

REPORT ON THE INQUIRY CONDUCTED TO
INVESTIGATE INTO THE CIRCUMSTANCES
WHICH LED TO THE OCCURRENCE OF FIRE
IN THE FLYING CLUB HANGAR SITUATED
AT ARMY AVIATION'S KHALID AIRBASE
QUETTA CANTONMENT ON 13TH NOV. 1990:

The Fire broke out in the Hangar of the Quetta Soaring & Flying Club on 13th of November, 1990. Soon-after the incident the Army Guards were posted and nobody from the Flying Club Staff was allowed to enter the area, which action was understandably quite correct in view of the fact that the Flying Club Hangar is located in the middle of the Army Aviation's set-up and the Khalid Airfield in any case belongs to the Army. The process of recording of statements and observations of the Flying Club Staff was, however, started immediately by the Management and a preliminary report was compiled and submitted to the Chief Inspector and President AIB with a copy to Chief of Airworthiness and the Airport Manager, Quetta Airport, on the 20th of November, 1990. Since the time of occurrence the Flying Club Management remained in contact with the Inspectorate as well as the Airworthiness branch of the Authority, through telegrams, post and telephones.

On 24th of November, 1990, on personal visit to the Corps HQs and the Army Aviation by the senior Gliding Instructor of the Flying Club Mr. Izaz Ahmed and Gliding Instructor Mr. Abdul Hamid Razvi, the Flying Club Staff was cleared to enter the area. Prior to this permission, the surveyors from the Insurance Company also showed

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up who were conducted through their survey by obtaining special permission from and under the supervision of the Army Aviation Authorities at the Base. The Surveyors were, however, not allowed to fulfil their requirement of photography.

Although the statements of the Flying Club Staff had already been recorded but on ~~the~~ site inquiry started on the 25th of November, 1990, for the circumstantial and demonstrative evidence recording, followed by a few sessions of cross-examination and questioning of the Flying Club Staff who attended to their duties at the site on 13th November, 1990 i.e. the day of the incident. Permission was also sought from the concerned authorities to record statements of the Air Traffic Controller of that fateful day and also of the Incharge of Fire Fighting Team of the Army Aviation's Fire Brigade; which was done on 27th November, 1990. Cross-examination of two members of the staff namely Akbar Khan and Mohammad Akbar had to be left pending because of their confinement to their houses due to burns which they sustained during their courageous effort to save the Towing Winch parked near the doors of the Hangar, in which they succeeded. Their cross-examination was conducted on 29th November, 1990. We also tried to record statements of more personnel from the Army but could not succeed, nor so far we have succeeded in obtaining the findings of the inquiries conducted

Contd...3.

independently by the Army authorities. Our own inquiry report which we have finally compiled with the blessings of the Airport Manager who also visited the site, is appended below for perusal and record please:

G E N E R A L:

On arrival at the Hangar it was found that almost everything was dragged out of the Hangar by the Fire Fighting Teams who seemed to have used bamboo bars or insulated hooks. Immediately, a few sessions of photography were organised during which photographs of the burnt out machines, interior of the Hangar, the electrical wiring of the Hangar and the terminal point of the Mains of the electrical supply were taken. The steel structure and the masonry of the walls and pillars was also photographed. The photographs of the main switch and the Mains where the wires were found cut were also taken. We are sorry that we could not take photographs of any point adjacent to the Hangar which is in use of the Army Aviation due to obvious reasons.

The Flying Club Hangar is of small size and height of the walls is not more than 10 feet. The main structure is built of steel with vertical framework meant to support the ends of each of the five steel trusses which are about 10 feet apart from each other and give ^{isosceles} ~~legacies~~ shape to upper portion of the Hangar. The vertical steel supports are covered by concrete and brickwork and the spaces in between are used to raise the walls, thus joining all the pillars and enclosing the

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entire area falling under the roof of the Hangar. The roof is made up of steel spacers fixed across the trusses and finally covered with the Asbestos sheets, No material other than the steel, concrete, bricks and asbestos has been used in the construction of the Hangar. The doors are also made of steel framework and metal sheets.

