

Crisis in Korea:

America, China, and the Risk of War

REPORTS ON THE SINKING OF THE CHEONAN

This appendix provides the interim South Korean report and the first instalment of the North Korean report. The Russian report was not published and the longest description of it that I have been able to discover appeared in the South Korean paper Hankyoreh on 27 July. That is available at http://english.hani.co.kr/arti/english_edition/e_northkorea/432232.html

1: Interim report of the South Korean Joint Investigation Group

Investigation result on the sinking of ROKS "Cheonan"

Posted May. 20, 2010

- Source : Ministry of National Defense



The Joint Civilian-Military Investigation Group(JIG) conducted its investigation with 25 experts from 10 top Korean expert agencies, 22 military experts, 3 experts recommended by the National Assembly, and 24 foreign experts constituting 4 support teams from the United States, Australia, the United Kingdom and the Kingdom of Sweden. The JIG is composed of four teams--Scientific Investigation Team, Explosive Analysis Team, Ship Structure Management Team, and Intelligence Analysis Team.

In our statement today, we will provide the results attained by Korean and foreign experts through an investigation and validation process undertaken with a scientific and objective approach.

The results obtained through an investigation and analysis of the deformation of the hull recovered from the seabed and evidence collected from the site of the incident are as follows:

The JIG assesses that a strong underwater explosion generated by the detonation of a homing torpedo below and to the left of the gas turbine room caused Republic of Korea Ship(ROKS) "Cheonan" to split apart and sink.

The basis of our assessment that the sinking was caused by a torpedo attack is as follows:

Precise measurement and analysis of the damaged part of the hull indicates that a shockwave and bubble effect caused significant upward bending of the CVK(Center Vertical Keel), compared to its original state, and shell plate was steeply bent, with some parts of the ship fragmented.

On the main deck, fracture occurred around the large openings used for maintenance of equipment in the gas turbine room and significant upward deformation is present on the port side. Also, the bulkhead of the gas turbine room was significantly damaged and deformed.

The bottoms of the stern and bow sections at the failure point were bent upward. This also proves that an underwater explosion took place.

Through a thorough investigation of the inside and outside of the ship, we have found evidence of extreme pressure on the fin stabilizer, a mechanism to reduce significant rolling of the ship; water pressure and bubble effects on the bottom of the hull; and wires cut with no traces of heat. All these point to a strong shockwave and bubble effect causing the splitting and the sinking of the ship.

We have analyzed statements by survivors from the incident and a sentry on Baekryong-do.

The survivors made a statement that they heard a near-simultaneous explosion once or twice, and that water splashed on the face of a port-side lookout who fell from the impact; furthermore, sentry on the shore of Baekryong-do stated that he witnessed an approximately 100-meter-high "pillar of white flash" for 2~3 seconds. The aforementioned phenomenon is consistent with damage resulting from a shockwave and bubble effect.

Regarding the medical examination on the deceased service members, no trace of fragmentation or burn injury were found, but fractures and lacerations were observed. All of these are consistent with damage resulting from a shockwave and bubble effect.

The seismic and infrasound wave analysis result conducted by the Korea Institute of Geoscience and Mineral Resources (KIGAM) is as follows:

Seismic wave intensity of 1.5 degrees was detected by 4 stations.

2 infrasound waves with a 1.1-second interval were detected by 11 stations.

The seismic and infrasound waves originated from an identical site of explosion.

This phenomenon corresponds to a shock wave and bubble effect generated by an underwater explosion.

Numerous simulations of an underwater explosion show that a detonation with a net explosive weight of 200~300kg occurred at a depth of about 6~9m, approximately 3m left of the center of the gas turbine room.

Based on the analysis of tidal currents off Baekryong-do, the JIG determined that the currents would not prohibit a torpedo attack.

As for conclusive evidence that can corroborate the use of a torpedo, we have collected propulsion parts, including propulsion motor with propellers and a steering section from the site of the sinking.

The evidence matched in size and shape with the specifications on the drawing presented in introductory materials provided to foreign countries by North Korea for export purposes. The marking in Hangeul, which reads "1번(or No. 1 in English)", found inside the end of the propulsion section, is consistent with the marking of a previously obtained North Korean torpedo. The above evidence allowed the JIG to confirm that the recovered parts were made in North Korea.

Also, the aforementioned result confirmed that other possible causes for sinking raised, including grounding, fatigue failure, mines, collision and internal explosion, played no part in the incident.

In conclusion,

The following sums up the opinions of Korean and foreign experts on the conclusive evidence collected from the incident site; hull deformation; statements of relevant personnel; medical examination of the deceased service members; analysis on seismic and infrasound waves; simulation of underwater explosion; and analysis on currents off Baekryong-do and collected torpedo parts.

ROKS "Cheonan" was split apart and sunk due to a shockwave and bubble effect produced by an underwater torpedo explosion.

The explosion occurred approximately 3m left of the center of the gas turbine room, at a depth of about 6~9m.

The weapon system used is confirmed to be a high explosive torpedo with a net explosive weight of about 250kg, manufactured by North Korea.

In addition, the findings of the Multinational Combined Intelligence Task Force, comprised of 5 states including the US, Australia, Canada and the UK and operating since May 4th, are as follows:

The North Korean military is in possession of a fleet of about 70 submarines, comprised of approximately 20 Romeo class submarines(1,800 tons), 40 Sango class submarines(300 tons) and 10 midget submarines including the Yeono class(130 tons).

