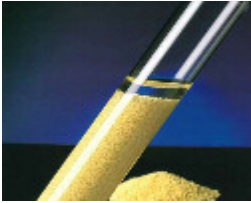







Kawasaki Green Innovation Cluster Member Information		Management Number	Section Number	Company
Business Classification	Soil, Water treatment Business			
Business Field	Sales and Development of Adsorbents for problematic soil and water contaminants			
Company/Organization Information	Company Name	株式会社日本海水		
	Company Name (EN)	Nihon kaisui Co., Ltd.		
	President	Masahiro Kanazawa		
	Address	Ochanomizu-NK Building-7 F, 4-2-5, Kandaugadai , Chiyoda-ku, Tokyo, Japan		
	Contact	+81-3-3256-8311		
	Capital	Jyen 1,319 million (End of March 2018)		
	No. of Employees	689 (End of March 2018, consolidated)		
	E-mail	read@nihonkaisui.co.jp		
	Website	http://www.nihonkaisui.co.jp/		
	Branches/ Agencies	Japan 7 offices Overseas		
Business Activities, Messages and Others	Business Activities	<p>As a leading company in Japan having the top market share of salt, Nihon kaisui Co., Ltd has been delivering secure and safe salt to everyone for many years. Based on our spirit of " technological potentials" and " traditions of craftsmanship" developed through the production of salt as ocean's bounty, we engage in environment, foods and agricultural business by exploiting infinite seawater resource.</p> <p>The products of the Environment Division include: 1) magnesium hydroxide slurry used for desulfurization/neutralization of coal power plants, 2) the adsorbent READ series to remove arsenic, fluorine and boron which are often technically difficult to remove, 3) ozone treatment facility using nanobubbles capable of treating hardly decomposable organic matter.</p>		
	Message/ Other	Although we have abundant track record in Japan for the sales of the hazardous substance adsorbent, our business operation has just begun to overseas. We are seeking collaborators who have business interests in water business in Southeast Asia		
	Examples of Products	<ul style="list-style-type: none"> * Adsorbent for fluorine removal READ-F (HG) * Adsorbent for arsenic removal READ-As * Adsorbent for boron removal READ-B (MC) 		

Kawasaki Green Innovation Cluster Product Technology Information		Management Number	Section Number	Company
Business Classification	Soil, Water treatment Business			
Business Field	Sales and Development of Adsorbents for problematic soil and water contaminants			
Company Name	Nihon kaisui Co., Ltd			
Product/Technology	Adsorbent for arsenic removal READ-As			
Overview of Products/Technologies	Features	<ul style="list-style-type: none"> · Higher Performance than other products in the market · Capable of processing regardless of number of valence of arsenic · Recyclable by regeneration process · Potential applicability to beverage industry · Abundant track record of sales in Japan. 		
	Keywords	Wastewater treatment, applicability to beverage industry, arsenic, compact, advanced treatment		
	Price			
Detailed Information about Products/Technologies	Details	<p>Arsenic in water can be continuously removed to achieve the Japan's environmental standard at 0.01 mg / L by using adsorption tower packed with the Adsorbent.</p> <p>The frequency of regeneration cycle depends on concentration and water flow rate.</p>		
	Capabilities	The basic adsorbent volume is proportional to water volume treated per hour divided by 10		
	Cost	Installation of adsorption tower is necessary in addition to the adsorbent.		
	Life cycle	Normally it needs replacement every 7 years		
	Remarks	In operating regeneration business, a base in the field is necessary.		
	Pictures relating to products and technologies	<p>READ-As adsorbent Simplified arsenic processing equipment</p>   <p>Spring water arsenic processing equipment (large scale)</p> 		
Advantages	Patent and award history	Global 100 Eco-Tech Awards in Exposition of Global Harmony http://www.expo2005.or.jp/jp/N0/N2/N2.6/N2.6.166/		
	Examples of use (Domestic and overseas)	The Equipment installed in Bangladesh by UNIDO in 2006 Recent large scale contracts include: the two spring water treatment equipment installed between the KEINAWA(connect the Kyoto-Nara-Wakayama) Expressway.		

