

## COMPANY

**Polysmart Technologies Pvt. Ltd**

## LOCATION

**India**

## SOFTWARE

**Autodesk® Simulation Moldflow®**

# Polysmart Technologies Pvt. Ltd

Autodesk Simulation Moldflow helps Polysmart replace three metal components with one plastic component to save time and cost.

To streamline the development process and achieve the goal of attaining better product quality, we have to make sure our technology stays ahead. We have been using Autodesk Simulation Moldflow successfully for many years. Autodesk Simulation Moldflow has unique modules and functions that reflect a commitment to the plastic industry and helped us to achieve perfection.

– Mr. Ashish Desai

Director -Polysmart Technologies

Image courtesy of Polysmart Technologies Pvt. Ltd

Polysmart Technologies has over 50 years of domain experience with plastic engineering in the automotive, water treatment, medical, wind energy, building products, defence and consumer goods. To keep up the growing customer demands, in 2005 Polysmart Technologies was started as a one-stop shop for plastic manufacturing needs, with the ability to handle everything from component design, production and the assembly of final products.

Polysmart Technologies has design centers in Mumbai and Pune with representatives in the U.S. The company has fueled its business by enabling its customers to meet their

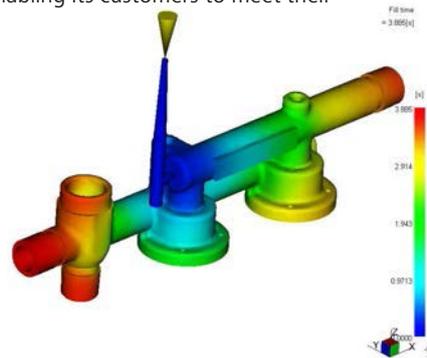


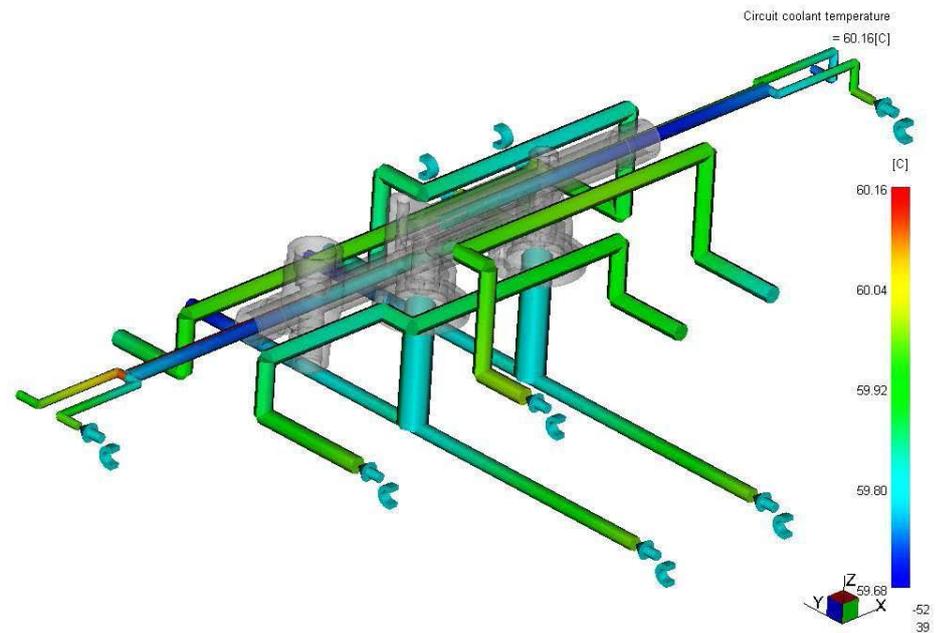
Image courtesy of Polysmart Technologies Pvt. Ltd

requirements with a well equipped, state-of-the-art in-house tool room and three ultramodern manufacturing facilities in Gujarat and Daman. As part of its fully integrated design, engineering and manufacturing approach, Polysmart Technologies has introduced the latest technologies into these facilities, including machines ranging from 50T to 1200T and a shot weight capacity of 2gms - 5000gms. They are also Silver Certified Autodesk Simulation Moldflow consultants in Asia with ISO 9001:2008 certification, follow Six Sigma procedures and run on SAP.

## Challenges:

Advances in the development of new and improved polymers have led many companies to re-think their use of more traditional materials like metals in the manufacturing process. Parts once thought of as impossible to create using plastic, are now being designed with polymers at a higher rate than ever before.

A few months back, a large manufacturer for water treatment systems approached Polysmart Technologies as one of the metal components of their water filtration system leaked at the



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–**Mr. Nilesh Nevrekar**  
Project Manager, Polysmart Technologies

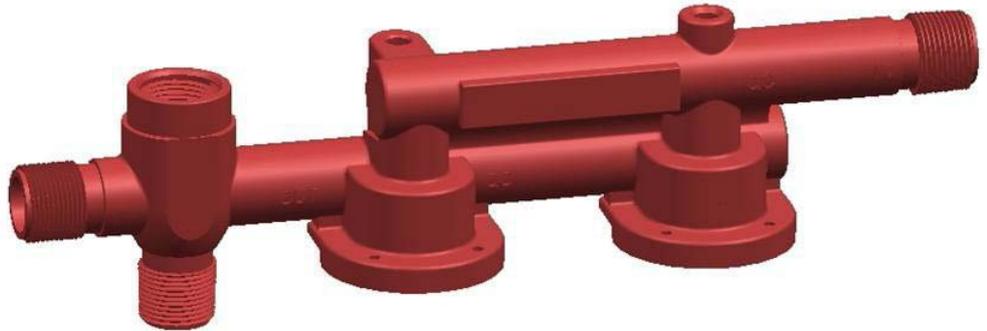


Image courtesy of Polysmart Technologies Pvt. Ltd

threading joints. The metal component was heavy with three different sections joined together with threaded joints. They also faced problems of corrosion and breaking of components at the joints that led to an increase in warranty and claims. They wanted to replace the metal component with a the plastic component to reduce the effects of corrosion and increase the durability of the component.

#### Key Benefits:

Modern plastic materials have been used for many decades, but until recently, they were only used for a few selected parts. However, that has started to change and tools, such as Autodesk Simulation Moldflow for plastic analysis, are playing a major role in that change.

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#### The Solutions:

In the plastic industry, Autodesk Simulation Moldflow provides valuable guidance to break free from traditional methods and perspectives

of manufacturing processing and planning. “Manufacturing and new-product development are both faster-paced and more complex than ever, with metal replacement often the key to reducing weight, cost, and production times. Autodesk Simulation Moldflow precisely predicts various issues and optimizes manufacturing parameters virtually” explains Mr. Nilesh Nevrekar, Project Manager, Polysmart Technologies.

Product design changes were not allowed, aside from changing the material of the component, a simple solution didn’t seem to exist. During the first trial, the three sections of the component were converted to two and joined together with a threaded joint, partially fixing the problem. Weight was reduced but the small leakage still persisted during trials and there was an issue of core deflection due to a higher length of the part.

In the revised design, “Autodesk Simulation Moldflow analysis was used to identify the problematic areas in the part and mold design, improve the design, convert three sections into one single item thereby eliminating the possibility of joint leaks, optimizing the processing conditions, evaluating the gate location thus reducing the core deflection and lowering the overall production cost and time as well.” said Mr. Nilesh Nevrekar