

## Cutting Through the Fog on 'Possible Military Dimensions' to Iran's Nuclear Programme: Purported large explosives chamber at Parchin

by Robert Kelley

On 14 July 2015, the Joint Comprehensive Plan of Action (JCPOA) was agreed after more than two years of intensive negotiations between France, Germany and the United Kingdom (E3), the European Union (EU), China, Russian federation and the United States of America (+3), E3/EU+3 and Iran, on ensuring the exclusively peaceful nature of Iran's nuclear activities. On the same day, the International Atomic Energy Agency (IAEA) and Iran agreed on a work plan called the Road-map for the Clarification of Past and Present Outstanding Issues regarding Iran's Nuclear Programme. Under the Road Map, the IAEA and Iran also concluded separate arrangements to address the issues of: (1) possible military dimensions to Iran's nuclear programme as set out in the Annex to the November 2011 IAEA report; and (2) of activities at Parchin, a large military-industrial factory in Iran.

Over past years, since November 2011, the issues of PMD and Parchin have been the subject of many analyses in the public domain, some which instead of clarifying the underlying issues have muddied waters. In a series of assessment, Robert Kelley, Associated Senior Research Fellow with the Disarmament, Arms Control and Non-Proliferation Programme at SIPRI, who has experience in nuclear intelligence and remote sensing, respectively at the U.S. Los Alamos National Laboratory and the U.S. Department of Energy, discusses some of the key issues and misperceptions concerning PMD and Parchin. These assessments are designed to acquaint the public with the truth and the application of the scientific method to information analysis in the service of peace and security. While some are trying to make the problem seem difficult, competent and experienced intelligence analysts use many tools to understand information and paint a clear picture. These tools include measurements of objects, categorization of objects, historical imagery over a relevant period of time, and, of course, common sense plus experience. **The second of these assessments looks at allegations of the existence of a large explosives chamber at Parchin.**

### Purported large explosives chamber

There were claims advanced by the International Atomic Energy Agency in November 2011 that Iran had built a large steel chamber at Parchin to conduct explosive tests that might be related to nuclear weapons development. The claims came from anonymous member States of the IAEA. No one has produced a single credible clue to support this assertion except by excerpting a book by a Russian scientist. In the book he says he wanted to build such a chamber but he never said that this was in Iran. The Russian scientist had built several chambers for explosive forming tests such as making nano-diamonds.<sup>1</sup> Although this may seem exotic, at first, explosively formed products are very common especially in the Former Soviet Union and are often made in chambers, usually much smaller. He says he designed the chamber in 1999 – 2000 and the IAEA says the chamber was installed in 2000.

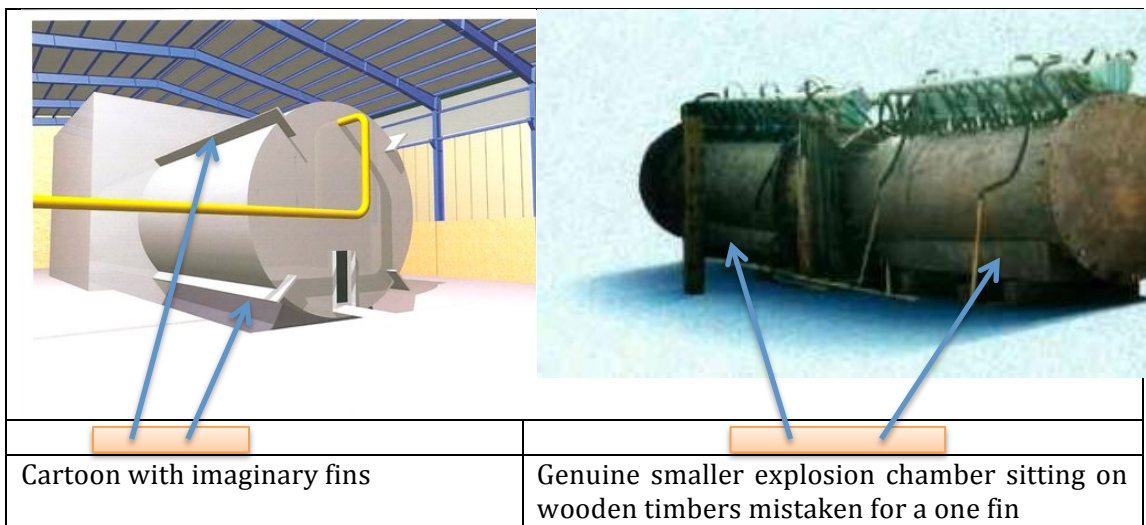
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<sup>1</sup> "Re-examining the mystery of Azgir," Jane's IHS, Satellite Imagery Analysis, 18 August 2014

This is a very tenuous claim given that such a chamber is roughly the size of a London bus with massively thick steel walls and would take several years to fabricate, if Iran had the capability, which is doubtful.

But one “cartoon” of the chamber was leaked via the press purporting to “prove” its existence. The drawing was said to be made from an eyewitness account.

When one looks at this apparently massive object, it is clear that it has enormous dimensions, but of particular interest are four long “fins” running the length of the chamber. These longitudinal fins are imaginary additions and if there were any reinforcements, they would encircle the chamber on the outside to strengthen it. to strengthen a chamber like this from a blast inside. Why are they there?



The answer lies in the book published by the Russian scientist. He shows a fuzzy photograph of the biggest chamber he had ever built up to that time for producing nano-diamonds. It is much smaller than the one he wants to build but there are some similarities. In his photo you notice one long line along the bottom edge. It could be a fin but when you enlarge it and look carefully you can see that the chamber is sitting on a bed of long wooden timbers; not knowing what they were the cartoonist made it into a fin and added three more for good measure. It is significant to note that the sketch was not made by an eyewitness but by a graphic artist who was given the fuzzy photo to copy. And when the “eyewitness” was asked to say how big the chamber was he gave the dimensions in the Soviet book down to almost the nearest centimetre. Sounds like he was coached?

A person close to this story is a former deputy director general of the IAEA who was interviewed by Associated Press and here is what he had to say:

*...it was "very similar" to a photo he recently saw that he believes to be the pressure chamber the IAEA suspects is at Parchin. He said even the colors of the computer-generated drawing matched that of the photo he had but declined to go into the origins of the photo to protect his source.*

The US intelligence community has a scale which they use to rate intelligence they receive. When the information contains three qualifiers in one sentence it is likely to be ranked as of low confidence. Not that the source is not credible but that the qualifiers in the sentence make it clear that he is not sure that this is real.

**Conclusion: The assessment above suggests that the cartoon depiction of the chamber is flawed in several aspects as is its purported origin and use. It is the concept of a graphic artist who has been given a photo to copy and very likely there is no eyewitness. One only has to remember the stories of the bogus Iraqi human source "Curveball" in 2003 to see the similarity.**