The electric wiring inside the Hangar is of open type and is fixed against and one foot below the top edge of the walls. There were three Tube-Lights and two Bulbs which were found in burst condition. There were three points in use for the Air Compressor, the Grinding Wheel and the Battery Charger. There were two electric fans fixed on to the steel frames of the roof trusses. There is a 'C' Category Stores' room by the western wall of the Hangar the door of which opens inside.

It may prove to be of some interest if it is mentioned here that originally the electricity line was brought to this airfield by the Quetta Flying Club in early sixties when the entire area was without inhabitation worth mentioning and the Flying Club was the sole occupant of the then called Gurkha Airfield which had three Runways joined at the ends forming a triangle. Twenty feet away from the south east corner of the Hangar is a small room with a separate small concrete cellar. The cellar is used by the Flying Club for storing POL. The room was used by the Flying Club for a Chowkidar, and the electric line was brought by them upto this room where the

main switch was installed and arrangement for the supply or cut-off of electricity to the Hangar was provided at this point.

But when the Army Aviation moved into this area and ousted the Flying Club by occupying their Hangar and the Control Tower building, they had a free hand to make use of every facility available at the site including electricity and Telephone of the Flying Club. The Flying Club remained inoperative for over a year during which time the Army Aviation established itself firmly by raising their own structures and extending the electric supply lines to their new areas from main lines. Probably from that time onwards the Flying Club gradually lost effective control over the affairs at the site and just by force of circumstances it was pushed into a state of redundancy in the eyes of the Army and in an effort to survive, it readily got used to a subordinate status. Over the years the Army Aviation has expanded manifold and many changes and extensions in supply of electricity have also taken place. The power lines and distribution of electricity is looked-after by the MES of the Army.

That small room 20 feet away from the south eastern corner of the Hangar is still there which is being used these days as "Battery Room" by the Army Aviation. But supply to the Flying Club Hangar continued from this point till the fateful day of the incident. The wire leading to the Hangar was, however, found cut, which was

done by the people from MES after the fire broke out. The point where this wire passes through the wall of the Hangar is shown in the photograph enclosed as "Exhibit A". Likewise the main line which reaches upto the Hangar and is fixed to an angle iron cross bar bolted to the main structure of the Hangar is illustrated by a photograph enclosed as "Exhibit B". The lines were found cut off beyond the cross bar, which was again done by the MES.

The internal Main Switch of the Hangar is located in the south eastern corner which was found in 'Off' position and completely covered with foam spray. Both the fuses fitted in this Main Switch were found intact, but the incoming wire was found cut, which again must have been done either by the Fire Fighting Party or the MES, the wires were found burnt out and dangling around. The Main Switch and its vicinity is marked on the photograph which is enclosed as "Exhibit C". Of the remaining areas of the Hangar, almost the entire wiring was found burnt out with casing melted and turned into brittle ash and at some places the naked wires were also visible. But the most prominent point which attracted attention instantly was the wall of one bay where the junction ~~Box~~ itself and a switch below, along with the wiring in between seemed to have been blown out of their circuit leaving behind spots of black soot larger than their own size. This assumption ^{also} gains strength from the fact that this portion of the wall was found clean otherwise, and seemed unaffected by the general

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fire, its heat or the smoke. This point is shown in the photograph which is enclosed as "Exhibit D".

The Khalid Airfield and its surroundings are predominantly inhabited by the Army Units and its personnel. The Airfield area is restricted and the entry is allowed through check posts only to those who carry passes issued by the Army Aviation or who have obtained special permission for entering into the Airfield area. The Guards and Sentries remain at their posts round the clock. And on the day of the incident in particular, no stranger or unconcerned person was reported to have entered the Airfield area. In view of the foregoing, therefore, and also in view of the fact that the resources are not there for this purpose, the main attention during the course of inquiry has been concentrated on all possibilities other than "Sabotage" the possibility of which is apparently remote. The findings of Army inquiry are still awaited, though.

