base and an expandable thermoplastic element, is used for reliably sealing-off chassis noise in automobiles.



Steering adjustment

This lever was manufactured to high specifications on the basis of precise calculations and material tests.



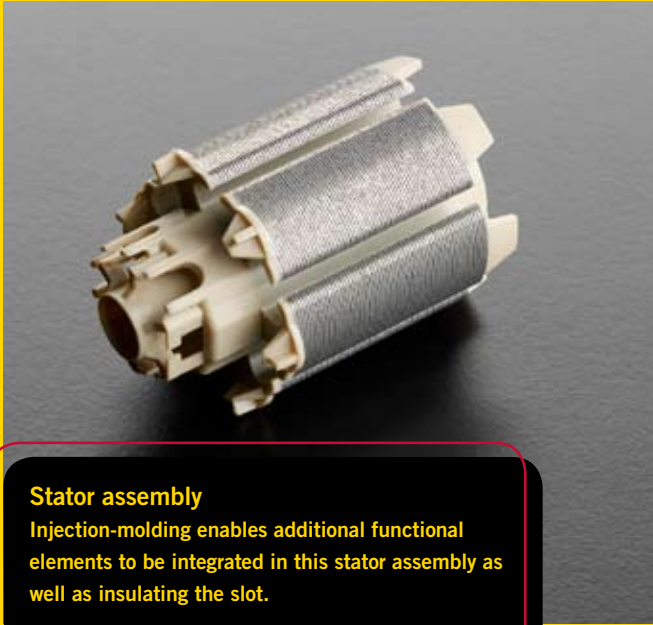
Tank filler neck

This two-component tank filler neck is produced using a complex mold featuring seven hydraulic core pullers.



Interior door handle

This interior door handle made from two different plastics and featuring a metal insert is produced using a stack turning mold with internal gas pressure.



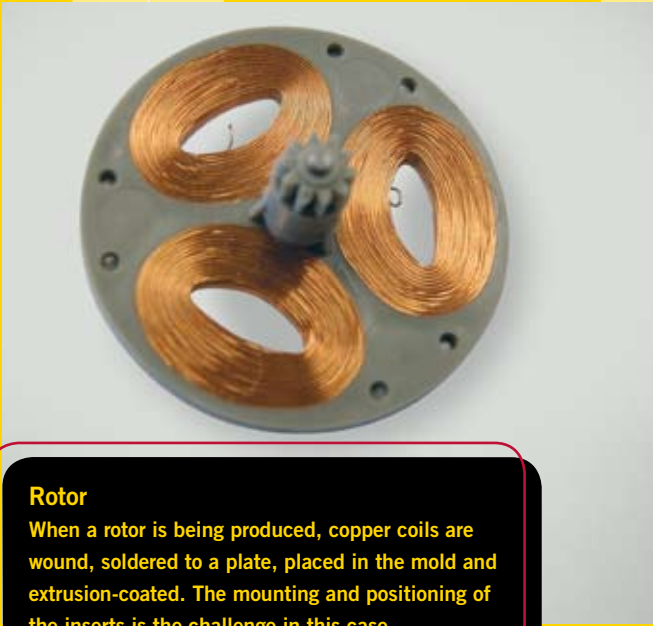
Stator assembly

Injection-molding enables additional functional elements to be integrated in this stator assembly as well as insulating the slot.



Variable coating thickness

The extrusion-coating technology enables variable coating thicknesses to be applied, and no problems arise at edges and corners.



Rotor

When a rotor is being produced, copper coils are wound, soldered to a plate, placed in the mold and extrusion-coated. The mounting and positioning of the inserts is the challenge in this case.



QUALITY AND COST-EFFECTIVENESS

AWM supplies everything from a single source: from the customized development of components through mold flow studies and prototype production to the manufacture of high-performance injection molds.

