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**Painting The Town Green**

**Revolutionary paint cuts energy bills by up to 33%**

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Mr. Yasuhiro Manaka, President Nihon Chuo Kenkyujo Co., Ltd.(NCK)

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President Nihon Chuo Kenkyujo Co., Ltd.(NCK) Japan

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[Energy Asia Japan](#)

“We are confident that no one can imitate the technology,” affirms Yasuhiro Manaka, President of Nihon Chuo Kenkyujo Co., Ltd. (NCK), the pioneers of a revolutionary heat-shielding paint that is setting the international standard for performance in the industry. Case studies around the world bear testament to the efficacy of NCK’s Adgreencoat paint, and tests in Saudi Arabia showed buildings’ electricity bills slashed by 18-33% after its application. The potential for this product to cut CO<sub>2</sub> emissions and fuel bills is phenomenal, and NCK – which is on track to be the industry’s global number one by 2018 – is looking for forward-thinking partners to join in taking its benefits truly global.

**How will the upcoming Olympic Games give NCK the chance to further promote Adgreencoat as the unbeatable heat-shielding paint brand?**

Since the 2020 Olympics will be held in Tokyo, there are many ongoing construction works. The buildings are going to get hot, which is not good for people nor the streets.

In the inside of the buildings, like gymnastics buildings, and the outside marathon lane, we are considering the application of our heat-shielding paint Adgreencoat.

For the waiting rooms or at the temporary buildings for the Olympic teams we will also use these heat-reducing measures.

In the Beijing Olympics, more than 100 people suffered heat strokes. We need to take steps to prevent this before we start building.

Even though we are a small company, we are confident in our product and its functionality.

**Are you talking to the IOC in order to do this, or is the negotiation finalized or are there still discussions?**

We are still discussing it.

**Japan is truly going through an exciting time at the moment. In a period of global economic recession, Japan is making the difficult choices to reorient its economy for a more globalized world. As Prime Minister Shinzō Abe has said, Japan is taking economic reforms that are “once in a generation,” through the popularly termed economic paradigm, Abenomics. How important are green economy and eco-friendly businesses to this modernization of Japan’s economy?**

In the paint industry there is an Asian Paint Industry Council, which has already been considering our globalization.

The Japan Paint Industry Council has started working with the Ministry of Economy, Trade and Industry to establish the Asia Paint Industry Council.

We are confident that the Japanese heat-shielding paint is the best in the world. The Asia Paint Industry Council has been established to develop and create a strong brand.

**Can you tell us about Adgreencoat and give our international audience a description and the background of it?**

About 10 years ago, the Ministry of Environment in Japan announced that there was much heat produced by the buildings in the island.

One of the plans was implementing 'green roofs'. For this project, there were some problems, the first being we needed high investments to make the necessary changes.

The second problem was keeping the roofs green; their maintenance was very costly. Besides, the pipelines on the roofs made it difficult to implement green roofs.

Therefore, we planned to apply heat-shielding paint on the top of buildings. There is a pilot project that started 10 years ago.

After seven years (i.e. three years ago) a new law passed regarding the standards of heat-shielding paint.

We already had a Japanese industrial standard called JIS. Three years ago, the Ministry of Environment established the JIS K 5675 for heat-shielding paint.

Since the new law that set the standards, many paint companies have applied for this standard, more than 30 of them. Only nine companies were approved just last year.

And the NCK product “Adgreencoat GL” has been applied by one of the nine companies, for which NCK has the production contract, and approved as a JIS-standard product.

In addition, it is clearly stated and corresponds with the Air Pollution Control Law in force in Japan, that efforts to control VOC (volatile organic compounds) emissions are the responsibility of operators/companies.

It means that we should refrain from using conventional solvent-based paint containing VOC. NCK’s production is with a JIS-certified factory, which focuses on water-based eco-friendly paint.

We are cooperating with two JIS-certified factories that are keen on developing water-based eco-friendly paint.

**So these certificates have given the stamp of approval for NCK and how green and environmentally friendly they are?**

Yes, actually, the JIS K 5675 certification is really hard to be approved due to the criterion of sustainability and weatherability compared to solvent-based products.

**You talked about NCK or Adgreencoat being the top brand by 2018. So what is the growth strategy, the communication campaign?**

We are truly confident that Adgreencoat technology will contribute to worldwide environmental preservation.

As the beginning of our global expansion, we have established local subsidiaries in Taiwan and Singapore, a related company in UAE, and started local production in Malaysia.

Plus we have started licensed production with a local company in Korea, and we are negotiating with locals in China and South Africa.

Furthermore, some businesses are ongoing in Middle East. We have expanding the notion of the “heat shield” effectiveness in order to establish the “heat shield standard” for the outside of buildings all over the world, by supplying our exclusive product and technology.

There was a conference in Kuala Lumpur in 2014 held by the University of Wales in which we were connected with a professor of Nippon University who attended, and we published an article in the paper about environmental preservation using all-inorganic coating, which actually referred to Adgreencoat.

I am going to tell you about the history of the product. About 10 years ago, the key material was invented at the Toyota factory.

Then they established a first venture company from Toyota, called Admatechs. That is when I met the company's salesman.

The key material (a spherical inorganic fine ceramic with a high heat releasing value) basically allows for heat to be released, and it has a 95% market share for IT gadgets' heat measures around the world.

In cosmetics they use this material with bigger spheres. I had a cosmetics company at that time, and I was brought the material as it was meant for cosmetics, but I did not use it because it was rather costly.

Then I thought if it were possible to add the material to paint. In cosmetics, the material is used to avoid the 'shiny-face' effect and hiding blemishes.

So I mixed paint with the key material, which has 0.5 micrometer ceramic spheres.