MACHINES & EQUIPMENT LYING IN THE HANGAR PRIOR TO THE FIRE INCIDENT:

The following Flying Machines & other pieces of Equipment were stored/placed in the Hangar before the Fire broke out:-

1. FLYING MACHINES:

<u>N a m e</u>	<u>Make</u>	<u>Model</u>	<u>Regn.No.</u>	<u>Status</u>
a) Cessna R 172 K	USA	1980	AP-BBE	Grounded since 26.4.89 for change of Engine. In temporary storage covered by Insurance.
b) Capstan Glider	UK	1965	AP-AUH	Awaiting visit of Surveyor fixed for 25th Nov.1990 for renewal of C of A, not covered by insurance.

<u>N a m e</u>	<u>Make</u>	<u>Model</u>	<u>Eng.No.</u>	<u>Status:</u>
c) ASK-13 Glider	GERMANY	1971	AP-AWO	Serviceable but not covered by Insurance
d) ASK-13 Glider "		1971	AP-AWP	Serviceable but not covered by Insurance

2. PIECES OF EQUIPMENT:

- a) Working Table - with bench vice and Grinder wheel.
- b) Tool Board - carrying general and special tools.
- c) Wooden Trestles eight in number.
- d) Wooden Chocks - four pairs.
- e) First Aid Box.
- f) Office Tables Wooden - three in number.
- g) Chairs wooden four in number.
- h) Garden Chairs with table - Iron covered with plastic strings -one set.
- i) Cable retrieving Machine -with cable.
- j) One roll of 6000 Feet of 5mm towing Cable.
- k) One old transformer-disused and lying in one corner since 1974.
- l) 16 Cushions.
- m) Fire Stands - two in number.
- n) Foam Fire Bottles - Four in number.
- o) Signalling Flags - Four in number.
- p) Fire Buckets - Twelve in number.
- q) Two 45 gallon drums for washing and watering floor of the Hangar in dry conditions when humidity drops to as low as 10%.
- r) One rear seat of the Jeep and Eight old tyres for placing under the wingtips.
- s) Assorted Charts - WARNING, FIRE FIGHTING, PERFORMANCE and Flying Charts.

The general arrangement in which the flying Machines and the Towing Winch were placed in the Hangar on the evening of 13th November, 1990, is illustrated through a Sketch Drawing/enclosed as "Exhibit E".

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THE SCENE ON ARRIVAL AT THE HANGAR
ON FIRST UNRESTRICTED INSPECTION OF
THE SITE ON 25.11.1990.

On arriving in front of the Hangar the first thing that one stumbled across were the remains of Glider Capstan AP-AUH. All that was sprawled across on the ground at about 90 degrees to the Hangar and 40 feet away from it, were the half burnt spars and the Centre Section made up of metal pipes and plates. On detailed inspection of the site it was revealed that this was all which was left of the Capstan Glider. While facing the doors of the Hangar, there to the right and slightly closer to the Hangar, was the burnt out structure of the Glider ASK-13, AP-AWO. The tubular structure of the fuselage was burnt naked ~~front~~ to rear. The left wing tip was on ground, Ribs and spars half burnt but the skin completely gone. The right wing completely burnt out with remaining portions of Spars turned into charcoal but were still attached to the anchorage points at the Centre Section of the Fuselage. This Glider ^{therefore} was also found totally destroyed. Both these Gliders are shown in the photographs enclosed as "Exhibit F".

Further up in the middle and closer to the Hangar (to be exact. 22 feet from the railings of the Hangar Doors) was lying the major portion of the front fuselage ^{of Cessna 172,} comprising the engine bay and the cabin, with wings blown off but the wing struts and the under-carriage legs buckled and still

attached to it. One blown up wing was found in shreds and the other one lying 6 feet, to the starboard side of the main remains of the Fuselage. The Empenage was also found detached from the Fuselage, with the pieces of tail unit lying scattered around. The main tyres were found burst. The control wheels/columns, Instruments' Panel, the seats, the Wind Screen, everything had been burnt and the entire remain was covered with Foam Soray left on it during Fire fighting operations. The entire structure of the Aircraft seemed to have been exposed to fire and intense heat barring the Engine Bay and the belly of the front Fuselage.

