



# Newsletter

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สำนักงานคณะกรรมการวิจัยแห่งชาติ  
National Research Council of Thailand



## **His Majesty King Bhumibol Adulyadej's Royal Speech**

Delivered on the occasion that Prime Minister, Mr. Chuan Leekpai, took the National Research Council Executive Board to Chitralada Villa Royal Residence on Tuesday, September 14<sup>th</sup>, 1993 with the intention of offering the 1<sup>st</sup> invention award of the Low Speed Surface Aerator, Model RX-2 (1993 Year Award) to His Majesty.

I am thankful to the Prime Minister for bringing me the National Research Council invention award today. The fund for the prize will be given to the Chaipattana Foundation which holds the copyright of Chaipattana Low Speed Surface Aerator, Model RX-2.

Not only I who am proud of the obtained NRCT's prize, but also other inventors feel the same. A large number of Thai people have created beneficial inventions a long time. When I went to north region 30 years ago. I saw a man who lives near Mae Klang Waterfall generating electricity from waterfall. He was the first person doing this by connecting an electricity generator with water from the waterfall for making use of the produced electricity in his house that opens and closes with a remote switch. This made me think that Thai people have a great idea in inventing useful things. In addition, M.R. Thepparit Devakula, a great talented inventor who is famous in making magnet produced Thepparit pump, and had a share in making artificial rain. I believed over passing 30 years Thai people have had an ability to invent useful things to the public, but due to no adequate support, hence Thai inventions were stolen to and developed in foreign countries without paying tax nor copyright fee to Thailand. In consequence, the NRCT's award presentation to inventors implies that they are invention owners. Let the NRCT continues seeking out creative thinking inventors to raise their morale. So if we support inventors, our country will be developed by our own effort in research which will save much cost, build a reputation and earn more income. I thus wish the NRCT takes strong action on this regard for our most advantages.

I would like to thank all comers once again. With regard to the offered money, it will be given to the Chaipattana Foundation for further supporting the Low Speed Surface Aerator, Model RX-2 which concerned technicians from the Royal Irrigation Department who built and developed it until it becomes operational. This award was deemed morale to all those technicians and all inventors who developed various useful machines for the country use.

May everyone help to find and give encouragement to inventors, enjoy a period of prosperity and achieve success in business.

## **First Invention of Honor Announcement for the year 1993 “Low Speed Surface Aerator or Chaipattana Low Speed Surface Aerator, Model RX-2”**

As HM King Bhumibol Adulyadej expressed concern over people’s health living in the community, he had a thought of getting the Low Speed Surface Aerator Model RX-2 invented for treating waste water caused by the community and industrial area in the immediate vicinity. This invented work was considered as versatile uses: air aeration, movement, and stir. The Model RX-2 aerator can be installed as stationary and mobile units and is able to eradicate dirty water with Biological Oxygen Demand : BOD 250 mg. per litre 600 cubic metres a day, with. 96 Baht cost per one cubic metre. Currently, a number of private and public institutions have made use of this invention. Since the Low Speed Surface Aerator is deemed the 9<sup>th</sup> invention of the world reflecting HM the King’s high intelligence, mindful interest of environmental issues, and a creative invention idol of Thai people, the NRCT Executive Broad resolved to present the 1<sup>st</sup> invention award of the Low Speed Surface Aerator, Model RX-2 to HM the King.



**Chaipattana Low Speed Surface Aerator, Model RX-2  
1<sup>st</sup> creativity & innovation annual award 1993  
which is beneficial to the country**



**King Bhumibol Adulyadaj looked at Chaipattana  
Low Speed Surface Aerator, Model RX-2**

## The role of the NRCT in pursuing research mission responding to HM the King's invention thought

In his childhood, HM the King has expressed an interest in science, engineering and technology, especially invention. His Majesty and His Majesty King Ananda Mahidol, his elder brother, made an attempt to assemble purchased radio receiver parts whilst they were studying aboard as HRH Princess Maha Chakri Sirindhorn remarked in a talk-with-mechanic interview published in the Engineering Journal "The King and His Mechanical Work" 1987, Vol.5, page 33. ***"Their Majesties desire a radio, then they have to share with their uncle to buy radio parts for forming the radio and listen to it together"***

Nevertheless, His Majesty needed to change his education to social science in preparation for ascending the throne following the death of HM King Ananda Mahidol.