It also possesses torpedoes of various capabilities including straight running, acoustic and wake homing torpedoes with a net explosive weight of about 200 to 300kg, which can deliver the same level of damage that was delivered to the ROKS "Cheonan."

Given the aforementioned findings combined with the operational environment in the vicinity of the site of the incident, we assess that a small submarine is an underwater weapon system that operates in these operational environment conditions. We confirmed that a few small submarines and a mother ship supporting them left a North Korean naval base in the West Sea 2-3 days prior to the attack and returned to port 2-3 days after the attack.

Furthermore, we confirmed that all submarines from neighboring countries were either in or near their respective home bases at the time of the incident.

The torpedo parts recovered at the site of the explosion by a dredging ship on May 15th, which include the 5x5 bladed contra-rotating propellers, propulsion motor and a steering section, perfectly match the schematics of the CHT-02D torpedo included in introductory brochures provided to foreign countries by North Korea for export purposes. The markings in Hangeul, which reads "1번(or No. 1 in English)", found inside the end of the propulsion section, is consistent with the marking of a previously obtained North Korean torpedo. Russian and Chinese torpedoes are marked in their respective languages.

The CHT-02D torpedo manufactured by North Korea utilizes acoustic/wake homing and passive acoustic tracking methods. It is a heavyweight torpedo with a diameter of 21 inches, a weight of 1.7 tons and a net explosive weight of up to 250kg.

Based on all such relevant facts and classified analysis, we have reached the clear conclusion that ROKS "Cheonan" was sunk as the result of an external underwater explosion caused by a torpedo made in North Korea. The evidence points overwhelmingly to the conclusion that the torpedo was fired by a North Korean submarine. There is no other plausible explanation.

THU. 20 MAY, 2010

The Joint Civilian-Military

Investigation Group

* Government press release (May 20)

Source: [ROK] Ministry of National Defense, Seoul

<http://www.korea.net/news.do?mode=detail&guid=46843>

The final report was issued on 14 September 2010 and is available at <http://www.cheonan46.go.kr/100>

2: "Cheonan" Case Termed Most Hideous Conspiratorial Farce in History

[This is described as the 'first instalment' of the statement, and two more were promised, but by the end of January 2011 no further instalments had been issued]

Pyongyang, November 2 (KCNA) -- The inspection group of the National Defence Commission of the Democratic People's Republic of Korea Tuesday released the following first instalment of a statement disclosing the truth behind the "Cheonan case":

Seven months have passed since warship "Cheonan" of the south Korean puppet navy sank in the West Sea of Korea.

No sooner had the case occurred than the U.S. imperialists and the Lee Myung Bak group of traitors deliberately linked the case with the DPRK as if they had waited for it to happen, kicking up an unprecedented anti-DPRK confrontation racket.

The DPRK dismissed the groundless story about "the DPRK's involvement" in the "Cheonan" case as a sheer fabrication and a conspiratorial farce from the outset and declared internally and externally its will to probe the truth behind the case to the last.

The proposal for field investigation made by the inspection group of the NDC of the DPRK was prompted by this will.

Much upset by the disclosure of the inside story about the case, the U.S. imperialists and the Lee group of traitors hastily announced "the results of the investigation" conducted by "civilian-army joint investigation team," desperately opposing the field survey by the NDC inspection group.

As the "investigation results" were criticized for being full of suspicions, they made public a "final report", another fabrication, recently only to be censured and ridiculed by all people.

They have staged joint naval exercises reminiscent of "demonstration of armed forces" one after another in waters close to the DPRK while getting frantic with a racket for applying sanctions against it on the international arena.

It was the original plan of the DPRK side to make public the truth of the case in the most scientific and legitimate manner after the completion of the field survey by the NDC inspection group.

The U.S. imperialists and the group of traitors, however, not only objected the field survey but went the lengths of turning down even the proposal made by the DPRK out of magnanimity to jointly survey and estimate all material evidence which they claimed lifted from the waters where the ship sank after bringing them to Panmunjom.

Under this situation the DPRK side decided to disclose before the world what sheer fabrication and conspiratorial farce they orchestrated on the basis of information gathered so far. The following is the first installment of the statement:

1. Aluminum alloy fragments prove themselves that the torpedo was not from the north.

The U.S. imperialists and the "investigation team" of the Lee group of traitors claimed that the fragments of torpedo allegedly lifted from waters off Paekryong Islet where "Cheonan" sank were those of aluminum alloy.

They opened to the public that the aluminum alloy was material evidence proving that the "torpedo was from the north" and that the "north attacked the ship."

The army and people of the DPRK have silently watched how the U.S. imperialists and the group of traitors have behaved over the issue of these torpedo fragments as they pretended to be well informed of it. The army and people of the DPRK have exercised patience with an intention to verify them and clarify what they had in mind on the spot.

Now that it has become impossible to verify them on the spot, they do not make any scruple of disclosing the truth about the case.

The navy of the Korean People's Army has torpedoes like navies of other countries and we do not hide the fact that it possesses torpedoes with such tremendous striking power that the world can hardly imagine.

They are Juche-based torpedoes made of steel alloy material manufactured by workers of the DPRK, not aluminum alloy made in other countries.

It was our original intention to hand steel alloy sample of a torpedo of the navy of the KPA to the U.S. imperialists and the group of traitors so that they may compare it with aluminum alloy. It was aimed to let them admit by themselves that the "story about attack on 'Cheonan' by the north's torpedo" was a sheer fabrication and a conspiratorial farce.

