Some pieces of the left wing rib, which according to the MAK and Miller reports were supposed to have had contact with the bb tree, were torn off the construction (Fig. 11)

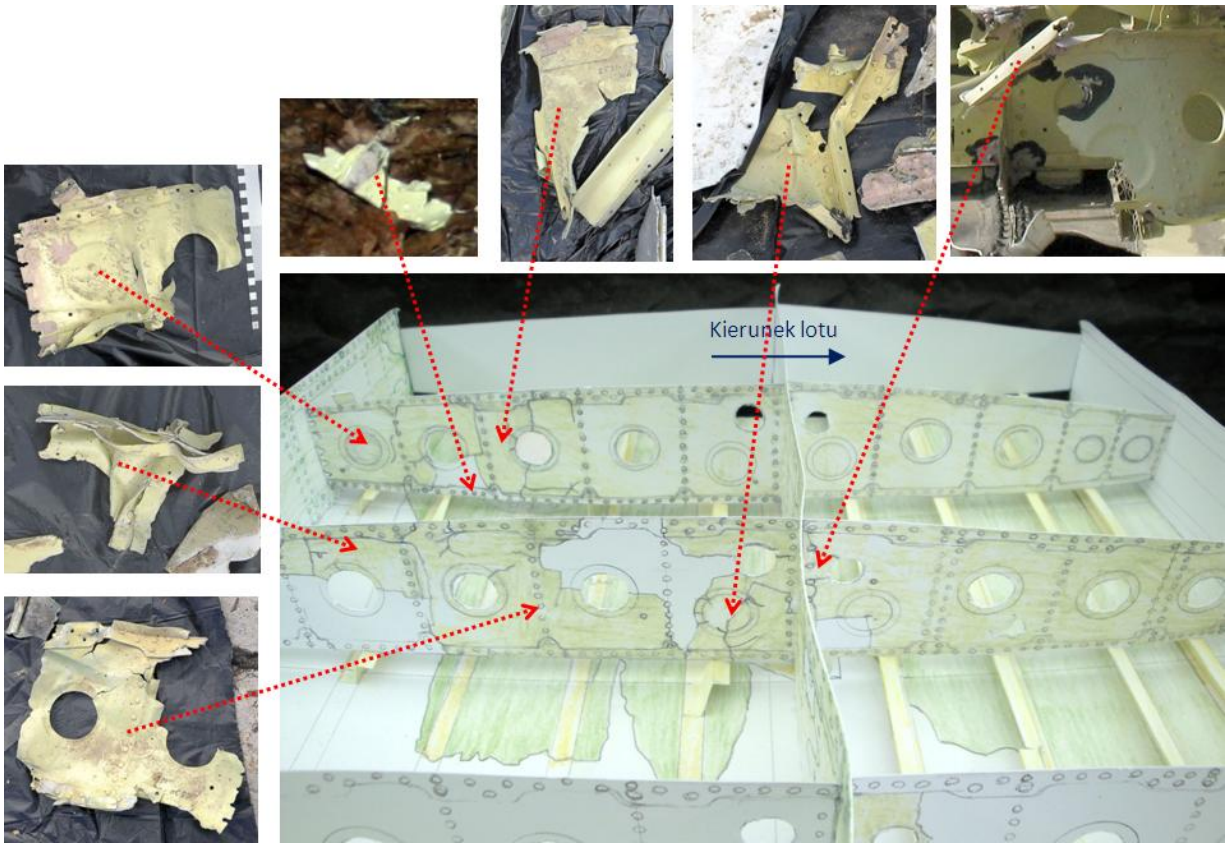

Fig. 11. Condition of the ribs of the left wing according to the reconstruction made by the Committee.