The Aircraft was parked in the south western corner of the Hangar i.e. in the last portion of the Hangar the previous evening. Its serviceability status since 26th April, 1989, was "Placed in storage for Engine Change". The extent of damage sustained by the Aircraft through fire is indicated by photographs enclosed as "Exhibits G, G-1 & G-2", stappled together.

To the right and away from the A/C's wreckage lying outside, close to and in front of the western portion of the Hangar, was lying Glider ASK-13 AP-AWP, left wing 1/3rd in the Hangar and resting on the ground on its tip. This had also been found in completely burnt out state and destroyed by fire. Like the other ASK-13 Glider, the Starboard wing of this Glider also

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had been totally burnt out and the stubs of spars were found still attached to the main attachment points at the Centre Section of the Fuselage. The left wing on the other hand, though burnt out, was found to have retained its shape despite the fact that ribs and the skin were gone, suggesting that either it was exposed to fire for lesser duration or with lesser intensity. But as earlier mentioned, the second ASK-13 also gave the same type of impression. That also had the right wing damaged most i.e. burnt most. This Glider is shown in photograph which is enclosed as "Exhibit H" in which it can clearly be seen that it is lying pretty close to the Hangar and that its left wings outer half is still in the Hangar as if, when the fire fighting operations were on, this Glider was simply pulled from the nose which made it roll out, turning on its left wing tip which was down on the ground in its parked state.

Off to the left were scattered a few pieces of furniture which remained unaffected by the fire. Their position in the Hangar has been given by the staff as being close to and against the wall of the first left bay of the Hangar, adjacent to the Fire Alarm Bell. This area is shown in the photograph enclosed as "Exhibit I". Both the tables two chairs and a small box remained unaffected by fire and were taken out by the Fire Fighting Team, alongwith the roll of Towing Cable.

On entering the Hangar the entire floor was found littered with broken small pieces of

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Asbestos sheets of the Hangar Roof, burnt out pieces of wood from the structure of Gliders, control cables, wires, metal fittings etc. Almost the entire floor was covered with ash of the burnt out stuff and pieces of Asbestos sheets. Along the western wall the two unused fire cylinders and two buckets were found lying on the floor. The First Aid Box was in its place and intact. A wooden Trestle, Tools Board, Performance Board, the Grinder Wheel and the Bench Vice's wooden table were found half burnt. A wooden Padestal ladder was also found burnt. The steel door of the stores was found blackened out but no traces of fire or damage inside the stores were found. This western wall of the Hangar and ~~entire~~ ^{entire} portion of floor ~~near it~~ is illustrated by ~~the~~ photographs enclosed as "Exhibit J".

The rear wall of the Hangar had nothing on it or against it except the electrical wiring, one foot from its top, with two junction boxes, two switches and two points for bulbs and tube-lights, which were found blown out of their foundation and circuit, leaving behind the marks of black soot. In the south western corner two 45 gallon drums, about half, full of water, which has been explained to be meant for sprinkling the floor of the Hangar in extremely dry weather which is very common in this part of the country; were found lying against this wall alongwith a disused very old transformer and ~~and~~ retrieving machine. The rear wall was found to have got four ventilators with fixed glass panes. This wall and portion of the floor in front of it is shown in photographs enclosed as "Exhibits K & K-1".