The DPRK is still willing to directly hand the steel alloy sample of Juche-based torpedo to the U.S. imperialists and the group of traitors.

The U.S. imperialists and the group of traitors have so far claimed that the aluminum alloy fragments were "those of the north's torpedo" only to deny the "story" by themselves.

Here we would like to more glaringly lay bare the hypocrisy and the inside story about the anti-DPRK conspiratorial scenarios including several "investigation reports" which the U.S. and the south Korean puppet forces announced as regards the "Cheonan" case.

2. Propelling body is a sheer fabrication

The propelling body is one of the decisive evidence produced by the U.S. and the Lee Myung Bak group of traitors to prove the story that the "north was involved" in the "Cheonan" case.

The origin of this propelling body is doubtful, above all.

It is nonsensical for them to claim that a civilian fishing boat appeared all of a sudden and netted the propelling body which dozens of warships equipped with sophisticated detecting devices failed to find out in at least 50 days. The propelling body which was shown by TV was different from what the "investigation team" opened to the public later.

The propelling body, which was lifted by the fishing boat at that time, was reported to have been pasted with silver paper but there was no such thing on the 1.5 meter-long propelling body shown by the puppet group's "investigation team" on May 20.

This is not the only thing that aroused suspicion.

At the outset the "investigation team" said that HMX, RDX and TNT explosive ingredients were detected from the hull of the warship "Cheonan".

But there was information that no minute explosive ingredient was detected from the propelling body which they claimed was used for sinking the warship. It does not stand to reason that no gunpowder ingredient was detected from the torpedo which is to explode by power of gunpowder, ie from the propelling body of the torpedo which they claimed was used for breaking the 1 400 ton-class "Cheonan" into two.

Driven to a tight corner, the U.S. and the south Korean puppet group excused themselves that they could not detect the explosive ingredient as it was dissolved in seawater because the propelling body remained in the very salty seawater for many hours. But this excuse turned out to be absurd as they had already made public that gunpowder ingredient was detected from the warship hull which remained on the bottom of the same waters for the same length of time.

3. Torpedo design, mockery of world

It was disclosed that the torpedo design shown by the group of traitors in a bid to convince the public that the torpedo propelling body was "from the north" was full of suspicions. This is a great irony.

At that time, the puppet group, making public the "results of joint investigation," shamelessly displayed in the venue of the news conference torpedo design CHT-02D it claimed was made by the north in a bid to make plausible its assertion that the propelling body of the torpedo which attacked the warship was "made by the north." It insisted it was certain that the propelling body was made by the north as "Guaranteed by the DPRK" was written on the catalogue of the torpedo design.

However, the words written on the design were ascertained to be Japanese in fact. It was brought to light that the torpedo motor according to the design was rectangular one, but the motor of the propelling body produced at the venue of the news conference was in streamlined shape.

When their clumsy plot proved to be false, they could not but admit that they explained those present at the press conference about "the propelling body from the north" with the help of a torpedo design different from the "torpedo" which had been produced.

The falsity of the design is proved by the following facts: The puppet group claimed in its "report on the results of the joint investigation" that the design was "one contained in north Korea's torpedo brochure distributed for export" and "it was provided with the image of the torpedo CHT-02D by the information analyzing section." And the last part of the report referred to "the process of issuing the

north's computer words by printer," hinting that it was a computer file. This fact alone proves that whether the design is a printed matter or image or computer file remains uncertain.

It was disclosed that the puppet group replaced the torpedo design by a new one in secrecy several times in a bid to convince the public at any cost that the propelling body was "from the north."

This goes to prove that the propelling body produced by the U.S. and the south Korean puppet group as strong evidence proving that the warship was sunk by the "torpedo attack by the north" was nothing but a sheer fabrication making a mockery of the world.

4. Writing style of "No. 1", vivid manifestation of ignorance

The U.S. and the south Korean puppet forces cited the writing style of "No. 1" written on the propelling body as strong evidence.

Workers of the munitions industry of the DPRK do not use pens when writing any necessary figures in the process of manufacturing any accessory and equipment but carve them and in this case they use Korean word "Ho," not "Pon" (number). In a word, "No. 1" is not an ordinary writing style used in the DPRK.

Moreover, had the warship been sunken by a torpedo attack, not only its head which caused explosion but its propelling body would have been seriously destroyed due to the high temperature and pressure which occurred during the explosion. Therefore, it is nonsensical that "No. 1" remains as clear as what has just been written on the propelling body.

When one looks at the back part of the propelling body and the rudder of the torpedo shown by the puppet "investigation team", one can judge that their surfaces are heavily corroded.

A torpedo is painted to prevent it from corrosion before its use. Its paint is burnt up due to high heat caused during its explosion and its remains are bound to be corroded under the sea.

Then there arises a question as to at what temperature the paint on the torpedo is burnt.

It is the views of the relevant scientists that generally the boiling point of the paint of silicon and ceramic varieties that can stand the highest temperature is 760°C and the boiling point of ordinary oil paint is 350°C-500°C.

Supposing that 250kg of explosives were used to attack the warship as claimed by the puppet "investigation team," the temperature on the back part of the propelling body of the torpedo might be 325°C at least and as high as over 1 000°C at best right after its explosion when the energy generated by it is estimated.

When taking into consideration the fact that the outer rudder at the edge of the back part of the torpedo remained corroded, its inside might be heated above the said temperature and the temperature inside of the back part of the propelling body on which "No. 1" was written might be as high as 325°C-1 000°C.