Some pieces of the wing spars from the detachable part of the left wing, which according to the MAK and Miller reports were supposed to have had contact with the bb tree, were torn off or bent outwards (Fig. 12,13 and 14)

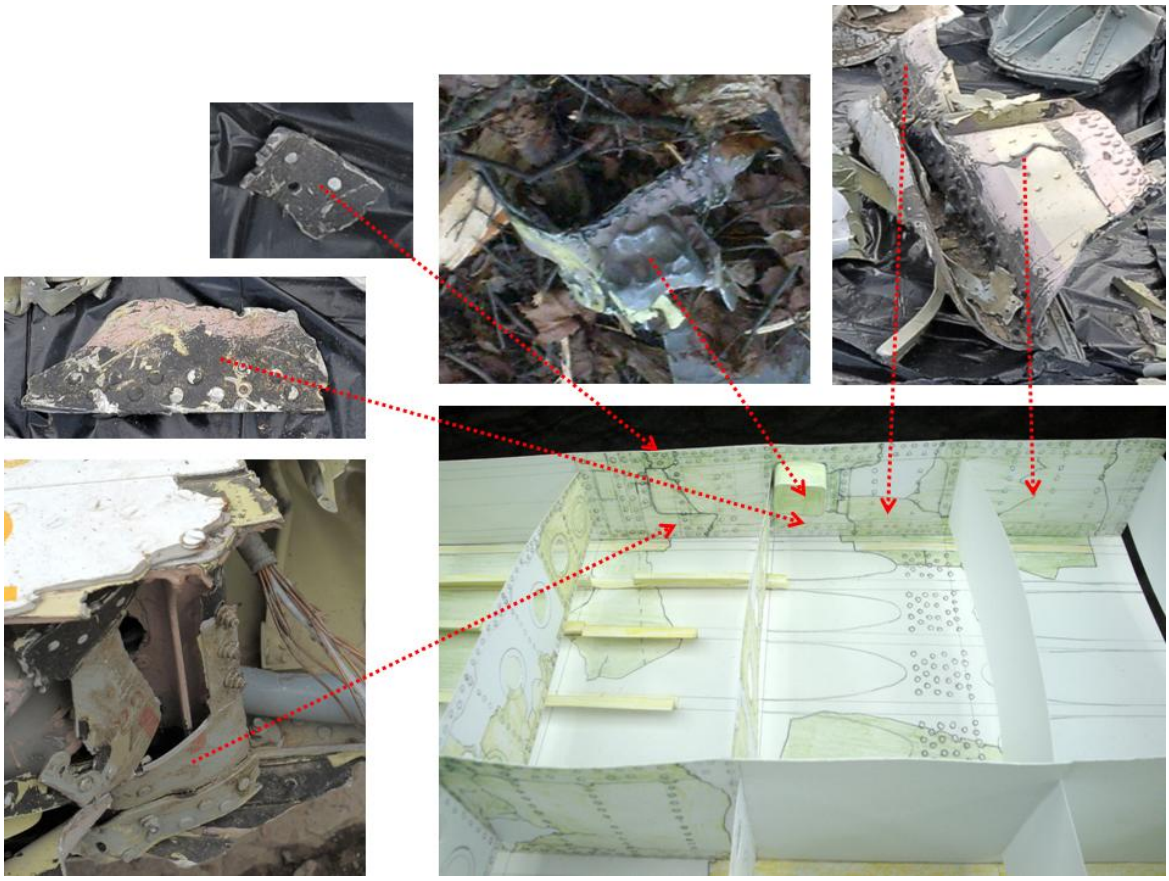

Fig. 12. Condition of spar no.1 of the left wing according to the reconstruction made by the Committee based on pictures and movies.

