

## Alain de Halleux – Director



### About the Director:

- TV report in Afghanistan (1981) broadcasted in the USA, France, Germany, Australia, Italy, The Netherlands...
- TV report in Lebanon(1982)
- Award : "Prix de la vocation" in 1983 for his photographic work during the war in Afghanistan.
- From 1987 to 2005, several commercials (concept and direction), industrial films, film trailers and video clips.
- Musician and teacher of Aikido
- Alain de Halleux has directed corporate films SUEZ, AXIMA, SOLVAY, FLUXYS, MASTERCARD etc...and won 3 international awards in the field of corporate film.
- He has worked for the European Commission and made commercials for PERRIER, the French Community of Belgium, the INSAS (film school), etc...
- He also makes experimental and family films.
- He was a cameraman for an American long feature film on gypsies : « WHEN THE ROAD BENDS ».
- He worked as an editor on the documentary « RESIST », produced by Aligators films.
- R.A.S, nucléaire rien à signaler (N.T.S, Nothing to report) (2009)**  
ARTE, RTBF, VRT. Expected purchase in 2009 : TSR and TV5 Monde  
Selected at Nyon Film Festival in 2009

## "Chernobyl Forever"

*a documentary by Alain de Halleux*

After the accident of 1986, Europe, with the exception of France, started doubting the Atom. Under public pressure, several countries promised to progressively abandon the atom industry. Electronuclear science was in danger.

In 1996, the 10<sup>th</sup> anniversary of the disaster confirmed their distrust and revealed to the world information that had been kept secret by the soviets. The media coverage focused the attention of the world community on the sanitary consequences of this nuclear disaster. And the consequences were dramatic. Whether a coincidence or not, in 1997, one year after this media general outcry, the G7

proposed to turn the territory of the greatest industrial disaster of all time into an "environmentally safe site".

10 years after this decision and after many technical and financial problems marred with scandals, the construction works can finally begin. However the EBRD, the European Bank for Reconstruction and Development is still struggling to collect money from donating countries that had committed to the project in the first place. This is because meanwhile a public-awareness campaign for global warming had succeeded in convincing people of the need to come back to nuclear energy. In this context, it is not useful anymore for the G7 and the International Atomic Energy Agency (IAEA) to prove any statement.

The disaster of Chernobyl is nearly 25 years old. Now, a new generation has arisen, a generation that doesn't know much about the disaster. Time has indeed got the better of the memories. That is why today, most people are convinced that this issue is a closed file. Only few people know that since 1986, thousands of workers have had to watch over and maintain the power plant and that billions of euros have been swallowed up in this long, discrete and unproductive undertaking. Nobody seems willing to realise the uncertainties that still surround this site which is still poisoning our present and our future for a long long time.

Today Ukrainians uncomplainingly accept this fatality and agree to the possible construction of 22 new reactors in their country. For youngsters, Chernobyl and the zone have become something virtual. Thanks to STALKER a survival game on computers they have everyday access to the zone. There they fight mutants and radioactivity without knowing that the actual consequences of the disaster are far from being sorted out.



Time seems to have defeated the vigilance of the old generation, the one that had grown up in communism and was acquainted with the event, the same generation who after the independence of the Ukraine in 1991 had put pressure on their government to make Chernobyl a priority. As a result, the whole of the population now suddenly behaves like the matter was closed. A proof of this statement is to be seen in the last presidential elections where no candidate mentioned the Chernobyl issue. None of them had a program including a follow-up of the disaster. None of them had even thought of mentioning the construction of the dome during their election campaign.

In 4 years, if everything goes as scheduled, the SARCOPHAGUS, the symbol of the flaws of civil nuclear power will vanish. This event will take place in complete indifference. This would probably also be the case of the commemorations of the 25<sup>th</sup> anniversary of the Chernobyl disaster.

But what meaning should we give to this new SARCPHAGUS?

The companies that have won the contract, VINCI and BOUYGUES, have raised the French nuclear estate and seek with AREVA and EDF to establish French civil nuclear power in the world.

With the dome, the companies kill two birds with one stone. First of all, they benefit from a juicy contract financially guaranteed by public institutions. Second of all, they restore a positive image of an industry that had been strongly weakened in 1986. Moreover, their positioning in the

Ukraine leaves the door wide open to new contracts for new reactors in the country and offers them access to the Uranium mines in the East of the country which represent 5% of uranium world stock...



This ambitious dome project is founded on the hypothesis that the SARCOPHAGUS would still hold a great amount of uranium and plutonium present before the explosion. But are we so sure of this statement? This is a crucial issue and there is at this point no general agreement on it. This question was raised as from May 1986.

After the fire was put out, the soviets realised that if the Corium, that is to say the radioactive molten lava would reached the ground water, this would cause a nuclear reaction 8 times that of Hiroshima. In fact the water slowing down the neutrons also increases their ability to cause atomic fissions of Uranium 235. So in order to prevent this disaster, the authorities have decided to reinforce the foundations of the reactor. After the urgency was dealt with, the engineers started fearing that with time, rain would penetrate inside the rubbles and reach the combustible. So the soviets decided to build a concrete SARCOPHAGUS to insolate the reactor. This tour de force is achieved in less than 6 months, which is a real challenge considering the pervading radioactivity.