But "No.1" was written by something like felt-tip pen, not by paint.

The ink usually used for felt-tip pen worldwide is made up of xylene, toluene and alcohol. The boiling point of each ingredient is known to be 138.5°C, 110.6°C and 78.4°C. So, the ink used on the back part of the propelling body might be burnt up at the temperature of 300°C.

If the outer paint is burnt up, the character "No.1" written with felt-tip pen should be burnt up and if the character is left, the outer paint should also remain. This is a science.

However, the outer paint that stands high temperature was burnt up but the inner ink remains though it is burnt even in low temperature. With no rhetoric can the puppet group justify this inconsistency.

It was quite natural that many personages said it was hardly understandable in the light of common sense why there was no similar character on other part of the propelling body of the torpedo if this was written by the north on it for the purpose of assembling it.

The character "No. 1" only betrayed the lack of scientific knowledge and ignorance of plot-breeders, far from proving that the "torpedo was made by the north."

A maritime expert conducted a personal experiment in the waters of the spot to scientifically prove the fact that the surface of the part on which the character was written was clearer than other parts as it was grinded by polishing paper to write new characters and it has never been under seawater.

University professors of the U.S. and Canada made a precision analysis of the ink used for writing character "No. 1" and officially confirmed that it is used in south Korea, driving the tricksters into an inescapable tight corner.

Everywhere in south Korea one can still hear such boos and jeers as that "blue buses 'No.1' running in streets are the ones from the north for intruding into the south", "players of blue color uniform with 'No. 1' on the playgrounds are players from the north" and "a nephew who has the same writing style as that used for writing character 'No.1' is also a spy from the north." This clearly proves how ridiculous the evidence proving "No. 1" is.

5. "Story about column of water", false statement made under coercion

Right after the occurrence of the warship case experts expressed as they pleased assertions and views on the cause of the case, saying that "it was stranded", "it was destroyed for its aging", "it was sunk by mine explosion", "it was sunk by the explosion of its ammunition chamber", etc.

But the U.S. and the south Korean puppet group floated the "story about column of water" in bid to brush aside the above-said assertions and convince the public at any cost that "the warship was sunk by the north's torpedo attack".

If the warship was sunk by a torpedo attack, there would be naturally the rise of column of water.

Therefore, the "story about the column of water" drew attention of the public keen to clarify the cause of the case.

But the results of analysis of the testimonies made by crewmen of the warship and the soldiers who were on duty in the waters near the warship right after the occurrence of the case proved that there was no one who witnessed the column of the water. Then, unexpectedly, it was reported that a watchman on duty on Paekryong Islet said he saw the column of water. He was reported to have

said that when looking at the waters at 270 azimuth angle about 4 km away from his position at a sound of bang, a white light flashed and disappeared.

But when comparing the location where he claimed saw the column of water with the position he was standing on duty, it was the place quite different from the scene of the incident and he witnessed nothing but "white light flash."

There was no one out of the 58 survivors of the incident who said he witnessed the column of water, light flash, flame and others that might happen at the time when the warship was attacked by a torpedo. The results of the examination of the dead by X-ray and other means showed that there was no trace of wounds caused by splinters or burns, except bone fracture, lacerated wound, etc.

This fact generally suggested that there was a small possibility that they died due to external hurt and suffocation but they drowned in the waters.

The puppet "investigation team" cited the story that there were drops of water on the face of a port watcher and there was a lot of seawater on the warship as an example to support the "story about the column of water" but this only became a target of ridicule.

A soldier who survived the incident had this to say: "At that time I was on duty of watching the starboard of the warship. I did not notice anything particular like a column of water when looking around." This statement flatly refuted the "story about the column of water" spread by the puppet group.

This fact proves that the above-said "story about the column of water" was a fabrication deliberately made by the upper echelon of the puppet military to convince the public that the warship was sunk by the "north's torpedo attack."

6. "Course of channel style infiltration", assertion of the blind

The U.S. and the south Korean puppet group invented the story about "the course of channel style infiltration" by the north's submarine into the said waters in a bid to prove that "Cheonan" was sunk by a torpedo attack of the DPRK.

Right after the occurrence of the incident the U.S. and the south Korean puppet military authorities asserted that there was no mysterious movement of the Korean People's Army before and after the outbreak of the incident.

Later they published what they called "results of investigation" in which they claimed some mini-submarines and a mother-ship of the KPA navy supporting them were confirmed to have left its certain base in the West Sea of Korea 2~3 days before the occurrence of the incident and returned 2~3 days later.

What matters is that there was neither a single mini-sub in that base touted by the puppet group nor any shadow of something similar to it.

The puppet group insisted that the submarine sailed towards the international waters in the west after loading torpedo at the said base and veered to the south before sailing to the east to infiltrate in channel style close to waters off Paekryong Islet.

There should be a limit to cooking up a lie.

When the public demanded correct data proving the story spread by the puppet group, it categorically objected to it at the outset, asserting that it could not confirm it for fear of the exposure of the level of army intelligence gathering over the information about the movement of the DPRK's submarines. But unable to turn down the public demand any longer, it uttered it could not show the image as its quality was poor because of bad weather.

In other words, the puppet group admitted itself that it failed to monitor any movement due to poor quality of image.