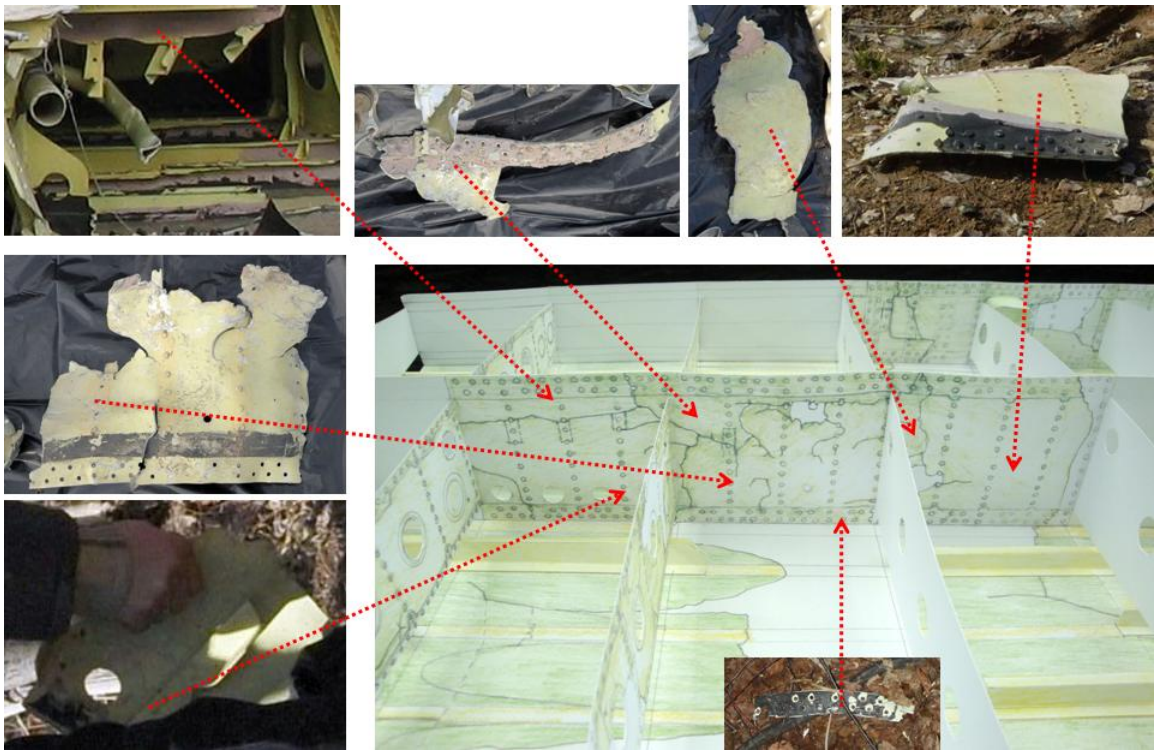

Fig. 13. Condition of spar no.2 of the left wing according to the model reconstruction made by the Committee, based on pictures and movies.

