

## First serially produced plastic compressed-air reservoirs for truck trailers made from Ultramid<sup>®</sup>

### Case Study

The first compressed-air tank made of plastic for truck trailers comes from Schmitz Cargobull. This part was developed by the Comat company of Kaiserslautern, Germany using three precisely harmonized Ultramid<sup>®</sup> types from BASF. The reservoir measures 1.2 meters in length, has a diameter of 32 cm and holds 80 liters. In trucks, it serves for the compressed-air control for numerous mechanical functions, especially for the brake and air-suspension systems. Up to now, this compressed-air tank has been made of metal.

The multi-step process for the manufacture of these reservoirs starts with a high-viscosity Ultramid<sup>®</sup> extrusion type from BASF's polyamide-6 range, from which Comat extrudes pipes that are then cut to size. Subsequently, a process developed by Comat is employed to impregnate continuous glass fibers with a heat-stabilized Ultramid<sup>®</sup> type: These fibers are then wound around the pipe.

Finally, an injection-molded cap made of a third BASF polyamide is affixed to the ends of the pipe. For this purpose, the company employed a special welding technique so that the cap is joined to the pipe ends to be pressure-tight.

The advantages of this plastic compressed-air reservoir in comparison to metal tanks are not only its reduced weight and cost but above all, its corrosion resistance.