The puppet group boasted that it discerns submarines on the basis of the observation data obtained by the south Korea-U.S. joint intelligence gathering machine and the credibility of the round-the-clock observation of the respective area by the U.S. ultra-modern intelligence satellite is very high as it is based on the precision image data with resolution less than one meter. It is sheer abstraction for the puppet group to talk about "the course of channel style infiltration," while asserting that it could not produce correct observation results because of "poor image quality" before 1~2 days before and after the outbreak of the incident.

The observation was not be affected by weather for some days before and after the occurrence of the case. Its assertion about impossible observation only goes to prove that its story about the infiltration of the DPRK submarine was no more than a farce of its own making to bury it in a "black box".

7. Aluminum adsorbent scientifically rejected

The U.S. and the south Korean puppet group presented even the analysis of adsorbent which they said found on hull and torpedo parts as scientific evidence proving the warship's sinking by torpedo explosion. They asserted that as large quantity of white powder found on torpedo propelling body was of the same component with those found on several places of hull, it could be concluded that the warship was sunk by a torpedo attack.

A precision analysis conducted by prestigious physicists of several countries including the DPRK categorically dismissed this assertion.

The puppet "investigation team" asserted that aluminum used for making a torpedo turned into non-crystalline aluminum oxides when it exploded and cooled and that the non-crystalline aluminum oxides are detected as aluminum in energy spectroscopy but not as aluminum in X-ray diffraction analysis.

Physicists of several countries including the U.S. and Canada refuted the above-said assertion, saying that it is not possible that aluminum turns into non-crystalline aluminum oxides 100 percent when undergoing explosion and cooling and explained that the probability of aluminum turning into oxides 100 percent is close to 0 percent and the probability of the oxidized aluminum turning into non-crystalline without residue is also close to 0 percent. They gave particular explanation proving that the adsorbent found on the hull and torpedo propelling body asserted by the puppet "investigation team" are hardly produced in high temperature like at the time of explosion unlike non-crystalline aluminum oxides, a product of explosion, as they are formed in normal and low temperatures. To scientifically prove this, those physicists analyzed and verified the adsorbent by various means such as X-ray diffraction, energy spectroscopy, infrared spectroscopy and laser spectroscopy and even

with the help of an electronic microscope. They even conducted direct experiment on it and proposed public experiment to the puppet "investigation team."

Physicists of the DPRK shared the view with those physicists.

The puppet group, however, did not respond to the proposal. It let loose such poor rhetoric that only oxidized non-crystalline aluminum, not oxidized crystalline aluminum, was detected in the initial examination because it was present in the minimum amount only to deny the scientific data and assertion made by themselves.

The mock explosion of hull and torpedo and the analysis of resultant adsorbent which the puppet group has so far claimed to be the most scientific one among the investigation results only proved that they tried to justify the investigation results in a far-fetched manner, unaware of even the scientific truth that aluminum does not turn into non-crystalline oxides 100 percent through explosion.

8. Port screw and fluorescent lamps in good shape

The puppet group staged such a farce as inviting people from all walks of life to look round the warship in the puppet Navy's 2nd Fleet base in a bid to link the warship case with the DPRK. But this added to its worry.

Those who went round the lifted warship cast more doubts about the case than understanding the explanation given by the puppet group. This is because there took place non-contact underwater explosion in the port of the warship but the port screw remained in good shape but the starboard screw was seriously deformed and fluorescent lamps in the part of the hull broken into two pieces are left as they were.

The witnesses ridiculed that they have never seen the torpedo with super-precision striking power capable of breaking only the warship into two pieces, leaving the fluorescent lamps very close to the part where explosion took place as they are, asserting that these fluorescent lamps should be licensed as "magic fluorescent lamps" and "bullet-proof fluorescent lamps" which stood the torpedo explosion.

As a matter of fact, the deformation of the screw provides core testimony to the fact that "Cheonan" was sunk without external factors. What is most important is to clear the basic doubts but the puppet group gave no explanation to this matter.

When arguments gained in scope and strength, the puppet Ministry of Defence ambiguously spoke about the results of the analysis of the screw deformation and let loose a spate of sophism that there is no reason to assert that glass fluorescent lamps should be broken in case the "Cheonan" hull is broken into two, claiming that fluorescent lamps of the naval warship were made to stand any shock.

The above-said port screw and fluorescent lamps provided strong evidence refuting the U.S. and the puppet group's assertion that the warship was sunken by the "torpedo attack of the north".

9. Evidence proving warship's stranding

The biggest controversy this time was whether the warship was sunk by a torpedo attack or due to stranding.

The puppet group opened to the media the bow and stern of the warship to which they had been barred from getting access to convince them that the warship was sunk by a torpedo attack.

As regards this issue, experts asserted that all information about the "Cheonan" case clearly proved that it was stranded, adding that the "joint investigation team" committed a serious mistake when analyzing the cause of the incident.

First of all, the waters where the bow of the warship was found is the waters between Paekryong Islet and Taechong Islet which abound in rocks.

The torn part outside the port security guard of the stern, the bending of the left side of the security guard and the seriously scratched part along the framework of the hull and the security guard can be usually found when the hull is hit by a rock or sand ground.

If it was the damage done by a torpedo attack, the warship would neither be partly torn off nor get rusty.

The experts who asserted that the warship was stranded contended that if the warship was sunken by the pressure of non-contact underwater explosion which would cause contraction and swelling, the security guard would be broken or blown up. They termed this a reasonable suspicion as regards the fact the security guard was in perfect shape although the right propeller of the stern remained bent.

The puppet group labeled such reasonable suspicion as "a strange story" and "actions benefiting the enemy" to calm down the reasonable assertion through a poor coloring measure. However, it could not hide the truth.