OUR SERVICES

Product development and design

- Feasibility studies
- Material and strength calculations
- Analysis of production processes

Prototype production

- Manufacturing prototypes
- Producing pilot molds

Moldmaking and mold development

- Mold concepts
- Mold flow analyses
- Automated, air conditioned manufacturing around the clock

Technology Center

- Sampling and short production runs
- Monitoring and optimizing processes
- State-of-the-art injection molding machines, 175 - 600 tons

Service and customer training

- Training customers
- Commissioning
- Optimizing customers' processes on-site
- Follow-up assistance and service worldwide

System integration

- Turnkey installations
- Manufacturing concepts
- Project management



AWM transfers workpieces and electrodes between the individual production and measuring machines within seconds by means of zero-point gripping systems. The repeat accuracy achieved is better than 0.002 mm.



In clearly defined application segments AWM itself also manufactures components in four-shift operations.

TECHNOLOGICAL HIGHLIGHTS

Being a technological leader – this is the challenge that AWM has successfully faced for many years. Time and again AWM succeeds in playing a crucial role in shaping technological progress in global markets where the pace of innovation is very rapid. This also applies in particular to the automotive component supply industry.

Multi-component technology state-of-the-art

Using state-of-the-art multi-component technology, two dissimilar materials – such as polyamides and thermoplastics, for example – can be processed in the same mold at different temperatures (260° Celsius and 85° Celsius, respectively) to produce a plastic component.

Insert Technology

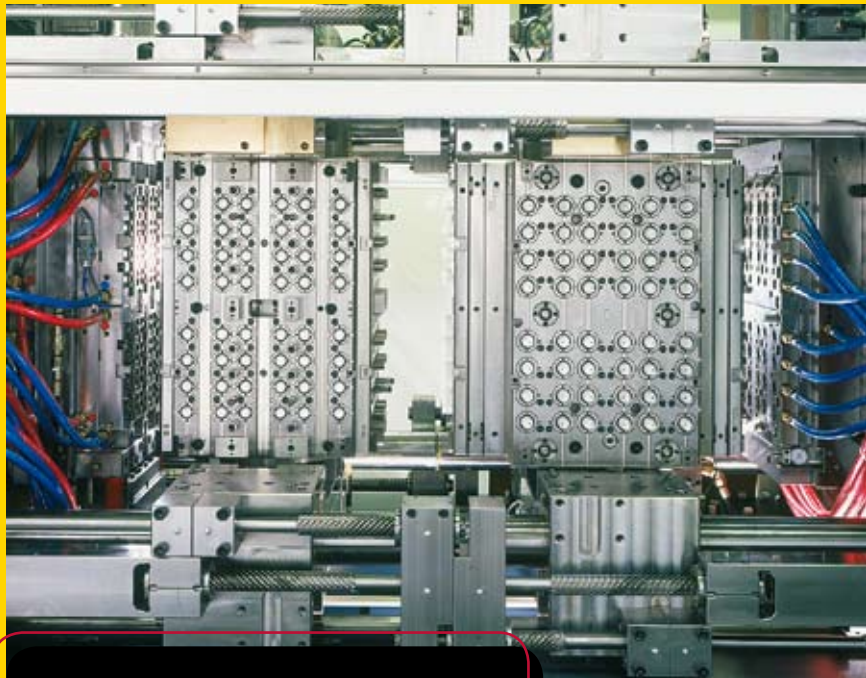
AWM has considerable experience in insert technology for combinations of metal and plastics and in the design and manufacture of plug contacts. Metal components are inserted directly into the mold and then extrusion-coated with plastics.

Insulation extrusion-coating

In insulation extrusion-coating, sheet metal bundles are placed in the mold and extrusion-coated with plastic. Together with a leading partner in the field of automation and winding technology, AWM supplies complete production lines for insulation extrusion-coating.

The advantages of these modern application technologies are self-evident:

- ability to incorporate additional functions
- cost effectiveness due to fewer assembly components
- very short cycle times
- high process control
- striking increase in quality
- environmental friendliness



Double cube technology is revolutionizing the injection molding process. Simultaneous injection on two closing levels and assembly of both components in the mold are possible in single cycle.