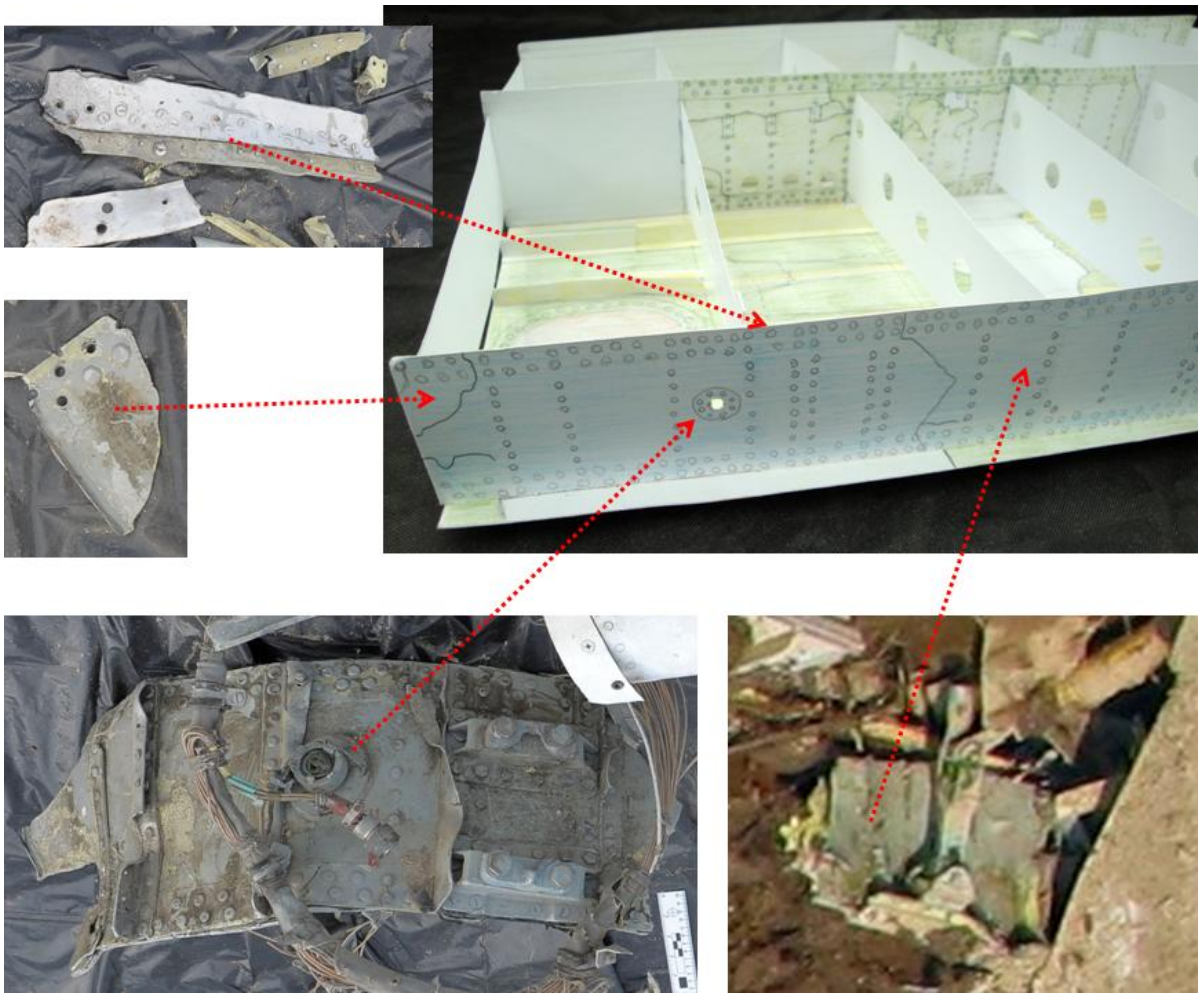

Fig. 14. Condition of the third spar of the left wing according to the model reconstruction made by the Committee.

A fragment of spar no.3 of the left wing, which according to the MAK and Miller reports was supposed to be cut by the so called bb tree, was found on the main crash site 450m behind the birch tree and then cut. Its separated pieces were found in various places of the debris storage place (Fig. 15)

Fig. 15. View of the same part of spar no.3 from the detachable part of the left wing on the main crash site and place of storage of the debris**.**

Some elements of the nose of the left wing, which according to the MAK and Miller reports were supposed to have had contact with the so called bb tree, were torn off or bent outwards (Fig. 16)

Fig. 16. Condition of the nose of the left wing according to the model reconstruction made by the Committee

Some pieces of the second section of the left wing slats, which according to the MAK and Miller reports were supposed to have had contact with the so called bb tree, were torn off or bent outwards; upper side upwards and bottom side downwards, and from the side of the angle of attack to the front (Fig. 17).

