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The Quality of Dirt, the Poetry of Factories

Par Maurice Nio, architecte

Architecture is beyond your control. And, like all major and complex industrial schemes, anything and everything could go wrong with this project. You can see it from the figures. 3000 people worked on this project between the years 1993 and 1997. There was a grand total of one-and-a-half million discussions with misunderstandings occurring in 5% of them: 75,000 times. 16,000 drawings were made along with an equal number of alterations and an equal number of re-alterations. 1200 contracts were drawn up. The plant is composed of 30,000 component parts that have been imported from 18 different countries. Twenty lead engineers have been chiefly responsible for its various aspects, for their 'lots', and just a few individuals (such as myself) have been responsible for the logic of the entire structure.

In fact, it's a miracle that the final construction not only works but also makes sense, let alone that it's resulted in something that could be described as architecture.

I have always believed that the construction process of these kinds of large-scale projects can generate its own self-organized system, that if you provide a few basic rules, those 3000 people will automatically come up with something beautiful. But this proved not to be the case during the five years of this project. Unlike nature, we humans always make an absolute mess of things. Someone has to act as the concept's guardian, someone has to be the conductor of the cultural and therefore irrational component of the building's totality.

Therefore, it's an absolute miracle that the resulting construction actually makes sense and is more than simply a technical solution to the task at hand.

The process was chaotic right from the beginning, right from the moment when, following a selection procedure, we heard that we had won the job and that the building's concept was to be presented within 7 working days. With my architect's enthusiasm, I boldly announced that this was no problem whatsoever. However, as things turned out...

What do you do if this is your very first waste incineration plant? What if you are not even familiar with the situation? What do you do when you're told that these installation system are still to be defined yet in turn the installation system will define the dimensions of the entire building? And what on earth do you do when you know that everything that you come up with will be changed a hundred times?

You make up a concept. You develop a concept that will have to last for five years: a concept that lasts longer than the brief and prosaic existence of the usual technical and functional demands; a concept that is both hard as nails and crystal clear; a concept that is simultaneously clear and obscure, and that magically transforms all the technical conditions into something poetic. This is the concept that the architect must come up with.

In fact, during the seven days, we worked on ideas for not just one but for five buildings and each of these architectural proposals had its own particular advantages and disadvantages. Except for one, and this proposal had everything. It was a statement but a flexible statement, and it could effectively weather, absorb and deflect the changes

wrought by the passing of time yet would also win over even the most recalcitrant builder, fitter, constructor or adviser. We called this proposal the dung beetle.

I can still remember laying out small maquettes of our proposals on the table and the look of utter amazement on the faces of our Dutch and German clients. They were expecting a nice box for their installation system, and we came up with a dung beetle.

Over that period of five years, our original suggestion underwent approximately ten drastic alterations. And yet, once everything was completed, its final version exactly mirrored that first small maquette of the dung beetle.

Now, after all that time, I can begin to understand what we have done. In conceptual terms, the waste incineration plant in Twente is the filter between the rough-hewn landscape surrounding the city of Hengelo and the advanced installation system within. The building works as a kind of interface between the external and internal landscape, between the coarse and the subtle, between the past and the future of rubbish. The building has assumed the features of the rubbish tips outside and the characteristics of the invisible incineration and decontamination process.

This is because the two independently-functioning incineration lines are essentially a digestive process. Both lines have to incinerate 230,000 tons of rubbish each year and to decontaminate flue gases. This digestive process most closely resembles that of a human being or an animal. And that is why this process inspired us to make an insect, a metallic green dung beetle with mechanical features, a beetle that feeds on all that rubbish and excretes clean flue gas.

We allowed this idea, this theme, to reverberate throughout the entire structure so that it resounded in the main building and in the five secondary buildings on the grounds which consist of the water and air-cooled condensers, the slag treatment building, the weigh house, the office building and the gas reduction station. But beyond that, it is also echoed in the very details and finish of the site, and in the many pieces of furniture that populate the building like small insects.

In a sense, this waste incineration plant is just an old-fashioned building, designed and completed in the spirit of Berlage, the 19th century Dutch architect, where everything is consciously scrutinized - from large-scale features right down to the tiniest details. This is because I favour a stylistic finish, conscious details. But on the other hand, the concept provides enough freedom to allow for unexpected developments and three-dimensional surprises that I never could have predicted. That I simply never could have predicted because 3000 people had given their own, personal spin on that very first proposal for this waste incineration plant in the Netherlands.

M. Nio, juin 1999