I discovered this myself; I was the first one to discover this type of paint. Then the researcher of Toyota approved it; we decided to get the patents for the paint in Japan, China and Singapore, and we started producing in Japan, Malaysia.

No one can manufacture this product or buy the product from Toyota, as we have the patent.

NASA developed paint with the ceramics-based material to use on its rockets.

It is great to use ceramics for heat insulation to overcome the extreme heat through the atmosphere before the universe – following the notion of “heat insulation” by keeping the heat at the coating film level, and not penetrating inside (the metal).

NASA technology was developed for heat-insulating purposes and utilized in Japan as well.

NASA uses hollow ball-type ceramics, which are bigger in size and with air inside, which affect the paint surface with its irregularities.

Because of its shape, it can be easily broken by rapid changes in temperature.

Our material has a much smaller diameter than NASA's, which is parts per tenth to hundredths, truly spherical and ultrafine particles.

It cannot be broken due to the nonporous shape. The ceramic has the functionality of reflecting and releasing the heat from the sun, by the notion of “heat shielding” – not keeping the heat at the coating film, just making it similar to the outside temperature, to keep inside comfortable.

Because of the size of their spheres, NASA technology-related products need to be applied in a thick coating, whereas we can maximize our effect with only a thin coating, given the size of our ceramic spheres.

**This is a revolutionary product that could save a lot in energy costs. So how are you working to promote this to potential clients?**

We have many past case studies and its effectiveness in data format. Based on the past experience, we can simulate how Adgreencoat works, saves energy, and reduces temperature and CO<sub>2</sub>.

Also, we have the demonstration kit and own iPad application to promote the product in various situations, such as exhibitions, presentations to clients, and so on, anywhere we need.

And we know the difference between “heat insulating” – which needs to be applied four to five times to maximize the effect – and a “heat shield”, which we can maximize the effect of with only three applications.

Adgreencoat can minimize the application cost. We are confident that no one can imitate the technology, not only its superb functionality, but also thorough consideration of the environment, aesthetic appearance, and its cost performance.

**How are you planning to communicate that your product is actually more efficient and cheaper and more eco-friendly than the others?**

We are struggling with the promotion. Because the standards themselves have been established in terms of 10 years, they have just now recognized that the heat-shielding element will be efficient.

But they just started the criteria.

We are just starting to promote that we have better functionality than others. In the past three years, the functionality itself has been recognized by the people who had the paint applied in their homes and buildings.

To promote its use, we have case studies in Japan and all over the world, including on important buildings like at Ski Dubai. We are approaching these landmark projects for promotion.

We also applied our product to the Toyota factory in Indonesia. We have been also promoting the development of our business in Singapore and Dubai. I will be visiting Shanghai to promote our product, and then Saudi Arabia after.

We are now carrying out case studies to promote Adgreencoat and get the data on how the product works. We are then considering collaborating with local companies so as to market and promote the product.

If they meet their sales' target, we are considering making them a production offer. We have established the 'made in Japan' and the 'made in Malaysia' product, and nearly achieved the Taiwan one.

The Korean product has also started developing, which is licensed.

**Any interest in the American market?**

Yes, of course. We are now doing marketing research to see who is going to be our partner.

Are you familiarized with OEM (Original Equipment Manufacturer) products? It is our product, but its name will be different when distributed in different countries. That is one of our strategies.

We also have a contract with a South African company. We are looking for partners all over the world: we have had visitors from Brazil, Philippines, Vietnam – local companies that cooperate with Japanese companies and have a branch in each of these countries.

With this strategy we are aiming to be number one in 2018 regarding the heat-shielding industry.

Last year, the United States and China agreed to implement CO<sub>2</sub> reductions in accordance with the Kyoto protocol. For the CO<sub>2</sub> reduction, we need to reduce the usage of air conditioning.

We can collaborate with the CO<sub>2</sub> emissions through heat shielding.

The former mayor of New York City decided to collaborate with a green environment. If they are successful in implementing eco-friendly buildings it is going to be possible to reduce the CO<sub>2</sub> emission by more than 6%.

There was a message from the former New York mayor, and the Seoul city mayor in Korea then joined him. Seoul's mayor announced it on TV, and the distributor asked us to collaborate with the local production in Korea. From this April on, local production will start in Korea.

**NCK is truly becoming a globalized company. The potential is enormous.**

Here we have a case study for setting up the criteria in Saudi Arabia. They compared regular paint and our product, Adgreencoat, to see how much electricity consumption reduction can be achieved.

We achieved a maximum 33% reduction, and an 18% minimum.

The government of Saudi Arabia will set the criteria based on this test. The test was ongoing until June of this year. If the test is successful, we will be Saudi Arabia's supplier.

Some of the Japanese local government has started grants for using heat-shield paint products in construction.

**I would like to talk a bit more about the structure of the company. How did you finance your projects? What is the initial investment that you have to make?**

We have the headquarters in Japan and branches in Singapore and Taiwan, and a related company in the United Arab Emirates, and we cooperate with many trading companies who have branches in Thailand, Vietnam, Indonesia, etc.

We are also focusing on societies who have different certificates, like ISO certificates.

Since we started focusing on eco-friendly products, we have been certified in Singapore, China and Taiwan.

In Japan we are only the one who has the Japan eco-mark, for which basically other paints will hardly be approved. It is the proof that Adgreencoat is the real eco-friendly heat shield paint in Japan.

We try to reduce the heat island phenomenon with the eco-friendly product.

**NCK's potential is enormous. You have all the certificates, all the regulation-compliance, and this unique valuable technology. Now it is just a matter of communicating, and raising the level of awareness globally about NCK.**

Yes, that is the only thing left to do. Our weak point is PR. We will cooperate with anyone who understands and loves this product the same way we do

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