Intellectual Property



Basic Policies on Intellectual Property

Toray Group has formulated and executes the following four intellectual property strategies as its basic policies on intellectual property.

1. Intellectual property strategies, as a part of the strategy trinity, that conform to management principles

Toray Group regards intellectual property as one of its vital management resources. We have linked our intellectual property strategies mutually and organically with our business and R&D strategies, and as a component of this "trinity," we have positioned intellectual property strategies as one of the most important elements of our management strategies.

2. Promoting the procurement of rights

In order to protect the Toray Group's products and technologies and to ensure profits, we promote high-quality patent applications and patenting, and strive to build a strong patent network with deterrence capabilities. Regarding trademarks, we execute the acquisition of appropriate rights with an eye to improving brand value.

3. Respecting the rights of others

Toray operates a patent confirmation system to comprehensively investigate the relationship between its own products and technologies and patents owned by other companies to assure that there is no infringement upon the rights of other parties. We also check the relationship of our trademarks with those registered by other companies prior to use.

4. Rightful enforcement of our own rights

When Toray Group's patent rights are infringed upon by another party, we take proper steps depending on the circumstances by exercising our patent rights, such as demanding that infringement cease, receiving monetary profits from licensing, and using our patent rights for cross-licensing with the patent rights of other parties.

Systems and initiatives for intellectual property strategy implementation

Toray Group implements intellectual property strategies in line with its basic policies through the following systems, initiatives, etc.

1. Patent responsibility structure and global patent strategy responsibility structure

Toray and its major group companies appoints patent managers for each product line and technology group and have established patent committees with the participation of members from the Intellectual Property Division, as well as research, R&D, and marketing and sales departments. Activities with regard to filing, patenting, defense, and exploitation of rights are promoted upon deliberation by the patent committees. In addition, the supervising executives in charge of technology and production in each business are appointed as global patent strategy chairperson to guide and supervise global intellectual property activities conducted by Toray and its Japanese and overseas Group companies in each business.

2. Development and implementation of an Intellectual Property (IP) action plan

Under the guidance of global patent strategy chairperson, each business division formulates and carries out an "IP

action plan" concerning important matters on intellectual property. Themes that should be given particular emphasis are selected as "Rank-A Projects" and focused upon for promotion. The status of implementation of the IP action plan is reported once a year to the Board of Directors.

3. Building barriers to other companies' entry by intellectual property

Toray and its major domestic and overseas subsidiaries and affiliated companies are strategically using patent application and patenting as well as concealment of know-how to build strong barriers to entry by other companies.

4. Patent confirmation system

When manufacturing or selling new products, we ensure that utilization, production, sale, etc. of our technologies and products do not infringe upon the patent or other rights of others. 5. IP landscape initiatives

In formulating IP strategies, we are taking action to explore ways to utilize our patents, and other initiatives, such as promoting the training of personnel (IP analysts, and others) who can exploit IP landscapes, developing research tools, and also analyzing the business environment and investigating new and relevant topics.

Contribution of Toray intellectual property to providing solutions to global environmental issues

Technologies toward realization of a Hydrogen Society The term hydrogen society refers to a society in which the use of hydrogen is widespread in everyday life and economic activities. Toray has been working on R&D for hydrogen-related products since long before hydrogen began to attract attention it enjoys today.

For example, of those patents and patent applications held by the Toray Group, the graphic below maps the standing of patents relating to solid polymer electrolyte fuel cells for which International Patent Classification (IPC) has been granted. Color-coded dots corresponding to each technological field are used to indicate Toray's many patents (Patents: red, patent applications: blue).

Each technological area includes fundamental and important inventions relating to hydrocarbon (HC) electrolyte membranes—which arose from Toray's unique polymer design, precision polymerization technology, and nano-level



Assessment of Toray's intellectual property

Toray Takes Top Spot in Fiber, Paper, and Pulp Industry in "2023 Ranking of Capability to Prevent Other Companies from Obtaining Patent Rights" and "Patent Asset Size Ranking 2023 "

Published annually by Patent Result Co., Ltd., the "Ranking of Capability to Prevent Other Companies from Obtaining Patent Rights" is an advanced patent application index that compiles the number of patents by a company that were cited as reasons for rejection of another company's patent application in the course of the patent deliberation process in any particular year. In 2023, Toray was ranked No. 1 in the fiber, paper and pulp category for the 12th consecutive year. As the same index benchmarks are used, if "fiber, paper and pulp," and "chemicals"

structure control technology-as well as gas diffusion layers (GDLs), for which Toray possesses the world's largest production capacity. Having contributed high added value to product lines such as catalyst-coated membranes (CCMs) and polymer electrolyte membrane (PEM) water electrolysis cells, these inventions will continue to create new value through synergies between each technological field.

In addition to these rights, Toray's hydrogen-related business, which is based on patents relating to high-strength carbon fibers for hydrogen storage tanks that are useful for the efficient transport of hydrogen, is contributing to the realization of a hydrogen society by providing a wide range of unique advanced materials and services throughout entire supply chains, from producing and storing / transporting to using hydrogen. Linking the provision of solutions to further value creation, we will aim to create a sustainable, highly profitable business.

Landscape map of patents relating to solid polymer electrolyte fuel cell technology (Each dot represents a Toray Group patent or patent application)

categories are treated as a single industry, Toray's ranking becomes No. 3.

Also published annually by Patent Result Co., Ltd., the "Patent Asset Size Ranking " is a compilation of overall scores for each company using a "patent score" that scores the profile of each individual patent for patents registered during the year. Toray has consistently topped the fiber, paper and pulp industry rankings since the 2013 edition.

In addition, Toray also ranked first for "semipermeable membrane-based separation-related technologies" in the "Patent Power Overall Ranking." Announced in July 2024, this is an assessment that focuses on specific technological fields and combines patent scores in the four major countries and regions of Japan, the U.S., Europe and China.