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CASES OF FALL OF BLUE AIRCRAFT ICE FROM SKY IN INDIA

Bimal K. Srivastava,
Former General Manager (Airports Authority of India)
G-11, Second Floor, Green Park Extension,
New Delhi-110016

Email: bksrivastava2000@yahoo.co.uk, bksrivastava2000@gmail.com

From time to time cases of fall of aircraft ice (Which is normally blue in colour), have been recorded all across the world. Strangely enough, the origin of such ice is from a commercial aircraft carrying passengers and flying high in sky, and that too from the most unexpected place, from its toilets. The occurrences of fall of ice from the aircraft are treated as extremely rarest of the rare case, yet there are many such cases world-wide on records.

Even Federal Aviation Administration Aviation (FAA) in USA, has issued a fact sheet on 1st Jan. 2005, for consumption of general public clarifying the common myths on the subject that not every strange looking & smelly object found around their neighbourhood was from the lavatories of the airliners. However, they also advised public that if something is suspected to have come from the sky, the matter should be immediately brought to the notice of FAA for further investigation.

How it happens?

In the Toilet System of modern commercial airliners, the waste gets sucked out through Vacuum suction. Use of vacuum, requires very little use of water (Mixed with blue sanitizing liquid). The lavatory waste is then stored in a storage tank inside the aircraft and on landing, the toilet cleaning vehicles are used to remove the waste.

Mostly a chemical (Sanitizing liquid), dark blue in colour (It could be of some other colour also depending on the type of sanitizing liquid used by the airliner) is mixed with cleaning water inside the aircraft lavatory holding tanks to deodorize the waste and to break down any solids. The blue chemical serves another purpose. In the event of any leakage from the drain pipes, the ground engineers are able to detect the leakage by observing the presence of blue colour on the exterior of the aircraft and thus would be able to repair it.

However in case of any leakage or seepage from the toilet drain lines, small amount of lavatory fluid comes outside and is condensed into ice due to low outside temperature. When the ice becomes too heavy it gets detached and falls on ground, normally during descent when the aircraft encounters higher

atmospheric temperatures on coming from higher altitude to lower altitude or during cruise when the ice weight becomes too heavy.

The colour of such ice is normally blue (Due to presence of blue sanitizing liquid). However in certain cases it could be green, blackish, yellow, muddy or even grey, depending upon the type of sanitizing liquid used.

Cases in India?

A large number of such cases have been observed in India also.

Let us take the case of a heavy lump of ice block weighing about 10 Kgs which fell from sky in the village of Hajibas located at a distance of about two Kms from Pinangwan in the State of Haryana on 18th May 2008. The above mentioned incident was reported in form of an odd & mystic occurrence in a Hindi News Paper the very next day, but the mystery remained unsolved.

The ice block created a hole about half a feet deep on ground. Fortunately, there was no injury to any person or damage to any property. The ice block melted after about two to two and a half hours.

The Blue colour of Ice, which changed to bluish liquid on melting, dry weather, summer season, no rains and isolated occurrence, ruled out any weather related event. Could it then be a part of global warming? May not be possible, as the global warming or other such occurrences normally affect the complete area and they do not occur at a single isolated place. Could the ice might have fallen off from some flying object such as a satellite or an aeroplane? Yes, that appeared most likely. In all probability the above incident also appeared as a case of aircraft ice.

It so happened that the incident had occurred near a village by name Hajibas near Pinangwan (Approximate Geographical Coordinates Latitude 27^o53'37"N, Longitude 77^o07'30"E.), which is located in District Gurgaon (Haryana) at a distance of about 75 Kms (Aerial distance) from Indira Gandhi International (IGI) Airport, Delhi exactly towards south (On a bearing of 180^o). This place lies below the Air Traffic Services (ATS) route known as W-20N (Chennai-Bangalore-Hyderabad-Nagpur-Bhopal-Delhi).

And when over this place, the aircraft are approximately 15 to 20 minutes to land at IGI airport, where the commercial airliners are descending from their cruising level of about 30,000 feet down to 15,000 feet, where temperatures are comparatively higher than the cruising level. By combining all the facts and figures, the incident definitely deserved the credit to get categorized as one of the rarest phenomenon of blue aircraft ice or "Non-Meteorological Ice" falling on ground in India.

The matter was also reported to the Director General of Civil Aviation (Which is the regulatory authority for Civil Aviation matters), New Delhi the very next day by the author. It is understood from DGCA that though there had been many incidents of leakage from toilet drains, however it was the first time when a report of fall of blue ice in India had been made to DGCA.

And then there was another notable Incident of fall of Blue Ice that had occurred near Mt. Abu (Distt Sirohi, Rajashthan) on 06th Oct 2009, when a large lump of blue Ice weighing about 25 Kgs fell from the sky in a farmhouse in Tokra village near Mount Abu (Approximate Geographical Coordinates 24⁰40'25" N, 72⁰42'40" E) at around 0515 Hrs IST. There were no rains and sky was clear with Temperature touching around 38⁰ C. The ice had melted down to about 4-Kgs and turned into a liquid deep blue in colour and sticky.

The case was examined by Dr. (Prof) K. K. Sharma, Head of the Deptt of Geology at the Government College, Sirohi, alongwith the team of Professors Dr. Ritesh Purohit (Lecturer, Geology) and Dr. Sanjay Purohit (Lecturer, Bio Technology). The team also consulted Jesus Martinez-Frias, a planetary geologist at the Center for Astrobiology in Madrid, and a pioneer researcher of large sized Ice lumps (Known as Megacryometeors). And then the case was declared as the ice from the lavatories of an aircraft. It may be mentioned that the an International ATS Route "A-791W (Westbound)" from Kolkata to Karachi passes through that area. It is possible that an airliner cruising at an high altitude over the route might have dropped the ice lump due to heavy weight of the same.

On 31.01.2010, there was one case in Mongshangei Maning Leika area in Imphal regarding the fall of a block of ice, blue in colour weighing about 5 Kgs on the roof of a house creating a hole in the tin-roofed kitchen. After melting it turned into bluish liquid with strange smell. The place is located just 1.5 Km away from Imphal Airport. It may possible that an aircraft approaching to land on "Runway 22" might have been responsible for the drop of Ice Lump.

Type of Aircraft Involved and Phases of flight

Other important conditions for formation of ice from aircraft could be as given below;

- Only medium & large passenger airliners with full-fledged passenger toilets operating commercial flights are involved. Some kind of leakage or seepage from the aircraft toilet drains is necessary.
- The place of incident should be located below an established ATS air-route meant for civil airliners or alternatively it should be close to an airport where passenger airliners are landing & taking off.
- This ice will however fall on ground only under two conditions;
 - When the airliner is descending, or,
 - During cruise when the ice lump becomes too heavy (Of the order of 50 to 100 Kgs or more),

Due to that reason while analysing the cases of ice fall, the above important aspects have been taken into consideration.

Conclusion

Author has made efforts to collect a total of 24 available reports for the last four to five years from the authentic media reports and analyse them by examining the published photographs and videos, type of ice lump, its colour, shape, smell and location of incident in relation to the nearby airports and air routes. The location of the incident site was examined vis-à-vis the established ATS Routes (Air Traffic Services Routes) passing over the area and with reference to the nearby airports where civil flights are operating. The details can be found on Internet Link

<http://aerosurvey.in/cases-of-fall-of-blue-ice-from-aircraft-in-india/>



This Piece of Blue Ice is most likely from the aircraft flying over the International Air Route A791W Kolkata-Karachi on 06th Oct. 2009 found near Mt. Abu (Rajasthan). Photo Courtesy-Proff K.K. Sharma