

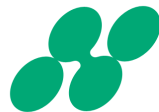
Surface Control Technology by NICCA Chemical

Create new values for environment of
Thailand with numerous functions of
specialty chemicals



O T A G A I

OTAGAI Forum Association



NICCA CHEMICAL CO.,LTD.

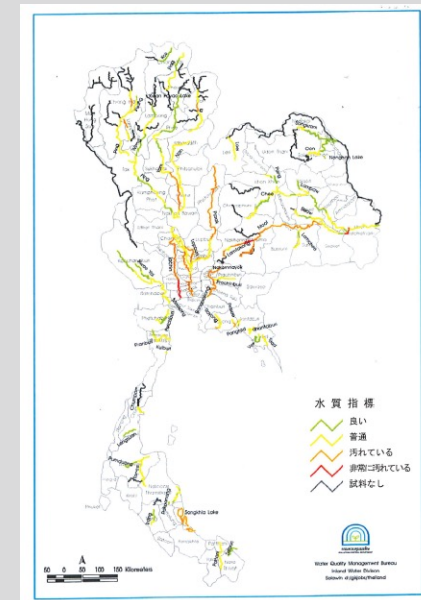
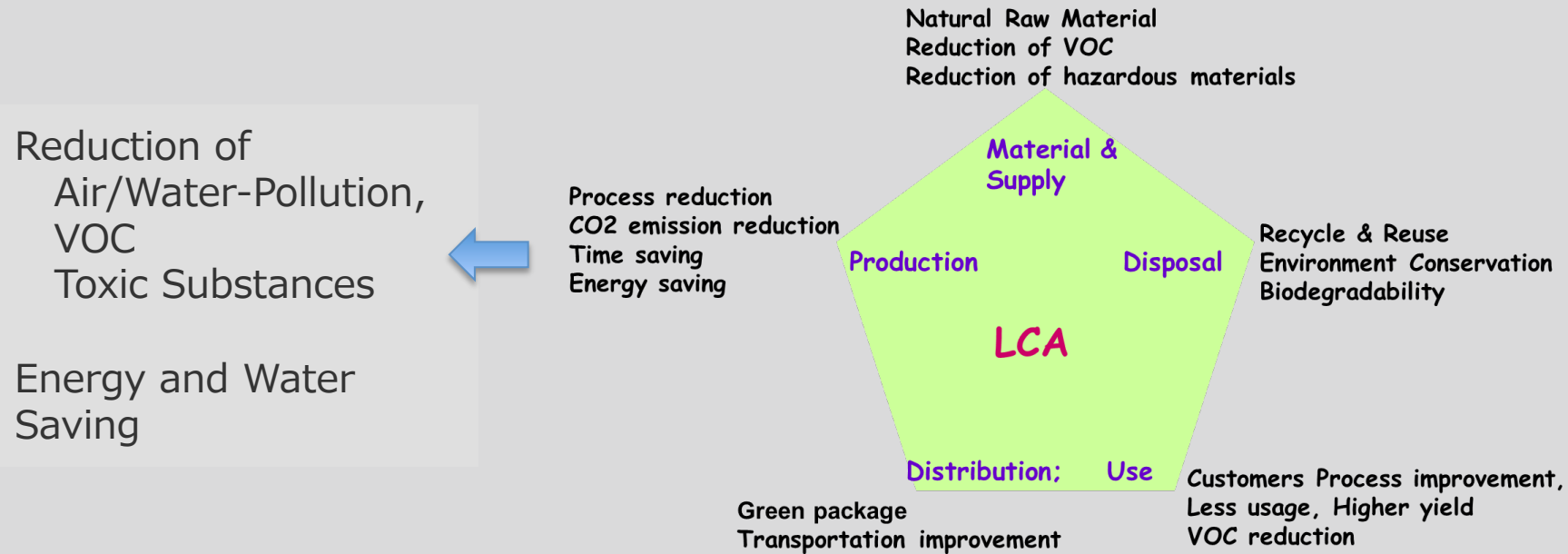


Feb.12, 2016

1. Benefit for Thailand

OTAGAI Forum Association

Criteria of Green Products of NICCA



2.Selling point

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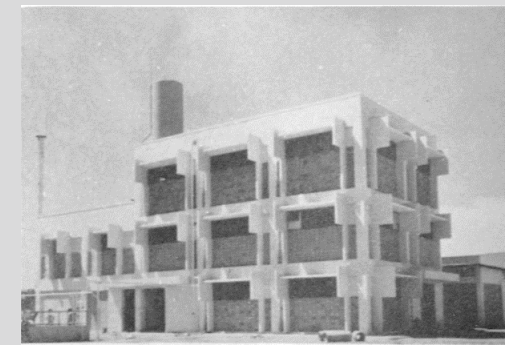
PFC-free Still DWR

Hall C2 Booth No.618

NICCA CHEMICAL CO.,LTD.