During reigning over Thailand, HM the King frequently visited his people, learnt of problems and endeavored to solve the problem for them and the country continuously through his projects covering several fields such as agriculture, engineering, technology and communication, together with protection of natural resources and environment, etc.

Being engaged in research and invention related to HM the King, the NRCT has committed itself to executing the following missions:



**HM the King anointed the aircraft used for conducting royal rainmaking project**



**The aircraft on royal rainmaking operations**

## 1. Begging Leave to Register the Royal Rainmaking Patent

"Royal Rain" is a technology that HM the King invented and developed with intention to help people, farmers to have sufficient water for use and consumption

The registration of the royal rainmaking patent commenced in 2001. The NRCT then asked for HM the King's permission to bring "R.B.D. Palm Olien as Alternative Fuel" Project and "The Royal Rainmaking Technics" to partake in an exhibition "Brussels Eureka 2001: 50<sup>th</sup> Anniversary of the World Exhibition of Innovation Research and New Technology" in Brussels, the Kingdom of Belgium during 13-19 November 2002; and the NRCT was granted permission. Later, the Bureau of the Royal Household requested the NRCT to have the two inventions registered in foreign countries. Nonetheless, the R.B.D. Palm Olien Project was already registered a patent in the country (on 9 April 2002), but did not apply for patent registration in any foreign countries within 12 months from the mentioned date yet. Therefore, only the royal rain was registered a patent both in Thailand and in other foreign countries. The royal rainmaking patent registrations are elaborated on details as follows:



**HM the King and HM Queen Sirikit allowed Mr. Jose Loriaux, Chairman of the Belgian Chamber of Inventors, the Kingdom of Belgium to bestow a prize *"Merite de l'Invention"* on HM the King on 5 June 2000 at 17.30**



**The NRCT presented the royal rainmaking patent to HRH Princess Maha Chakri Sirindhorn, Royal representative on 29 September 2006 at Chaipattana Building, Suan Chitralada**



**Invention Diploma presented to  
HM the King in Brussels Eureka 2001 exhibition**



**Gold Medal of Honor given to  
HM the King in Brussels Eureka 2001 exhibition**

- **Registration of the Royal Rainmaking Patent in Thailand**

The Department of Intellectual Property (DIP), Ministry of Commerce registered and issued HM the King with a special patent (No. 13898) "**Weather Modification by Royal Rainmaking Technology**" on 29 November 2002. At a later time the NRCT's letter (NRCT 0006/2047) dated 3 April 2003 was despatched to the Office of His Majesty's Principal Private Secretary to have an audience with HM the King for offering the aforementioned patent; and the NRCT was allowed to meet with him on 2 June 2003 at Sala Roeng Hall, Klai Kangwon Palace.

- **Registration of the Royal Rainmaking Patent in Foreign Countries**

HM the King designated His Excellency Ampol Senanarong, Privy Councillor as Royal representative to submit the royal rainmaking patent registration application to the United States of America, European Union and Hong Kong Special Administrative Region (Hong Kong SAR), respectively.

The European Patent Office (EPO) registered and granted the royal rainmaking patent (No.1491088) on 17 September 2003 and published the registration in European Patent Bulletin on 12 October 2005.

Ten EU countries such as Albania, Cyprus, Greece, Lithuania, Monaco, Macedonia, Romania, Turkey, Denmark and France, formally issued the patent. As for Hong Kong SAR, it issued the royal rainmaking patent No. HK 1072525 on 7 April 2006 which will protect the patent privacy within a span of 20 years as from 17 September 2003.