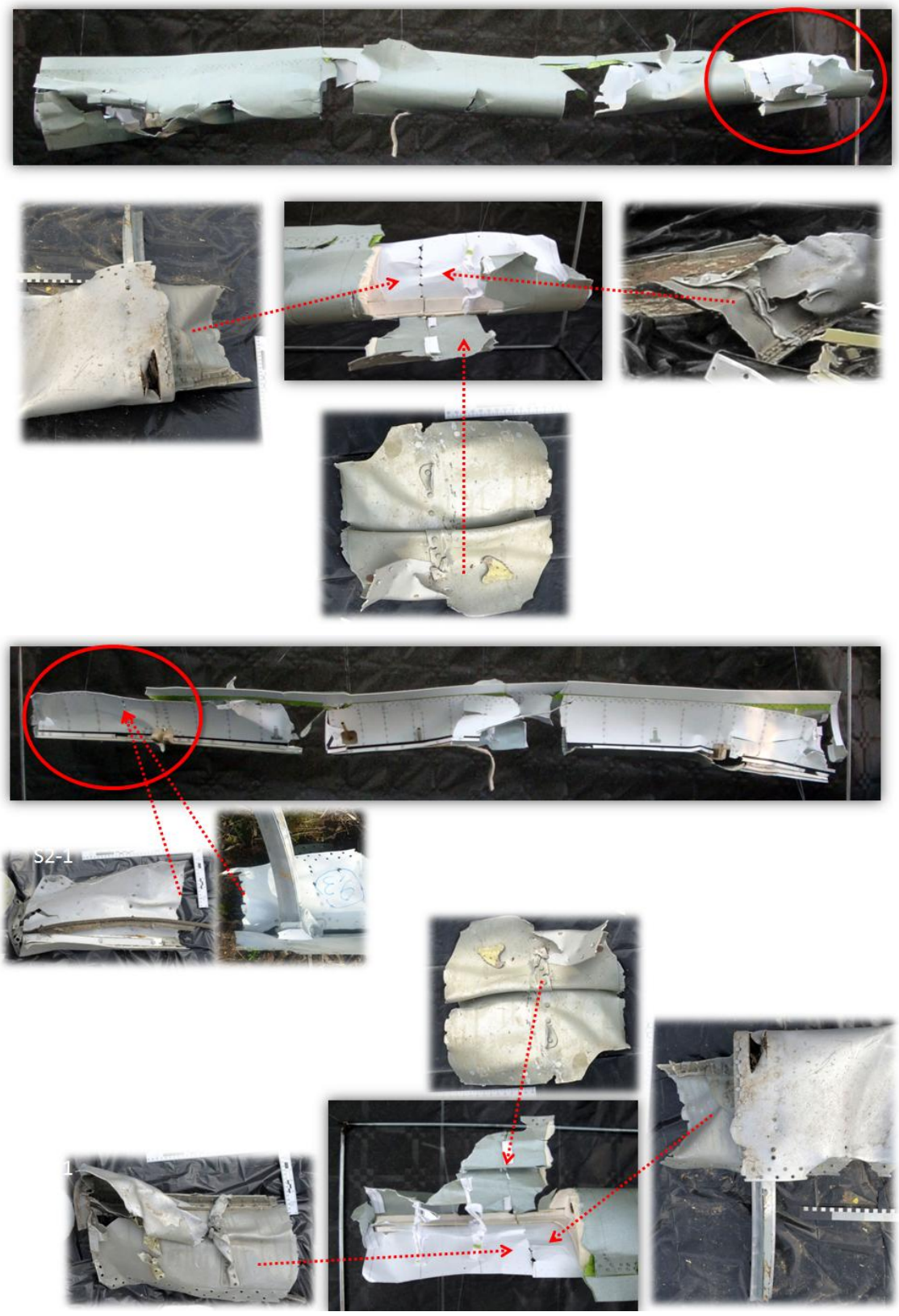

Fig. 17. Condition of the second section of the left wing slat according to the model reconstruction made by the Committee

The reconstruction of the console of the left wing, made by the Committee KBWLLP, in the place, where according to MAK and Miller reports it was supposed to have had contact with the bb tree,

shows clear signs of deformation as a result of high internal pressure with the epicenter being between ribs 27-32 (Fig. 18.)

Source: Reconstruction of the console of the detachable left wing part with elements of the external construction, which have traces of deformations due to high internal pressure, which epicenter is between ribs 27-32.