The Eastern wall was found to be carrying the "Main Switch" of the inside of the Hangar near the corner where it meets with the rear wall. Location of the Main Switch is marked with a circle on the photograph enclosed as "Exhibit -L". In addition this wall carried two points for a tube-light and a bulb and an external point for Air Compressor or a drill machine. On the other side of this wall are the rooms of the Army Aviation Squadron who have not raised another wall in between and therefore, this wall has become a common wall. The main supply electric wire also passes through this wall, coming from the Battery Room of the Army Aviation and entering the Hangar near the point where this wall meets with the rear or southern wall. This wall is shown in two portions alongwith its joint with the rear wall, the internal main switch and the point where the supply wire enters the Hangar. Please refer to the Photographs which are enclosed as "Exhibits L & L-1". It also shows the Area on the floor where Capstan Glider was parked.

All the doors of the Hangar were found undamaged. The upper half of the walls was found completely smeared with the Foam Spray used by the Fire Fighting Parties. All the electrical boards, switches and sockets were found half burnt out. A few brick pillars were found damaged which were located near the Cessna Aircraft; and apparently this damage occurred after the petrol tanks of the Cessna Aircraft blew up. The roof sheeting of Asbestos was completely shattered over an area of about 2/3rd of the roof and sheets of the remaining area were found cracked. The steel structure was found undamaged except for one Truss which was found

a little bent and deformed, It seems to have received direct hit at the time of explosion of the fuel tanks of the Aircraft. This damage is shown encircled on the photograph enclosed as "Exhibit M" + Damage to pillars in "Exhibit N" The general condition of the Hangar, its walls and the roofing is amply shown by the photographs enclosed as "Exhibit O, O-1 & O-2". The general view of the area in front of the Hangar on the first inspection of the site, after fire incident, looked like as shown by the photograph enclosed as "Exhibit P" . Hand sketch "Exhibit Q" should also help. Three sessions of photography were held to cover as many aspects of this incident as possible. This ofcourse was confined only to the areas falling under the jurisdiction of the Flying Club or allowed by the Army. The debris was finally removed after the permission from Mr.Mohammad Ali Siddiqui, Ops.Investigator. The following witnesses were examined and their statements recorded:-

1. Mr. Izaz Ahmad Senior Gliding Instructor, who was the last to leave.
2. Mr. Abdul Hamid Rizvi, Gliding Instructor who left the site at around 4 p.m.
3. Mr. Syed Ahmed Sarfraz, Gliding Instructor who left site at about 5 p.m.
4. Mr. Akbar Khan, Winch Operator, who closed the doors of the Hangar.
5. Mr. Mohammad Akbar, Helper, who helped in closing doors after the usual switch off of the main switch located in the Hangar was done by Mr. Akbar Khan.
6. Mr. Rafique Hussain, the Chief Mechanic, who also left the site in the last.
7. Mr. Ghulam Rasul, the Winch Operator No.2, who on that day was operating the Toyota Jeep of the Flying Club for retrieving of the Towing Cable.

8. Mr. Mohammad Usman, Helper, who also left in the last with Mr. Izaz Ahmed.
9. Mr. Ghulam Sarwer, Helper, who left the site after doors of the Hangar were closed.
10. No.3002425, L/NK Mohammad Younes, Air Traffic Controller on duty on that day, who claims to have noticed the fire first, who also called out the Fire Parties of both the Army Aviation Squadrons, and informed all concerned on telephones.
11. NK Syed Akhlaq Hussain Shah and Syed Feroze Hussain Shah Incharge Fire Brigade, 10-Army Aviation Squadron.

SUMMARY OF INQUIRY, ARGUMENTS & FINDINGS:

From the statements, from the demonstrative display of functions carried out on that day till the doors of the Hangar were closed and the staff dispersed and also from the circumstantial evidence, the following main features of the Incident stand out prominently:-

1. The usual practice of carrying out Gliding Operations in the afternoons was followed on that day also and the first half day was utilised for inspection and maintenance of Flying Machines, Towing Winch and repair of Towing Cable.
2. The Gliders having low profile and large spans, the parking in the Hangar was too congested. It is a normal practice to have "Wing underwing" and Tail under wing parking pattern in the Hangar of Quetta Soaring & Flying Club which is of 60' x 50' (useable space) size.
3. The open type electrical wiring inside the Hangar was all found burnt and at three places the junction boxes, switches and the wiring in between were found blown out of their circuits, leaving behind black spots on walls.

