

History of the “ASAHIIV” Thermoplastic Valve

It has been 60 years since Asahi Yukizai released Japan's first, and one of the world's pioneering, thermoplastic molded stop valve in March 1956.

At the time, Stop Valves made by welding plastic sheets and pipes together were already available around the world, however valves with a diameter of 25 mm or less were some 3 to 4 times bigger than today's Stop Valves (Globe Valve), and had a low sealing pressure. The welded sections also often became damaged, which was a cause of many issues for customers.

It was around that time that the president of an Asahi Yukizai distributor heard about these issues from a client textile factory. Asahi Yukizai was already making molds for water pipe joints, and discussions soon turned to the possibility of using similar molds for making valves in what became one of the first steps towards making plastic stop valves.

At the same time, there were discussions about making thermoplastic diaphragm valves for use at Asahi Kasei plants, and closer examination of metallic valves revealed the same structure could be made using molds, and so prototypes started being made. Today injection molding is mainly used, however at the time, molds were made using hydraulic compression methods.

In 1956, the “ASAHIIV” Stop Valve with no metallic parts was successfully developed, and was released up to a 50 mm diameter. The valve was much stronger than welded units from competitors, and it was so popular that the product lineup was increased in 1961 to include units up to 100 mm diameter.

Since then, Asahi Yukizai's thermoplastic valves have resolved many issues related to metallic valves by applying the light weight and excellent corrosion resistance, long operating life and chemical resistance characteristics of thermoplastic.



ASAHIIV Stop Valve
(Globe Valve)

[Reference] Difference between compression molding and injection molding

Compression molding is a method that involves placing a material inside a hot mold and melting the material with heat and pressure, and then cooling with water before taking the product out of the mold. One product can take a long time to mold, and also requires a high level of manufacturing technology.

In contrast, injection molding is a method that involves injecting the raw material into a mold hydraulically or with an electric cylinder, and then cooling with water before taking the product out of the mold. The time required to make products is shorter, and also requires less manufacturing process control, which means it is ideal for continual manufacturing of large numbers of products with complex shapes.