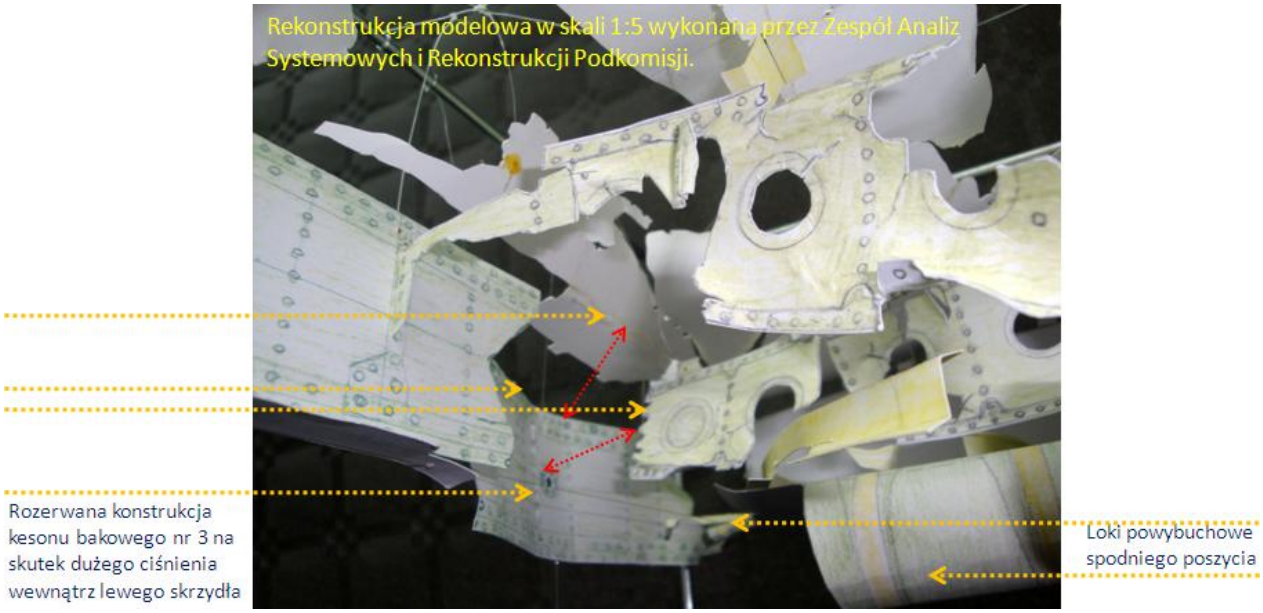

Fig. 18. Reconstruction of the console of the subtracted part of the left wing with elements of the internal structure, bearing traces of deformation through the impact of high internal pressure, whose epicenter is between the ribs No. 27-32.

Pieces 1 and 2 of the slot section of the left wing (which are 6m20cm long in the construction) were scattered in the direction of the flight of TU-154M in an area between 20 to 230m from the so called Bodin birch tree. Many elements were moved and some of them swapped on the 11th and 12th of April which might indicate deliberate manipulation of the evidence .

Example: One of the pieces of the 2nd section of the slot, which fell in to the ditch next to the road leading from the garages to the Gubienko street approx.20m behind the birch tree, was moved on the 11.04.2010 under the bb tree. On April 12 it was swapped with another piece stemming from the line of separation (which fell in to the ditch next to the street leading from the garages to Gubienko Street, approx. 50m behind the birch). Picture 19

The majority of elements from the flaps of the detachable wing part were scattered from the bb tree in the direction of the main crash site in an area 15m-225m according to the flight direction of TU-154M. (Fig. 20).

Source: Pictures from the report and movie materials of the Committee.

Fig. 19. Fragments of 2 sections of the slot moved from the original location on the ground under the tree claimed to have made contact with the wing.

The separation place of the tip of the left wing is not parallel to the axis of the fuselage, but it creates a line deviating from this axis by 7.5-10 degrees.

The separation place of the left wing tip shows classical post-explosive signatures typical for the use of explosive materials, like irregularly curled edges with more than one turn. The broken area of the left wing tip shows a large number of the characteristic signs compatible with high internal pressure such as zipping of rivet lines, pulling of rivets and clean separation of skin from the remaining parts. (Fig. 21 and Fig.22).