Novel Technologies for Sports/outdoor materials from **NICCA CHEMICAL.**

bluesign[®] SYSTEM PARTNER



Since 1974

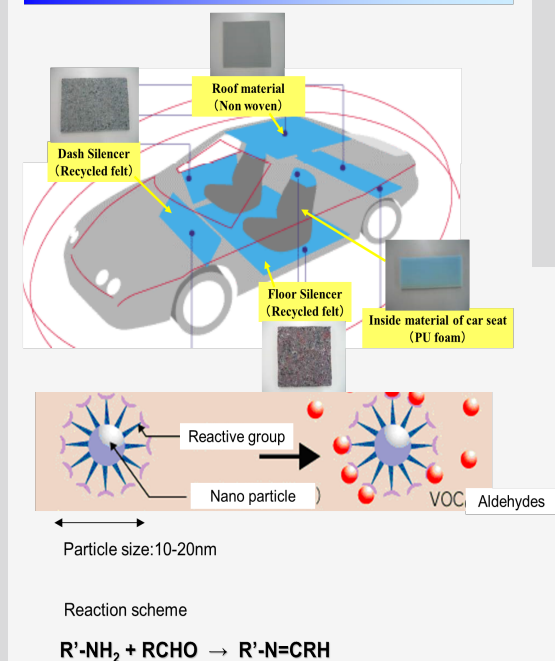
Flame Retardant Backing for Car Sheet

Halogen Free
Low accumulation
Nontoxic
Noncombustible
Comfortability

Back Coated

The diagram shows a car seat with a circular area on the backrest labeled 'GRAY FEX2'. A dashed line connects this area to a small image of a 'Back Coated' material, which is shown as a brown rectangular sheet. Next to it is a small image of a flame, indicating the material's flame-retardant properties.

Kirakuru AL-00GT for Automotive interior materials



42 years
Partnership
in Thailand



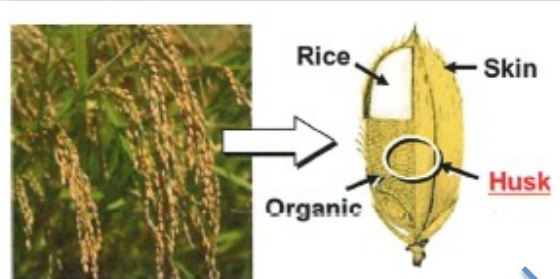
Siam Textile Chemical



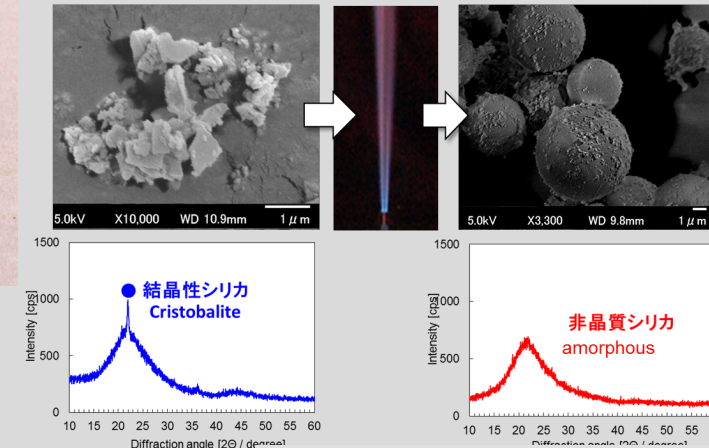
OTAGAI

3. OTAGAI point

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From Harmful cristobalite silica to high pure amorphous silica



Rice husks (million ton/y)

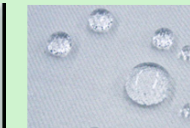


Husk power Plant in Thai

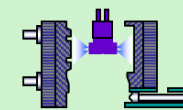
Amorphous silica



Coupling agent



Water repellent

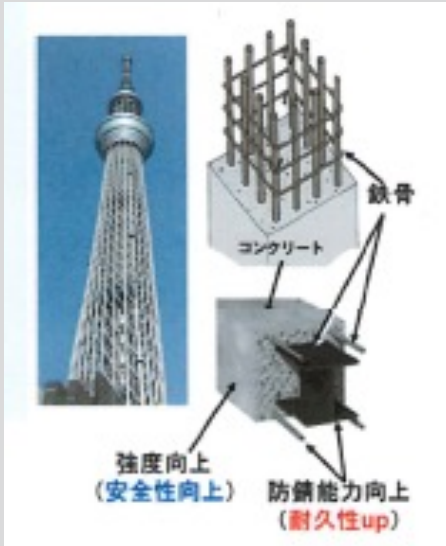


Lubricant



Hair Care

Super Durable Cement



Bio-Silica® Consortium

Project sponsored by National Agriculture and Food Research Organization, NARO

Osaka university

Nippon Steel & Sumikin Cement

Nicca Chemical



OTAGAI

NICCA CHEMICAL CO.,LTD.