In 1989, Moscow asked the Kurchatov Institute to do research on the SARCOPHAGUS and the rubbles in order to assess the amount of combustible still remaining and the possible risks of a criticality accident. After 3 months of topographical research in Dantesque conditions, the team concluded that 97% of the combustible still remained. This statement was convenient for Moscow and the International Atomic Energy Agency (IAEA) because it allowed them to put the population's mind at ease regarding the limited presence of radionuclides in their gardens.

But in 1994, a dramatic turn of events occurred. SEBASTIEN PFUGBEIL, a German scientist and his Russian colleague Konstantin Tchecherov set up two expeditions in order to make up their own opinion about the actual amount of combustible still remaining. They had diametrically opposed views. According to both men, only 3% of Uranium still remained inside the Sarcophagus. In all cases, both figures are not reassuring. If only a small percentage of radionuclides has been spread on the globe, what happens when a new accident spreads an even greater amount of radioactivity? And if this contamination is due to 97% of combustibles as claimed by Pflugbeil why then build an edifice that serves no useful purpose?

For more than 20 years, the SARCOPHAGUS will be patched up and reinforced. In 1991, an earthquake of 3,4 on the Richter scale reminded us that the power plant had been built on a seismic rift. An earthquake of 4,3 on the Richter Scale would be enough to definitely shake the frail edifice down. Therefore several mathematicians have created test models in order to assess the consequences of this kind of event .

If the SARCOPHAGUS should collapse before the dome is completed, the contamination would increase by 30% and would mainly affect a 30km<sup>2</sup> Zone as well as the Pripjat river. Moreover this river flows into the Dnepr which supplies with drinking water not only Kiev but 17 million people from Kiev up to the sea.

If this disaster should happen under the dome, this would limit the spreading to 10% and would only affect a restricted area of 10 km<sup>2</sup>. Besides environmental and sanitary consequences, the

stumbling of the SARCOPHAGUS before or after the building of the dome would constitute in all cases a serious psychological shock for the Ukrainian population.

An absolute certainty is that the more we wait before building the dome, the greater the risks for the SARCOPHAGUS to weaken and the more the task of covering the reactor with 1,5 million tons of concrete becomes very delicate.

Moreover the DOME is far from being approved unanimously, especially in the Ukraine where several scientists and some fringe politicians denounce "an expensive, risky and useless undertaking". On the other hand, the latter ask for real issues to be attacked head-on. For example, The ZONE includes 800 unauthorized wells containing radioactive wastes. Flooded every spring, they threaten the ground water and thus the health of a great deal of the Ukrainian population. The LAGOON near the power plant has to be drained because in 1986 tons of highly radioactive wastes have been thrown into it. Now only a dike prevents the Lagoon from flowing into the PRIPYAT river and reinforcing this dike costs millions to the government every year! But the Ukraine has no other choice. If the dike breaks, it will be the end of the Ukraine.

Unfortunately, the country has dropped its guard regarding food and water control. However the authorities should invest in research and health in this country where demographers foresee life expectancy to reach only 59 years in 2050 instead of 73 years during the communist period. According to detractors of the project, it would have been better to chose for a less expensive and less showy project. The latter would have preferred a strategy based on an earlier and in open air dismantling of the sarcophagus instead. This would have reduced the risks incurred by the workers and reduced the amount of waste produced by the construction itself. According to VLODIMYR USATENKHO, liquidator and Ukrainian parliamentary : *"It would have been better to devote all this energy to deal with all the other consequences of the accident. The task is simply inhumane. Our country, alone, can not bear this burden. The dismantling of the 3 other units of Chernobyl will cost 6 times the construction of the dome...."*

So for some, this project is a waste of time and money. For those undertaking it, it is a full stop and it gives birth to a new promising era. But when analysing it, even if we put aside the thousand unresolved problems, things are only about to begin in Chernobyl. Even if we consider the hypothesis that the dome is useful, many uncertainties still surround its future...

When the work is completed, the Ukraine will have to wait until 2045 to finally start dismantling the SARCOPHAGUS and the REACTOR and attempt the even more delicate operation of retrieving the still highly radioactive combustible. Today, no technology has made this operation possible. We are thus entrusting future generations to assume this responsibility. They will certainly find the solution!

This agenda gives the benefit - and it needs to be underlined -of postponing the risk of failing in this enterprise to a time when there won't be anymore Uranium on the planet and thus, probably no more nuclear power plants based on atomic fission.

Moreover, the dome is structurally guaranteed to last until 2114. In 100 years, it will have to be dismantled again and we will have to find a shelter capable of holding 18 thousand tons of iron and 1,5 million tons of contaminated concrete. The critics also remind us that the pieces of the dome once dismantled will at their turn become nuclear wastes themselves. Put together, they could reach the size of a 60 meter high building, 100 meter wide and 100 meter long. We could have done without this cumbersome burden!

Whether the dome happens to be useful or not, whether it serves the interests of the nuclear lobbies or whether there is or isn't any combustible left, the project is poised to materialise. In the end, all these interrogations come too late. They have not been the subject of any serious debate in the Ukraine or in the European parliament.

But we need to think about the future. What will we do when the dome will be put together? In what

conditions will the workers operate while building the dome and when the dome is completed? What are we going to do with the wastes? How can we organise the control of the zone for a period as long as the time that separates us from the 1<sup>st</sup> world war? Where will we find the money for the 12 works of Hercules that still need to be completed?....