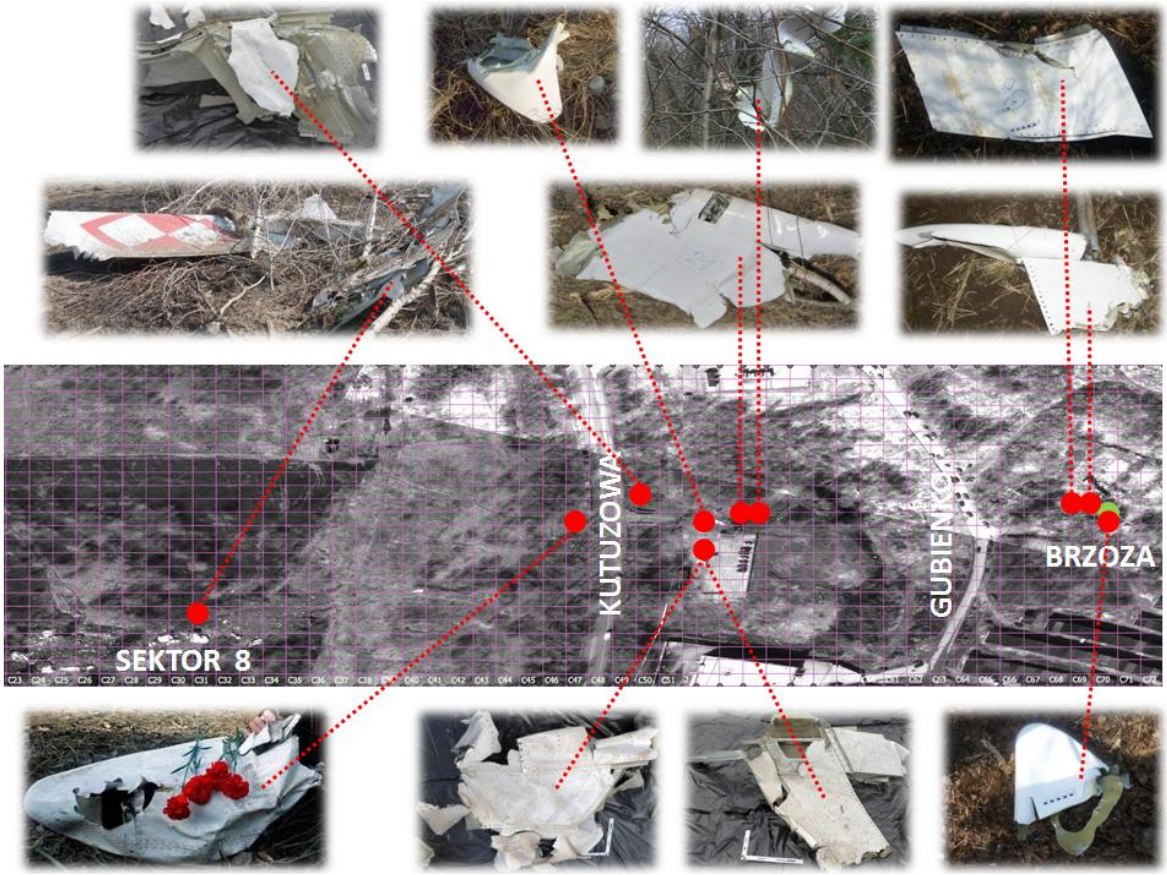

Fig. 20. The locations on the ground of various parts from the left wing.

