# Contribution: Congratulations on the Publication of the 90th Anniversary Special Issue of *Valqua Technology News*

Let me express my congratulations on the publication of the 90th anniversary special issue of *Valqua Technology News* to all the staff of the technology-development department of Nippon Valqua Industries, Ltd. I used to work in that department, and so I am happy to see this anniversary.
In the research and development department, I used to study fluororesin. At that time, fluororesin was introduced as a material for Valqua's seal products. I also conducted basic research, although I probably spent longer in applied research and development.
In this article, I would like to share some of my experiences while working on application development.

Thanks to its distinguished characteristics, fluororesin is used in many industrial fields including for semiconductor manufacturing equipments, chemical plants, and automobile-related and electronic components. Also, domestically manufactured fluororesin electric cable (Valflon electric cable) was used to explore locations for geothermal power generation, a new energy.
In development studies for geothermal power generation, cables for underground surveys are required. These cables are used in volcanic areas, and so naturally, excellent heat resistance is required to tolerate the high temperatures found underground during exploration. At that time, the best cable for this purpose was tetrafluoroethylene resin electric cable.
However, despite its excellent functions, tetrafluoroethylene resin was difficult to process, so we worked hard to devise a way to manufacture cables of several thousand meters. After great difficulties, we adopted tape-wrapped cable.
We attached various sensors to the end of the cable. Then, along with electricians and the cable, we explored trackless mountains in a volcanic zone. After safely arriving at the planned location for generation, we measured the temperature of hot hydrothermal water present several meters below the ground along with the staff at the geological survey station. This was all a long time ago (about 40 years?) .

I also experienced on-site development activities. Once, we worked on developing components including a chemical-resistant heater and solving problems at a production line of a major semiconductor manufacturer which went on to lay the foundation of the current IT society. On another occasion, we were posted to a steel-manufacturing site, where we were surrounded by strong acids and alkalis contained in tanks lined with chemical-resistant fluororesin, piping inspectors lined with chemical-resistant fluororesin, and other equipment. We proceeded with

development in this tough environment. These hard experiences now provide good memories.

Thanks to the support from many technology-development staff, we could carry out various application development projects. As a result, we received the Plunkett Award four times. DuPont, an American manufacturer which was the first to start producing fluororesin, gives the award to a group which has done excellent work in application development. Our achievement was the culmination of continuous efforts by our excellent R&D staff and related parties, so I was delighted to win the awards.

As we celebrate the prosperous 90th anniversary year, I look forward to further achievements from the technology-development department which will help Valqua to expand toward the coming 100th anniversary.

NIPPON VALQUA INDUSTRIES, LTD. former Managing Director (Technical・Business development)
Yoshiaki Mori