

*Editor's note: During our annual meetings there are numerous presentations that benefit our membership. The presentation below is one that we at PDA felt was exceptionally valuable and we've decided to share it with our readers. The following article is an exact transcription of Toji Nagai's speech, which he presented at the 2003 PDA Annual meeting.*

Hello!

My name is Toji Nagai. I am president of Active IN Inc., a company in Japan. First, I would like to warn you that I am not a good English speaker.

Now, today, I would like to talk about how polyurea is being used in Japan. In Japan, polyurea is used for two different fields. One is for architectural structures such as buildings. The other is for engineering works like wastewater treatment, tunnels and bridges.

Japan has much more use for engineering works. In wastewater treatment, there are new specifications being set by the Japanese Government. These days in Japan, the number of new engineering projects has decreased and now we mainly do re-finishing work. The government specification for wastewater treatment has four different classes, A, B, C and D.

D class is applied to sewage for the most contaminated water. And in the C class, polyurea has to be applied over fifteen mils, and for D class, polyurea must be over twenty mils thick. The most important items in both C and D classes are the thickness of the spray and the adhesion of the polyurea. The thickness is tested with ultrasonic equipment and the adhesion is also tested.

As for bridges, there are basically two types. The first is for railroads and the second is for highways. For railroads, polyurea is used for many bridge parts, both side and walls and for repair of the surface as well. Some repairs on bridges are moving from epoxies to polyurea.

The reason these repairs are necessary is there is surface damage from acid rain and UV. For bridges used for highways, polyurea is used between the asphalt and the concrete layers. The polyurea works to protect the base concrete from acid rain and also allows the rainwater to run off the bridges and down the drains.

Active IN has been doing some tests for this application, which will be completed by next January (2004). I hope after those tests, our polyurea will get good recognition and be used throughout Japan.

The Japanese Government is also VERY difficult to work with, and many times they prefer to use Japanese materials. There are specific test items for every public facility. And the tests for those items for highway is VERY expensive. Tests for asphalt uses cost us about one hundred thousand dollars. It is very rare to pass these tests in the first attempt. Sometimes we must re-test several times. Unfortunately, we have failed the first tests and are now re-testing. For your information, for the first test, we did not get enough strength when we applied asphalt over polyurea. So this time we are doing it by using our newly developed adhesive to give better strength. The new adhesive is our industrial secret and so I cannot tell you about it here. However, if anyone here knows of any good adhesive materials in this country, I would like to try using them. So please let me know.

In our country, waste disposal is becoming a more serious problem then ever and we face many difficulties. However, the market for this is very large. We are experimenting with university professors and other people to develop some methods for burying all types of industrial garbage. Unfortunately, for projects like this, the pricing is very low. If you would like to know about the pricing, I will tell you later, over drinks.

Since Japanese Prime Minister Koizumi began his term, the Governmental projects have decreased by thirty percent. I hate to tell you the dark side of Japan, but because of this unstable economic situation, the suicide rate is VERY high. For the past five years, the yearly suicide rate is over thirty thousand people per year. Within that number are about twenty thousand people who lost their jobs in the slow market. However, our business is regaining its stability and we see some indication that our economy is picking up its strength a little bit. I hope the next years bring better business for all of us!