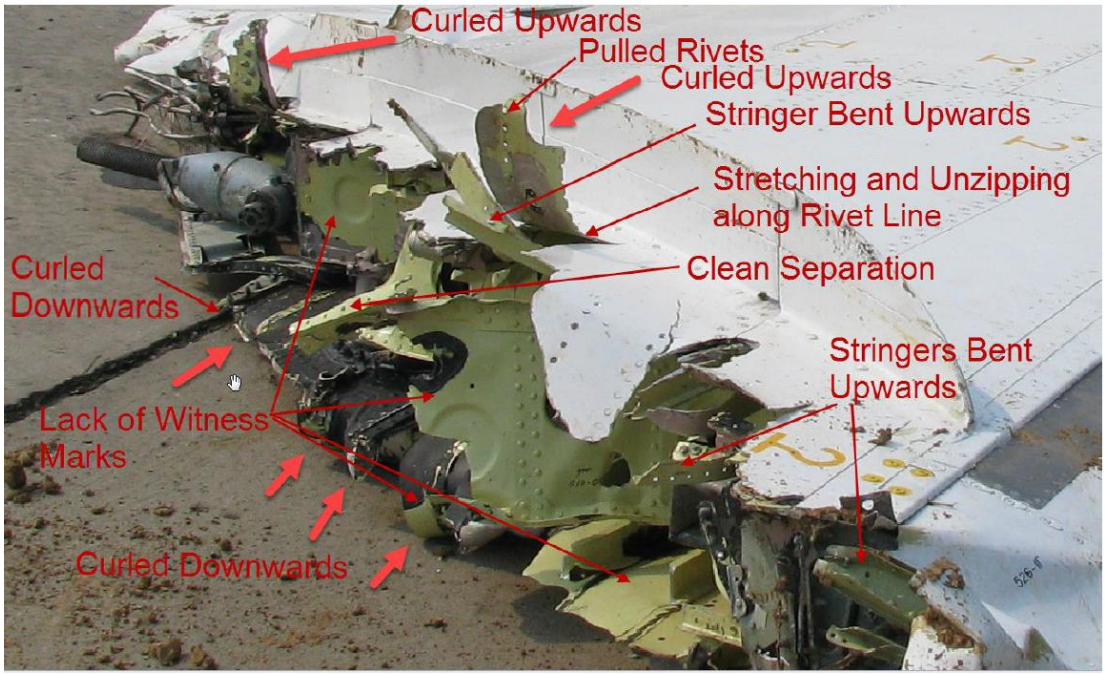

Fig. 21. The area of separation of the left wingtip of TU-154M, PLF101 showing the classic and significant signs of explosion and an additional number of characteristic signs of an explosion.

Fig. 22. A close-up of the photograph from Fig. 21 with visible post-shock curls with axis of curl in the direction of flight.

The experiments carried out by the KBWLLP Committee in March 2018 on the wing fragment model in the scale 1: 4 and 1: 1 show that the wing with fuel and fuel vapors can be destroyed by explosive charges with similar features of destruction of the structure without a major fuel explosion with many observed features similar to the wing tip in Smolensk. (Fig. 23 and Fig. 24)

Fig. 23. Scale 1:1 Separation by explosive material of the wing box containing fuel. The experiment demonstrated the wing could be cut without a secondary major fuel explosion.

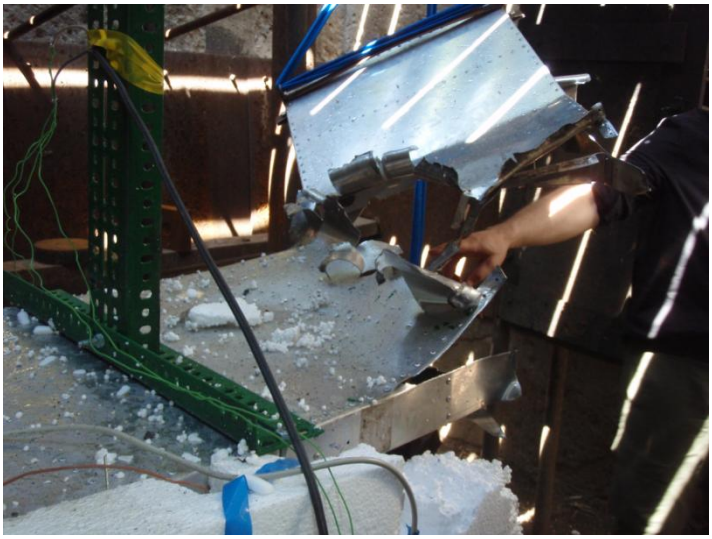

Fig.24. Experiment of cutting the wing model on a 1:4 scale with fuel, with the use of 6g/m PETN Cord Note the direction of curls away from the area of high internal pressure. The experiment demonstrated the wing could be cut without a secondary major fuel explosion.

Source: Report on the research on explosiveness of fuel, Volume 1 2017