Later on 21 August 2009, the NRCT headed by His Excellency Ampol Senanarong, and his staff members: committees engaged in patent registration and archival royal rainmaking patent had an audience with HM the King with intent to hand over the royal rainmaking patent issued by the EU EPO and the Intellectual Property Department of Hong Kong SAR amounted to 11 countries as well as archival royal rainmaking patent to HM the King at Phra Tamnak Piamsuk, Klai Kangwon Palace, Hua Hin District, Prachuab Kiri Khan Province



## 2. Presentation of Invention Patent and Award "Chaipattana Low Speed Surface Aerator, Model RX-2"

On February 2, 1993 HM the King was presented with an invention patent "Low Speed Surface Aerator", or "Chaipattana Low Speed Surface Aerator, Model RX-2". His Majesty becomes the first king of Thai monarchy and of the world who gained this patent. The Chaipattana Low Speed Surface Aerator, Model RX-2 is deemed the ninth invention of the world registered a patent.

On July 2, 1993 HM the King graciously granted Minister of Commerce (Mr.Uthai Pimjaichon), Deputy Minister of Commerce (Mr.Jurin Laksanawisit) and their members of staff, including the Secretary-General of the Chaipattana Foundation (Dr.Sumet Tantivejkul) and his committee to have an audience with HRH Princess Maha Chakri Sirindhorn so as to hand the patent over to HRH Princess at Chitralada Royal Villa, Dusit Palace.

On 14 September, 1993 Mr.Chuan Leekpai, Prime Minister and Chairman of the National Research Council took the National Research Council Executive Board to the Chitralada Royal Villa, Dusit Palace to have an audience with HM the King for presenting the first invention prize of the year 1993.

On May 10, 1994 The Cabinet resolved to declare the 2<sup>nd</sup> February of every year to be the Inventors' Day in Thailand to commemorate the achievement of HM the King in inventing "Chaipattana Low Speed Surface Aerator, Model RX-2". The patent was registered and offered to His Majesty, the first King in Thai history to get the invention patent and was named "The Father of Thai Invention".





Later, on August 14, 2001 the Secretariat of the Prime Minister officially announced that the Prime Minister has assigned the National Research Council of Thailand to be a focal agency in charge of organizing an event "Inventor's Day" in collaboration with both private and public sectors with the idea of promoting and supporting research and invention on science, technology and environment leading to the development of inventions for public use.



**" 2016 Inventor's Day ", organized by the National Research Council of Thailand**

### 3. Presentation to His Majesty with the designation of “The Father of Thai Invention”

The National Research Council (NRC) Meeting which was held on 15 October 2017 and chaired by General Surayut Julanon, Prime Minister and Chairman of the NRC, reached a decision to present the name of “The Father of Thai Invention” to His Majesty following the NRC’s suggestion by reason of HM’s ability in research and his creative thoughts given to research work and various projects to solve problems and eradicate sufferings of people, such as the New Theory : Sufficiency Economy, the Royal Rainmaking Project, vetiver, etc. So the NRC Meeting has assigned the NRCT to submit **the Presentation of the Name “The Father of Thai Invention” to His Majesty** to the Cabinet for consideration on 2 December 2008; and the Cabinet agreed with this matter to celebrate HM the King’s 80th anniversary on 5 December 2007.