4. The wires at the Mains were found cut off and so was the wire before the Main Switch of the Hangar and after the Battery Room of the Army Aviation.
5. The Main Switch and its surrounding area was completely covered with foam.
6. The Flying Machine most affected by fire in terms of its complete annihilation was found to be the Glider Capstan AP-AUH which was parked with its tail unit deep in the corner where the Main Switch is located. The only portion left of this Glider is the tubular frame of the Centre Section and two burnt out black long beams called Spars.
7. The time factor involved is very short in duration, in the occurrence of Fire. Doors of the Hangar were closed at around 5.30 p.m. and the fire is stated to have already broken out by 5.40 p.m. with 5' error of judgment.
8. No stranger or unconcerned person was reported to have been seen in the area on that day, nor anything unusual was seen or felt in the Hangar, (while placing the Glider, the Towing Winch and other pieces of equipment) by any of the 7 members of staff of the Flying Club, who obviously moved about in the Hangar and finally put the main switch in off position before closing the doors. No smell/odour was felt, nor any smoke noticed by any one.

9. The Tanks of Cessna Aircraft were in topped up condition; the Main Battery was lying in stores, the doors of the Aircraft were in locked condition; prior to break out of fire.
10. A separate concrete POL store, away from the Hangar is in use of the Flying Club and no evidence was found about the presence of any liquid or loose inflammable material in the Hangar at the time of incident.
11. The entire staff of the Flying Club was reported to be fully satisfied with the working conditions, remunerations and the care they received from the organisation. No abnormal behaviour or conduct of any member of the staff was reported. Files of the entire lower staff contained clearance from the Police.
12. In view of the present day's unprecedented advancement of technology in every field, the possibility of use of a remote controlled/device or a delay action chemical was also considered.

ARGUMENTS - POINT BY POINT:

1. This apparently is an irrelevant matter in so far as the Fire is concerned which broke out at sunset, at the end of that day's all activities, hence does not merit any argument.
2. This also does not seem to have any connection with the cause of fire, direct although it may have contributed towards

the extent of resultant loss. So this may also be not considered for further discussion.

3. Generally speaking the wiring inside the Hangar was reported to be in a reasonably good shape because it had undergone annual check at the time of renewal of Organization Approval in July this year. From some of the enclosed Exhibits, the black spotlike marks left behind at the places on the walls where the junction boxes and switches were present before the fire, it can be noticed clearly that these marks are of a size larger than the junction box, the switch or the wire in between. During inspection their places were found empty and they seemed to have vanished into thin air, strongly suggesting that "Short Circuiting" had certainly taken place which blew them out of their circuit, either through the Mains ~~of~~ the line before the Main Switch or from within.

4. As is shown by the enclosed Exhibits, the lines of the Mains, which reach upto the steel structure of the Hangar, are anchored to a steel cross bar bolted to the main structure. Connections from this point were also found cut. During the inspection. One or two of the staff in their statement have also mentioned that when they ran back on a shout from the Sentry about the fire and tried to unlock and open the doors ^{they} strongly felt the presence of electricity in the body

of the doors on which they used their "Chadars" for handling the doors. But presence of flow of electricity through the doors in this particular case cannot be readily accepted to be the result of short circuiting because by then the fire was already at its fury peak and, therefore, creates doubts in the mind. But the fact remains that the Main Lines were found cut off and some people remember having seen the sparking taking place in this area at the time of Fire.

5. Generally speaking the fire fighting personnel during their fire extinguish^{ing} operations directed the Foam spray on all machines and electrical fittings. They had no CO₂ or CTC with them for use on this fire but they surely must have got arrangements for protecting themselves against electricity. But the point to make here is of the Main Switch, inside the Hangar, which seems to have attracted more attention from the Fire Brigade because it itself and the Area in its vicinity was overly covered with foam spray. This gives rise to the belief~~e~~ that something worthy of attending more and probably first, was happening in this area where incidentally the tail of the Capstan Glider was positioned close by and exposed to any threat of fire. May be that short circuiting took place here first, putting Tail of the Capstan on fire through bursts of sparking.