Kawasaki Green Innovation Cluster Product Technology Information		Management Number	Section Number	Company
Business Classification		Soil, Water treatment Business		
Business Field		Sales and Development of Adsorbents for problematic soil and water contaminants		
Company Name		Nihon kaisui Co., Ltd		
Product/Technology		Adsorbent for fluorine removal READ-F(HG)		
Overview of Products/Technologies	Features	<ul style="list-style-type: none"> · Higher Performance than other products in the market · Suited for advanced treatment process · Recyclable by regeneration process · Abundant track record of sales in Japan and overseas. 		
	Keywords	Wastewater treatment, fluorine, advanced treatment, cost reduction		
	Price			
Detailed Information about Products/Technologies	Details	<p>Fluorine in water can be continuously removed by using adsorption tower packed with the Adsorbent. Reusable by alkaline cleansing to remove fluoride. The frequency of regeneration cycle depends on concentration and water flow rate.</p>		
	Capabilities	The basic adsorbent volume is proportional to water volume treated per hour divided by 20		
	Cost	Installation of adsorption tower and regeneration unit are necessary in addition to the adsorbent.		
	Life cycle	Normally it needs replacement of 10 to 20 % of the adsorbent /annum		
	Remarks	Application of the adsorbent to high concentration wastewater causes not efficiency due to adsorption capacity of the material.		
	Pictures relating to products and technologies	<p>READ-F (HG) Adsorbent</p>  <p>Fluoride Adsorption Dual Tower</p> 	<p>Fluoride Adsorption Single Tower</p> 	
Advantages	Patent and award history	Patented in Japan, PCT filled in China and Korea		
	Examples of use (Domestic and overseas)	<p>Abundant track record of sales in Japan including semiconductor plants and thermal power plants. In overseas market, the products were sold to Japanese automobile factories and thermal power plants.</p>		

Kawasaki Green Innovation Cluster Product Technology Information		Management Number	Section Number	Company																																						
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Business Field		Sales and Development of Adsorbents for problematic soil and water contaminants																																								
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Product/Technology		Adsorbent for boron removal READ-B(MC)																																								
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	Keywords	Wastewater treatment, boron, advanced treatment, cost reduction																																								
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Detailed Information about Products/Technologies	Details	Boron in water can be continuously removed by using adsorption tower packed with the Adsorbent. Reusable by acid cleansing to remove boron The frequency of regeneration cycle depends on concentration and water flow rate.																																								
	Capabilities	The basic adsorbent volume is proportional to water volume treated per hour divided by 10																																								
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	Pictures relating to products and technologies	<p>Comparison with competing product on their performance</p> <table border="1"> <caption>Data points estimated from the graph</caption> <thead> <tr> <th>Water flow rate (BV)</th> <th>Other company adsorbent (mg/L)</th> <th>READ-B(MC) (mg/L)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td><td>0</td></tr> <tr><td>25</td><td>0</td><td>0</td></tr> <tr><td>50</td><td>0</td><td>0</td></tr> <tr><td>75</td><td>0</td><td>0</td></tr> <tr><td>100</td><td>0</td><td>0</td></tr> <tr><td>125</td><td>1.5</td><td>0.5</td></tr> <tr><td>150</td><td>3.5</td><td>1.5</td></tr> <tr><td>175</td><td>6.5</td><td>3.0</td></tr> <tr><td>200</td><td>10.0</td><td>4.5</td></tr> <tr><td>225</td><td>15.0</td><td>7.5</td></tr> <tr><td>250</td><td>20.0</td><td>11.0</td></tr> <tr><td>275</td><td>-</td><td>16.0</td></tr> </tbody> </table>			Water flow rate (BV)	Other company adsorbent (mg/L)	READ-B(MC) (mg/L)	0	0	0	25	0	0	50	0	0	75	0	0	100	0	0	125	1.5	0.5	150	3.5	1.5	175	6.5	3.0	200	10.0	4.5	225	15.0	7.5	250	20.0	11.0	275	-
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	Examples of use (Domestic and overseas)	Abundant track record of sales in Japan including leachate treatment process for Industrial waste disposal site and wastewater from machine factory.																																								