Had the torpedo exploded near "Cheonan" as claimed by the "investigation team", a lot of fragments might have been embedded in the warship body. But there was no fragment on the warship and there was no one among the seamen aboard the warship who got his eardrum ruptured and his joints hurt, etc. and no dead fish could be seen on the surface of water. The results of the analysis of "TOD" image made public by the puppet Ministry of Defense and the coordinates set by the "investigation team", the coordinates of automate tactical command system of the puppet navy, etc. showed that the warship "Cheonan" continued to sail northwest even after the time the warship was sunken announced by the "investigation team." This denies the story that "the warship was sunk by a torpedo attack". Survivors testified to the fact that they felt the warship hit something with the sounds of "bang" and "boom" before rising and smelt burning oil. This fact went to prove the warship's stranding.

It is by no means accidental that experts at home and abroad assert a comprehensive analysis of the propelling power unit of the torpedo which the group claimed was lifted from the waters where the warship sank, the deformation of the hull, the contents of the testimonies made by those related to the case, the condition of the wounded and the autopsy of the dead, an analysis of seismic wave and air sound wave, the simulated underwater explosion, analysis of the tide near Paekryong Islet, analysis of explosive ingredients, retrieved parts of torpedo, etc. can prove that there was no short-distance non-contact underwater explosion and the propelling body had nothing to do with the destruction of "Cheonan" and there is no evidence proving that the torpedo was from "the north."

10. Animation file disappeared before being made public

The "investigation results" announced by the puppet group said that torpedo CHT-02D with explosive power of 250kg of TNT went off three meters portside from the gas turbine room of the warship and in waters in depth of 6-9 meters, giving off "shock waves and non-contact underwater explosion effect" which resulted in finally breaking the warship into two.

The "shock waves" which caused the most serious direct damage to the warship gave shock to the hull with the speed of 8 000 meters per second.

Had the torpedo produced such powerful shock waves in the distance of approximate three meters off the hull as announced by the puppet group, 1.1 second would be enough to completely cut off the warship.

An animation file showing the test of "non-contact underwater explosion" of a heavy torpedo conducted by the puppet Institute for Defense Studies in 2004 proved that torpedo "Paeksango" with explosive power equivalent to that of 185 kg of TNT completely split the hull into two pieces in less than one second after its explosion.

In more than 10 seconds after the explosion scores of meters high water column disappeared and the bow was observed to be scores of meters away from the stern. In more than 30 seconds after the explosion it was hardly possible to find any trace of hull on the water surface.

This suffices to prove that "Cheonan" might have completely sunk or its bow might have been separated from its stern after about 30 seconds if it had been hit by torpedo CHT-02D with the explosive power of 250kg of TNT much stronger than that of torpedo "Paeksango."

The puppet Ministry of Defense which has so far refused to disclose the navigation diary and sonar details was compelled to open to the public a TOD animation file showing the waters where the warship sank. But only the scenes showing the explosion of the warship and the split of the hull were missing.

Then where has the animation file showing the hull at the moment of split which can serve as strong evidence proving the cause of the warship's sinking gone?

Right after the occurrence of the case the puppet Ministry of Defense disclosed the scenes showing the "Cheonan" in its normal operation before the explosion and its bow and stern that were split after explosion and the sinking of the bow. But it insisted that TOD record of the most crucial moment showing the split of the bow and stern was not available. It, however, could not but disclose additional animation file two times in face of the public criticism. This only aroused greater suspicion.

This TOD animation file dealt with what happened from 32 to 40 seconds after the alleged explosion of the warship.

This animation file lasting 8 seconds showed the funnel of the warship as a black spot and its starboard side tilted toward Paekryong Islet, not its bow and stern completely split.

The scientific experiment asserted by the puppet group and common sense suggest that had the warship been sunk by a torpedo, it should not have been shown above the surface of the water 32 seconds after the explosion.

Much upset by this, the puppet Ministry of Defense made poor excuses that "scenes are blurred as the TOD focus was set at magnification of three times as low as the normal focus" and that "it was hard to discern the split warship body as resolution was low though it was broken into two pieces."

At the very outset it concealed this file, talking about military secret and the like and corrected its assertions three times. But the results proved that the warship was not sunk by a torpedo attack. Clear is why this animation file went missing.

11. Unreasonable measurement of corrosion period

The falsity of the "investigation results" presented by the U.S. and the south Korean puppet group can be seen through their measurement of corrosion period of the propelling body.

At the time when the puppet group announced the "results of mid-term investigation", they said that they could not measure the correct corrosion period as great deflection between the quality and corrosion layer of the metal of the propelling body was observed in the course of measuring them, adding that members of the "investigation team" estimated that it was similar to the state of 1-2 months corrosion through the examination with naked eyes.

What matters is why the corrosion period of metal could not but be measured only through examination with naked eyes.

There is a need to investigate the experiment results announced by an expert on maritime affairs of south Korea.

He said that he put heated aluminum, stainless steel and iron fragment in the waters with salinity and tide, etc. similar to those in the waters where the warship was sunken before taking them out in order to scientifically clarify the state of corrosion of the warship.

The results showed that they were not as heavily rusted as the propelling body and, particularly, white adsorbent was found in some part of aluminum but some heated parts appeared to be dark. This stood in sharp contrast to the adsorbent found on the propeller of the propelling body which was announced by the puppet "investigation team".