6. As has been stated above, one is inclined to believe that Capstan Glider was the first to catch fire and that the short circuiting took place at or in the vicinity of the Main Switch inside, which is located in the south western corner of the Hangar. The other factors which support this assumption that the short circuiting took place in this corner first and that Capstan Glider was the first to catch fire are argued as below:-

- a) The structure of the Capstan Glider was made up of Spruce wood mainly and covered with fabric and at some places with plywood. It was thus more prone to catching fire than the Cessna 172, which was of metal and covered with metal skin. The other two Gliders were parked a little up in front and the parts of their structure which suffered comparatively lesser Fire damage were their left wings which were on ground and close to Cessna Aircraft. This strongly supports the view that it was the Capstan which caught fire first and set the fire broke out in this corner of the Hangar.
- b) The remains left of the Capstan Glider strongly suggest that this machine caught fire first and remained on fire comparatively for longer duration, thus leaving behind only the metallic Centre Section and burnt out two spars of wings. The Glider practically got totally annihilated by fire, So, this also strongly supports the view that Capstan Glider was the first

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to catch fire and that therefore, the short circuiting took place at a point located nearest to this Glider; which in this case is the area where the Main Switch of the Hangar is located.

- c) Right wing of the Glider AP-AWO which was half way over the left wing of the Capstan, got damaged much more than its left wing, which was resting on its tip on the ground and close to the Cessna Aircraft. This also suggests that Capstan Glider caught fire first as a result of which the right wing of ASK-13 Glider AP-AWO was also engulfed by flames rising from the body of the Capstan Glider. So it becomes further clear that fire originated/started by short circuiting taking place in the nearby area, which again in this case is the Main Switch Area.
- d) In case of ASK-13, AP-AWP Glider, again the right wing was found affected most by fire. Looking at enclosed "Exhibit E" one can easily see that right wing of this Glider was also up and over the body of the Capstan although for the purpose of clarity the wing has been shown a ^{little} tilted forward

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of the body of the Capstan. The right wing was completely burnt out while the left wing still had its shape intact. This fact also suggests that the Capstan Glider caught fire first and that the short circuiting took place in the area closest to this glider.

- e) As stated before, the only thing left of the huge Glider Capstan AP AUH, after the fire, is a Tubular square shaped frame of the Centre Section and two burnt out spars sticking out from both sides. While referring to Exhibits 'E' and 'Q' one can easily visualise the scene at the time of fire fighting operations. The Winch had already been pulled out by two members of the staff of the Flying Club before the Fire Brigade reached the site. This left the area in front portion of the Hangar (which fell directly in front of the corner where the Capstan was on fire) clear of any obstruction except the Glider AWP which was parked in the last, that evening. But as it will be observed from Exhibit 'Q', this Glider seems to have been half rolled in a hurry and left there in front of and half inside, the Hangar, thereby blocking one third of the opening to the Hangar. This picture strongly suggests that the immediate attention of the fire fighting party was attracted by the corner where the Capstan Glider was on flames or where the short circuiting was taking place or had taken place. Looking at the position of the wreckage of each machine it can easily

be made out from photographs that remains of Capstan Glider were pulled out first which were found during the first inspection lying at the farthest distance from the door railings of the Hangar. The foregoing of this para, therefore, also suggests that short circuiting took place around the Main Switch area and that Capstan Glider was the first victim.