### 4. Presentation of “World Inventor Award”

The NRCT has been notified from the International Federation of Inventors’ Association (IFIA), the Republic of Hungary, the Korea Invention Promotion Association (KIPA), and the Association “Russian House for International Scientific and Technological Cooperation”, the Federation of Russia that they have prepared “World Inventor Award” for presenting to HM the King at Klai Kangwon Palace on 9 September 2009 in order to commemorate His Majesty in devising the Chaipattana Low Speed Surface Aerator, royal rain and His Majesty’s thought pertinent to the Sufficiency Economy. As His Majesty’s inventions assist in tackling the problems of people, the international invention organizations named His Majesty “The Father of World Invention”, and designate the 2<sup>nd</sup> February of every year as an International Inventor Day Convention: IIDC. Accordingly, the mentioned organizations intend to present HM the King with “World Inventor Award” as follows:

FIA, the world’s largest invention organization which is located in Budapest City, the Republic of Hungary and comprises 86 member countries related to invention, presented “Glory to the Greatest Inventor : His Majesty King Bhumibol Adulyadej in the Year of Creativity & Innovation 2009”.

KIPA, an invention organization belonging to the Republic of Korea, presented Special Prize Award and a certificate for the Chaipattana Low Speed Surface Aerator, Model Rx-2, the New Theory: Sufficiency Economy.

The Association “Russian House for International Scientific and Technological Cooperation”, a special organization established in 1992, presented Special Commemorative Gold Medal, together with a certificate for RX-2 Aeration Model.



## 5. Lending Support for

- **The King's Royally Initiated Laem Phak Bia Environmental Research and Development (LERD)**

The NRCT has given support for the LERD since 1997 in budget terms allocated for academic research of the project that need precise and relevant details and academic accuracy prior to dissemination.

The LERD, conducted at Laem Phak Bia Subdistrict, Ban Laem District, Phetchaburi Province in the region of 642 rai of land, intends to treat wastewater, get rid of solid waste and revive the environment with natural method and appropriate technology.

The Organizations concerned with wastewater treatment and solid waste eradication are the Chaipattana Foundation, Royal Irrigation Department, Kasetsart University, the NRCT, Royal Forest Department, etc.



- **The Research and Development on the Relationship of Vetiver Grass and Termites to Serve the Royal Initiation of His Majesty the King**

His Majesty allowed HE Ampol Senanarong, Privy Councillor, took the NRCT's staff and researchers to have an audience with him on 22 November 2002 at Klai Kangwon Palace, Hua Hin District, Prachuab Khiri Khan Province so as to report the progress of vitiver grass and termites research to His Majesty.

His Majesty made a suggestive remark that the vitiver grass should be used properly, not to affect its main purpose for protecting runoff and soil erosion. In case of other purposes, the area preparation for planting is a must; and studying about the use of other raw materials as an ingredient to make plywood gets indispensable.





## **6 . Presentation of the Preparation for Satellite Image Map Project in the Commemorative Project of His Majesty**

On the occasion of His Majesty the King's 72<sup>nd</sup> birthday anniversary on the 5<sup>th</sup> December 1999, the NRCT presented the Preparation for Satellite Image Map Project to join in the Commemorative Project of His Majesty.

The Preparation for Satellite Image Map Project aims to develop information service designs to be able to spread its use to local region following HM the King's idea in regard to forest resource and watershed conservations, and development of water source in the countryside. The form of data service is designed to lower production cost, and meanwhile to greatly produce in a short time; its size and feature is convenient and easy to use such as the maps that HM the King employs to work in several areas.

*Example of projects that initiated the satellite image map are as follows:*

- **The Preparation for Satellite Image Map Project in Forest Conservation Areas of the country**

The purpose is to survey, follow, protect and to suppress the forest resources encroachment in 65 national parks and 44 wildlife sanctuary areas covering more of 50,000 rai of land. The 4,283 - copies satellite image map were printed and gave to 57 governors as well as forest officials in order to increase the local units' performance.

- **The Preparation for Satellite Image Map Project for Irrigation Work**

This project is undertaken in three regions of the country. Phayao in the north, Sakon Nakhon in the northeast, and Krabi in the south. These provinces were selected as the pilot ones. The data graphic, map, geographical feature, irrigation data and project that were used for planning and fieldwork operation were dispensed to Phayao agencies, Sakon Nakhon Province and Krabi Province for 928, 1,425 and 640 copies, respectively.