The same can be said of the iron fragment. It was rusted dark but when one placed it in the air after rubbing off the dark rust, it turned yellow. This proves that the propelling body was rusted more heavily as it is also in contrast to the shaft of the propelling body which was rusted red.

Some part of stainless steel was observed dark but no corrosion was found.

He noted that the propelling body presented by the "joint investigation team" to prove the torpedo attack by the north gathered great amount of rust, estimating that it might have been under water for 4-5 years at least and then put in the air for a considerably long time.

The results of investigation made by Russia said that one could judge from the scientific analysis and comparison between the rust formed on the warship hull and the rust formed on the propelling body with "No.1" that the propelling body was under seawater for more than six months, adding that one could draw conclusion that they have nothing in common.

Contained in the appendix to the "final report" made public by the puppet "investigation team" were data of EDS proving that the adsorbent collected from the torpedo was not aluminum oxide caused by explosion but aluminum hydroxide, rust caused by corrosion.

Overseas experts said that the data of EDS, which was observed when adsorbent was treated with heat at 200°C, was contained in the "final report" even though they were not presented at the time of the publication of the mid-term investigation, noting in unison that as the results of experiment of adsorbent are the same with those of heat treatment of aluminum hydroxide, they are contrary to the conclusion of the "final report" that adsorbent was caused by explosion.

They expressed their understanding that it can be interpreted that some scholars of conscience left such data in the "final report" full of deceptions and falsity.

In the final analysis, the puppet group revealed by themselves the unscientific and slack way the investigation was made through such simple estimation as "examination with naked eyes", not scientific and technological examination, and fully showed that the "story of the north's involvement" in the "Cheonan" case was a sheer fabrication.

12. Simulated warship sinking invites derision

The puppet group reportedly staged a simulated warship sinking allegedly to prove the warship sinking by torpedo explosion with an aim to link the "Cheonan" case with the DPRK.

The simulation overturned the investigation results the puppet group has so far announced.

From the outset it declared that the explosive power of the torpedo was equivalent to that of 250kg of TNT of the DPRK's heavy torpedo CHT-02D and, on this basis, presented investigation results.

The specification of the "No. 1 torpedo" made public by it defined the amount of powder as 250kg. What matters is that explosive power of such amount of powder is not enough to sink "Cheonan".

In general, high-efficiency powder stronger than TNT is used in torpedo.

Torpedo experts consider that torpedo explosive power is 1.4-2 times stronger than ordinary TNT. This indicates that the explosive power of the "No. 1 torpedo" is as much as that of 350-500kg of TNT.

The puppet group belatedly admitted the fact that the powder of the torpedo was not simply made up of TNT. And in order to correct its mistake it increased the explosive power of the torpedo to that of 360kgs of TNT and staged another simulated underwater explosion. That was necessary to almost correctly represent the real damage done by explosion to the warship including its engine room and hull floor.

The results of the simulation negated what happened at the time of warship sinking.

Negation of the explosion as powerful as that of 140-260kg of TNT which was registered by the then seismic and air sound waves precisely means that of the generation of shock and heat, height of column of water, wounds suffered by crewmen, possibility of existence of character "No.1", the hull and inner powder keg and all other places of the sunken warship that remained undamaged by explosion-caused shock waves as well as all other points of contention based on explosive power.

As regards the simulation, a member of the "investigation team" confessed that "they could not but work hard for around two months to modify and rectify a model." This indicates that the simulation was carried out in a deliberate way to serve the original purpose.

After all, the puppet group's desperate efforts to fabricate the story about the "Cheonan" sinking by the DPRK's torpedo attack backfired on it.

13. "Final report" reduced to false indictment

When the "mid-term report" published by the U.S. and the south Korean puppet group on May 20 was snubbed and rebuffed by the public opinion inside and outside Korea, they presented the "final report" on September 13 after the lapse of more than one hundred days, talking about the removal of all suspicions which have been raised so far.

The "final report", however, touched off stronger suspicion, only proving that the group of traitors made an empty talk when it promised to clear off the suspicion.

The puppet group just confined itself to such work as recording the course and contents of investigation and the analysis data including the investigation activities carried out according to schedule unlike at a time when it issued the primary presentation of the case with main emphasis on the analysis of the cause of the sinking of warship "Cheonan", and even deleted the part that aroused strong suspicion pending solution.

The puppet group again presented the torpedo propelling body, which was lifted from the waters where the warship sank, as material evidence proving the "story about the attack of 'Cheonan' by the north's torpedo", a story that sparked off the strongest suspicion. But it failed to present the direct evidence proving that the propelling body is "from the north" and, as for character "No.1," "design of torpedo", etc. it only repeated previous assertions.

The south Korean media, deploring who would believe the unsubstantial "final report" full of "indirect evidence", said that it is quite natural that more than 70 percent of the south Korean people assert that the "authorities are deliberately distorting the truth to seek the political purpose or evade responsibility" and the remaining people are not believing or doubtful about it as the investigation conducted for many days after inviting so many experts only increased and reproduced the skepticism about the cause of the sinking of warship, far from presenting perfect evidence.

In fact, people of various strata of south Korea including political, public and scientific circles are holding urgent seminars, expressing their will to probe the case to the last.

It is by no means fortuitous that the Russian investigation group, the only group which investigated the case on the spot, said as regards the sinking of warship that "it could not find anything that could be possibly judged to have been caused by torpedo attack of the north", the Sweden investigation group which participated in the joint investigation officially held off its stand that "it was the deed of the mini-submarine of the north" and different countries of the world demanded the reinvestigation of the case, becoming skeptical about the "results of investigation".

