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NCK

Modern technology for the world's modern diversity

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Energy Asia Japan

Japanese company NCK unveils its new paint with heat-shield technology fit for use in the Muslim world, as it complies with religious guidelines. NCK recently signed with Malaysian company Sersol Berhad to produce this paint – which will be known as Adgreencoat – for use in Muslim nations, which will be also be environmentally friendly and energy efficient in addition to religiously approved. In an exclusive interview with The Worldfolio, company president Yasuhiro Manaka outlines the future of this product for the world, as well as the new changes for the company in the national context as Japan reemerges from recession and resumes its place as an active player on the global stage.

Mr. Manaka: 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 measurements.

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 Tokyo Olympic Committee in order to do this and 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? Give our American audience just 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 on 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. It 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 (meaning, 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, which NCK has the contract production, and approved as the JIS standard product.

In addition, it is clearly stated and should correspond with the Air Pollution Control Law in force in Japan that the self-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 has the production with JIS certified factory, which focus 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 environmentally friendly and green that they are?

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

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 subsidiary in Taiwan and Singapore, and a related company in UAE, and started local production in Malaysia.

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

Furthermore, some businesses are ongoing in Middle East. We have been expanding the notion of the "heat shield" effectiveness so as to make 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 involved 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 wondered if it were possible to add the material to paint. In cosmetics, the material is used for a brighten-face effect and for hiding spots.

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

I discovered this myself; I was the first one discovering this type of paint. Then the researcher of Toyota approved.

We decided to get the patents for the paint in Japan, China and Singapore, and we started producing in Japan and 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 insulating to overcome the extreme heat through the atmosphere before the universe, by the notion of "heat insulating", to keep the heat at the coating film, and to not penetrate inside.

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 affect the paint surface with their irregularities.

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

It cannot be broken due to the nonporous shape. The ceramic has the functionality to reflect and release the heat from the sun, by the notion of "heat shielding", not to keep the heat at the coating film, just make 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 thick coatings, whereas we can maximize our effect with only thin coatings, 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 past experience, we can simulate how Adgreencoat works, saves energy, and reduces temperature and CO_2.

Also, we have the demonstration kit and own iPad application to promote the product in various situations, such as at 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 "heat shield", which we can maximize the effect 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 cheaper, more efficient 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 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.

For promotion we have had case studies in Japan and all over the world. And important buildings like at Ski Dubai. We are approaching these landmarks 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.

We are now making case studies to promote 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 familiar with OEM (Original Equipment Manufacturer) products? It is our product, but its name will be different when distributed in different countries. That is also 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_2 reductions in accordance with the Kyoto protocol.

For the CO_2 reduction we need to reduce the usage of air conditioning. We can collaborate with the CO_2 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_2 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 compare regular paint and our product, Adgreencoat, to see how much electricity consumption reduction can be achieved.

We achieved a maximum 33% reduction and even an 18% minimum in this case.

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.

Plus 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.
