

Business Activity~Achievements and Prospects

The Nitto Denko Group Tape and Optical Businesses have been forced into tough times due to repercussions from adjustments in production by our customers, a situation to which we will respond by new development, through enhancing production capacity and entering developing markets. Meanwhile we will pursue our Membrane Business, which has continued to be robust, through enhancement of technical cooperation as well as further development of maintenance and service businesses. We will pursue further growth of our Medical Business by investing in new products.

Optical Business

Since November of fiscal 2008, volumes of sales of every product such as LCD televisions, personal computers and mobile devices for which the Nitto Denko Group provides components decreased, resulting in a drastic reduction of our initial production forecast for each instrument. As for optical films for LCD television, we shifted our strategy into the securing of production materials, mainly for the highest selling general-purpose 32-inch class products, by reducing costs via thorough rationalization in domestic and overseas plants. However, we were still not able to head off a considerable decrease in order volume stemming from production adjustments by panel manufacturers.

In fiscal 2009, in order to enable our business to deal with changes readily and remain in competition, we will strengthen our competitiveness by pursuing enhancement of production capacity, streamlining and rationalization, and, for LCD television markets in developing countries having good prospects for sales expansion, we will create systems which enable us to strategically develop competitive-price products.

Furthermore, in the field of big screen televisions larger than 40-inches, we will broadcast our original technological capabilities by pursuing the development of larger, thinner and more highly functional optical films.



Optical film for high-definition LCD

We will expand our business even more in the field of small and medium sized products such as mobile phones and portable music players, through mobilizing all of our unique accumulated technologies such as Transparent Conductive Film for touch panels.



Transparent conductive film ELECRYSTA®

Tape Business

Since the second half of fiscal 2008, inventory adjustments which occurred amongst our customers serving the personal computer, portable music player, game console, HDD and household appliance industries, caused sales of almost all bonding and joining products for these industries to hover at a low level.

Surface protective products have also been affected by inventory adjustments in the metal-processing industry. Surface protective films for the FPD industry which contribute to high-functionalization of thin displays have been robust, while markets for surface protective products for optical elements have hit the wall owing to decreased demand.

Automotive related products have also been affected by sluggish world demand. We will develop products in synch with various needs in the automobile industry including those for environment-responsive cars, with functions such as resistance to heat, insulation, heat release, reinforcement and damping.

In the tape business overall, we will promote aggressive penetration into the markets of newly developing countries, globalization via overseas production, and manufacturing with due consideration to the global environment, as well as pour our efforts into new product development.



Membrane Business

As for reverse osmosis membranes, business deals for seawater desalination plants with Algeria, Spain, Saudi Arabia, India, China, Australia and so on were strong and progressed favorably, making up for decreases in new deals for industrial use in the manufacturing process of semiconductor materials and liquid crystal



New factory in Shiga Plant

panels as well as for decreases in exchange demands, stemming from the economic recession.

Against the situation of the worsening global freshwater shortage, production capacity of our reverse osmosis membrane, expected to be in even more demand in the future, increases 1.6 times with the start-up of operations of a new factory in the Shiga Plant. We will commit ourselves to accepting orders for products for seawater desalination and reuse of wastewater in the future.

In addition to pursuing enhancement of state-of-the-art reverse osmosis membrane technology, the Group has established a joint venture with Mitsubishi Rayon Engineering Co., Ltd. and is conducting product development of micro filtration (MF) for seawater treatment prior to desalination as well as of micro filtration such as membrane bio reactors (MBR) for wastewater treatment. In 2008 we established an R&D center specializing in water treatment business at WaterHub of the Singapore Public Utilities Bureau (PUB) in Singapore. Focusing on usefulness assessment tests using water which will actually be processed, we are developing applications and aiming at further global evolution.

Hydranautics Partnering with Water For People

In late fiscal year 2008, Hydranautics made a founding corporate donation of a "Village Sponsorship" to Water For People, a leading global non-profit dedicated to providing clean water to developing countries by developing locally sustainable drinking water facilities, sanitation facilities and education programs. To build on the foundational corporate sponsorship, Hydranautics employees around the world had the opportunity to participate in one-time and ongoing donation programs – payroll deductions, online giving as well as a recyclables drive/fundraiser.

Over 1.1 billion people worldwide do not have access to safe drinking water – and 2.6 billion people lack adequate sanitation facilities. As leaders in water filtration technologies and as an integral member of the clean water industry, we recognize that the reach and impact of our products not only

improves life around the world, it also opens up opportunities for Hydranautics as a company to reach out to at-risk communities to make life better. We look forward to this beginning-of-legacy initiative as a sponsor and benefactor of Water For People and are excited about our future as a helpful global 'good neighbor.'



Additionally, taking the initiative before other corporations in developing IMS designs (Integrated Membrane Solutions: proposing comprehensive systems around membranes to customers at the planning stage), the Nitto Denko Group offers services in which customers themselves can design the most appropriate water treatment systems. We support customers' facility management by helping get long-range maintenance services started and implementing technical assistance which actualizes stable desalination.