Mass media of Russia, Germany, China, the U.S. and other countries dismissed the "final report on warship 'Cheonan'" announced by the south Korean authorities as a false document full of sheer fabrication.

Much upset by the shower of criticism and denunciation, the tricksters let loose a spate of groundless outbursts, advising those who were strongly suspicious of the case to "look at cartoon as regards the suspicion and the points of contention to get understanding".

Talking about the "limitation of detectability" in the present era in which detection is made down to the level of nanogram is little short of self-admitting that falsity can never prevail over truth. And the use of cartoon to give the scientific and technological solution goes to prove the mean level of the artifice employed by the tricksters.

The Lee Myung Bak group of traitors fabricated the case of "Cheonan" while sacrificing a great many soldiers to escalate the confrontation racket. It only glaringly disclosed its heinous nature as the group of traitors unprecedented in the nation's history, the vicious confrontation-minded elements and the despicable sycophantic traitors serving the U.S.

The United States egged its trivial stooges on to fabricate the conspiratorial case against the DPRK, self-proving before the world that it is matchless "producer" in this field and committing another fraud-packed case to meet its strategic interests in the Far Eastern region, the Northeast Asian region.

There are a lot of information proving the falsity of results of investigation about the "Cheonan" case announced by the U.S. and the group of traitors.

We will issue the second and third installments of the statement to prove the truth behind the conspiratorial farce and charade in face of the frantic racket kicked up by the U.S. and the group of traitors to escalate confrontation with the DPRK while making fuss about the case of "Cheonan" warship.

The U.S. and the Lee Myung Bak group of traitors will never be able to escape the sledge-hammer blow of the times and history for their fabrication of the hideous charade unprecedented in the history of the Korean nation.

Source: KCNA, Pyongyang

<http://www.kcna.co.jp/item/2010/201011/news02/20101102-10ee.html>

3: Reports on the Russian investigation

The Results of the Russian investigation were not made public but details were leaked to the South Korean paper *Hankyoreh*

Russian Navy Expert Team's analysis on the Cheonan incident

A group of Russian Navy experts visited the Republic of Korea from May 30 to June 7, 2010, reviewed the ROK sponsored Joint Investigation Group (JIG) report and collected material necessary for analysis and experiments.

The following are the conclusions reached based on the analysis of and experiments on the materials given to the team of Russian experts.

1. The explosion of the Cheonan can be categorized as a non-contact explosion below the ship.

2. The ROK sponsored JIG's conclusion on the sinking of the Cheonan is not correct because of the following reasons:

- The JIG's official time of the explosion (21h:21m:58s) is inconsistent with the expected time based on existing records and with the last recorded time of the CCTV image (21h:17m:03s) that was cut off when electricity was lost inside the ship on the same day.

The time when soldiers inside the Cheonan ship reported, using their cell phones, to communication soldiers at a nearby coastal military post that some soldiers on board were injured was 21h:12m:03s. This time is not the same as the ROK JIG's official time

- The following was concluded from our examination: Before the sinking, the bottom of the Cheonan ship touched the shallow ocean floor, and all wing blades of its right screw (propeller) and two wing blades of its left screw (propeller) were damaged, and the damaged propellers were scratched so badly that they became shiny and wide areas of the screws were scratched by friction. The body and the end parts of the aforementioned propeller wing blades were additionally stretched. One wing blade of the right propeller has a metallic crack at the edge, which is inconsistent with the ROK JIG's opinion "The distortion of the right screw of the ship is due to a sudden stop of the right screw axle".
- Remnant fishing nets were found entangled around the right screw axle of the damaged ship. This contradicts the ROK's claim that there were no fishing zones in the area of the ship's voyage.
- It may be possible that the presented torpedo part was made in North Korea, but the ink mark is inconsistent with the normal standards of marking (the location and the method of the mark). Visual examination of the torpedo part indicates that the torpedo had been in the water for more than 6 months.
- The area of the ship's accident is at risk of ocean mines, which is indirectly proven by the fact that the docking locations and voyage paths are restricted to the west seacoast of the Korean peninsula.

The Russian experts' conclusions are the following.

1. It is confirmed that the cause of the sinking of the Cheonan is due to an explosion outside the ship and in the water.
2. Before the sinking, the Cheonan ship touched the ocean floor on the right, a fishing net was entangled in the right propeller and the right line of the axle, which damaged the propeller wings.

Due to the entanglement of the fishing net with the right propeller and axle line, the Cheonan ship must have experienced restrictions in its speed and maneuvers.

The Cheonan ship was traveling in a shallow area close to the coast and was entangled with the fishing net, and while it was moving to deeper water, the bottom of the ship might have touched an antenna of an ocean mine, which ignited the explosion of the mine.

Another possibility is that the ship was traveling with its malfunctioning navigation system and with a restricted maneuvering capability, it might have been exploded by a ROK's torpedo.

3. The torpedo part that ROK presented seems to be an electronic torpedo with a radius of 533mm. However, we do not conclude that this particular torpedo was launched to and impacted on the Cheonan ship.

Source: "Russian Navy Expert Team's analysis on the Cheonan incident." *Hankyoreh*, 29 July 2010.

Cyranoski, David. "More questions raised over South Korea's sunken ship." *Nature* (2010).

ⁱ David Cyranoski, "More questions raised over South Korea's sunken ship," *Nature* (2010).