4. Summarize

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- Providing “ **Novel Green Products** ” to customers in Thailand with life cycle assessment of products such as water-bones polyurethanes, deodorants. flame retardants and water repellents.
- Providing “ **Total Solutions for the whole textile** ” process to achieve world’s major apparel and fabric manufacturer’s advanced demand.
- Challenging to “**Advanced Recycling Process of Rice Husks**” to produce high-purity silica materials and their application to industries.



OTAGAI

5. Company Information OTAGAI Forum Association

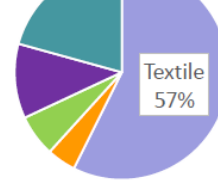
- Foundation 15th Sep. 1941
- Capital 2.9 billion JPY
- Business
 - ① Industrial chemicals for textile, paper, metal, etc...
 - ② Cosmetics, Home personal care, medical chemicals
- Productivity Consolidated: 33.6 billion JPY (For 9 month)
Non-consolidated: 17.2 billion JPY (For 9 month)
- Employee Consolidated: 1,182 Non-consolidated: 524
(As of 31st, Dec. 2013)

Business field mainly pro-use for all fields

- Textile : **Apparel interior** Automotive material
- **Fine Chemical**
- **Cleaning & Medical**
- Speciality chemicals
- Demi cosmetics

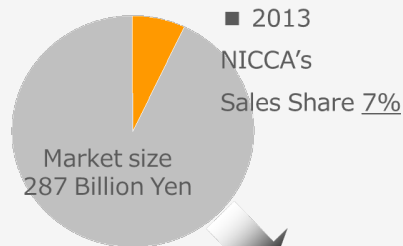
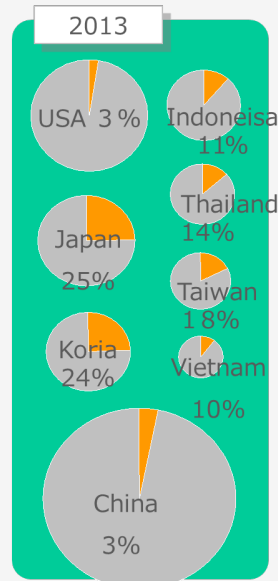
* Red letter: Domestic share No.1

Sales amount composition ratio (Consolidated)



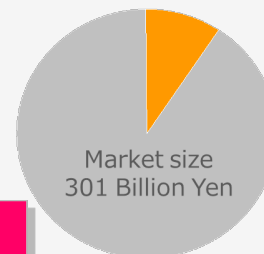
■ Textile ■ Fine ■ C&M ■ Speciality ■ Cosmetics

Global Market Share on Textile Chemicals



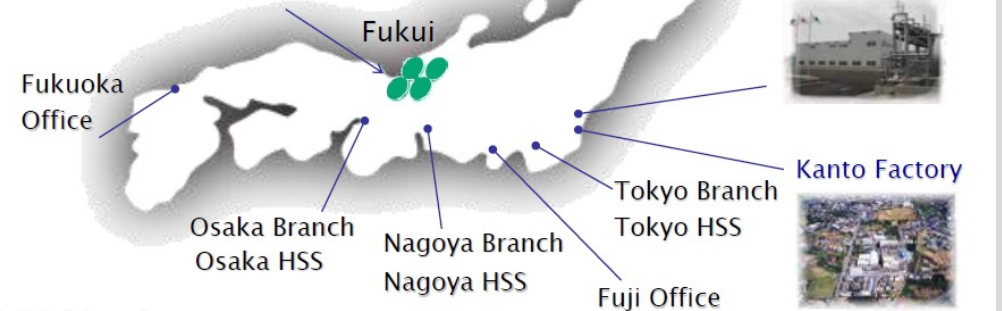
■ 2016 Target 10%

Toward Global No.1



Domestic

Head office
Hokuriku Branch
General Research Center
Hair science research Center
DEMI Factory
Sabae Factory
Sabae Distribution Center



NICCA Group Global Network