In addition to three production bases in Japan, the United States and China, we have deployed sales technical service bases (bases where we not only sell products but also suggest techniques and services matching to our customers' needs) in twenty-some places in the world including newly established bases in Mumbai, India and Dubai, United Arab Emirates.

We will continue to enhance our global responsiveness based on close adherence to customers' needs by taking advantage of the world's most advanced water treatment membrane technologies.

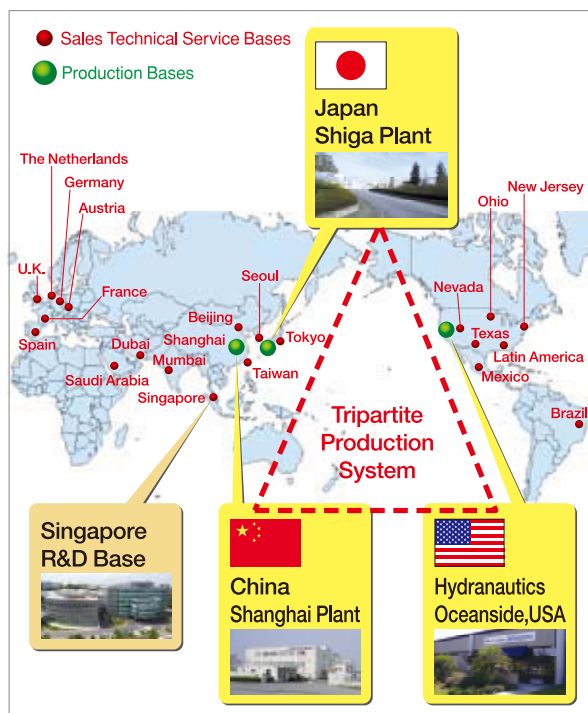
Medical Business

In 1978 Nitto Denko Corporation entered into the medical field. By applying our accumulated adhesive technologies to the development of "Transdermal Drug Delivery Patches", through which medicines painted on tapes placed on the skin permeate into the body, we produced our first commercial therapeutic product, "Fluocinolone Acetonide". Thereafter, we manufactured an angina treatment product for responding to sudden angina attacks (1983) and an asthma treatment product for preventing morning asthma attacks as well as allowing patients to sleep at ease by stabilizing blood levels of medicines. Initially, we had a tough time due to influence from National Health Insurance price revision in Japan, however owing to the enhancement of our sales force we have steadily boosted our sales figures. Even now both of these products dominate domestic markets.

In the autumn of 2008, we succeeded in collaborative development with the Teva Pharmaceutical Industries Ltd. of a Transdermal Drug Delivery Patch lenitive (The Fentanyl Patch) for cancer-related pain, which we launched for sale after being granted approval by the United States Food and Drug Administration (FDA). Marketing of other medical and sanitary articles such as tapes supporting muscles (NITREAT Kinesiology Tape) is also robust.

In the future as a medical business activity we will expand the sales of therapeutic products for asthma on the market in China, where their production and distribution have already been launched through obtaining approval as imported therapeutic products. Still more, while devoting ourselves to enhancing development of new products, we plan to expand the sales of existing products globally.

In recent years "nucleic-acid drugs"* have gained attention in the biomedical field as a prospective treatment for illnesses. As stated elsewhere in our Research and Development pages, we are currently marketing solid polymer support "NittoPhase®" for oligonucleotide synthesis, through Kinovate Life Sciences Inc., an American affiliate. By means of these solid polymer supports, medicines can be produced



Network of Membrane Business

more efficiently than by traditional controlled porosity glass. At this time Nitto Denko Corporation and our U.S. research subsidiary Nitto Denko Technical Corporation have jointly developed a further new, high-performance solid polymer support for oligonucleotide synthesis.

Further, we are conducting research on a biodegradable polymer for molecular-targeted therapy which delivers drugs to targets in the body, developed through our core technologies of polymer synthesis and processing based on adhesive technology. Based on an earnest desire that in the not-so-distant future transdermal absorption technology and these new Nitto Denko Group polymer synthesis and processing technologies will clear away people's various pains and sickness, we are devoting ourselves to research.

* Nucleic-acid drugs: Nucleic acid, indispensable for heredity, survival and breeding, is the most significant chemical substance for living organisms, a high-molecular substance composed of Nucleic acid base (purine and pyrimidine), Pentose (Ribose or Deoxyribose) and phosphoric acid. Drugs manufactured from this substance are called "nucleic-acid drugs."



Transdermal bronchodilator therapeutic patch for asthma



NITREAT Kinesiology Tape



Fentanyl Patch

Donation of Transdermal Patch for Local Anesthesia

In response to a request by the "Asia Child Care League", an NPO supporting pediatric cancer patients and their families, the Nitto Denko Group has donated three years' worth of Transdermal Patches for local anesthesia. Children are scared of injections, and we wanted to do whatever we could to relieve their suffering and empower them in their battle against cancer. The patch, a type of transdermal pharmaceutical which produces local anesthetic effects, reduces pain by merely being put on the skin before injections.



The pediatric cancer ward of Hue Central Hospital in Vietnam



Transdermal Patch for Local Anesthesia