7. The time between closing of the Hangar Doors and first detection of Fire by L/NK Mohammad Younas, the Air Traffic Controller of the day is undoubtedly very short. Taking into account the factor of human error, which is possible on such occasions, ~~it~~ still falls within 10 minutes of the time the doors were closed and the staff dispersed. This clearly indicates that something of a sudden nature occurred in those ten minutes. Prior to detection of fire no sound of any kind of explosion was reported by any person. The only explanation left to record in respect of this incident, therefore, falls within the confines of two possibilities i.e. Electrical Short Circuiting or the tiny remote controlled explosive device. Neither there has been any evidence in support of the later nor the circumstances and security measures exercised at the Army Aviation Base suggest the possibility of such nature. We would, therefore, confine ourselves to only first possibility, which is more evident than the later. May be, that a slight tremour created by the 'BANG' of the doors of the Hangar during closing, triggered off the process of short

circuting at a place where the wires may have been already critically placed requiring a slight movement to ignite spark, taking only moments to give a start to such a havoc.

8. This indicates that nothing had happened or had started to happen till the closing of the Hangar doors. This point does not require further elaboration.
9. This relates only if the possibility of fire originating from the Cessna Aircraft itself is considered which was also looked into seriously. But with the battery lying in stores, doors secured and locked, there was no apparent reason available for the break out of fire from within the Aircraft and its systems. The subsequent explosion of tanks which were topped up with petrol, did undoubtedly cause fatal damage to the Aircraft and also the other machines and the Hangar and added more fury to the fire. Apart from this it does not seem to possess any reasons to argue it further.
10. No evidence whatsoever, material, circumstantial, or verbal was available in support of the possibility that some inflammable loose liquid or material may be lying in the Hangar before the fire broke out. No proof was found in this case, and, therefore, the cause of fire secondary in nature could not be established. It does not require further arguments.
11. This para as given already is sufficient to exclude the possibility of any attempt of committing sabotage by any member of the staff,

using such an advanced technique of creating fire by the use of a tiny remote controlled explosive device. Short of using such device there is no possibility of igniting fire in the Hangar in presence of seven members of the staff and that too without producing smoke, smell or any odour before the doors were closed. No more arguments, therefore, are required in this respect.

12. The possibility of break out of fire through the use of remote controlled explosive device or a delay action chemical was also looked into very seriously but due to lack of resources and facilities, this matter which ~~de~~mands highly sophisticated laboratory tests could not be taken to its logical finality. But as already explained sufficiently in the foregoing paragraphs, such possibility in the presence of Army and their most stringent rules and practice regarding permission to enter the area, is not there. Nor one can think of any such possibility involving the staff of the Flying Club, who have been reported to be most dedicated and satisfied with their service conditions.

F I N D I N G S:

The findings of the inquiry into the cause of FIRE which broke out in the Hangar of Quetta Soaring & Flying Club in the evening of 13th November, 1990, are given below which are based on conclusions reached at, through statements, through circumstantial evidence, through material evidence and through the evidence conceived from demonstrations:-

"This Catastrophical Fire broke out due to accidental electrical short circuiting".

L O S S E S:

1. Destroyed:

One Cessna 172 Aircraft, Regn.No.AP-BBE

One Capstan Glider, Regn. Mo: AP-AUH

Two ASK-13 Gliders Regn.No. AP-AWO & AP-AWP

16 Cushions, Tools Board, Two Tables, Three Trestles.

One Ceiling Fan, One ladder Platform, Four Pairs of Flags.

2. Damaged:

The entire roofing made up of Asbestos Sheets and Brick pillars of the Hangar.

INSURANCE STATUS:

Only Cessna 172 Aircraft was insured against fire risk/damages etc.

R E C O M M E N D A T I O N S:

1. In the case of Quetta Flying Club which does not enjoy unrestricted control over the affairs at Khalid Airfield it would be advisable for them not to have the Electrical Connection/ Circuit inside the Hangar again. Night Flying Operations are in any case prohibited in this area. Instead the side rooms which are under construction and meant eventually to be used as workshops/offices etc. may be fitted with electrical connection with a provision to plug in supply for interior of the Hangar if and when needed to be used.
2. In view of the praise worthy record of performance of the Quetta Flying Club in which they have logged todate close to ONE LAC Glider Sorties and 1500 Hours on Powered

Contd...27.

-(27):-

Aircraft all accident free, and spread over a period of long 30 years and also holding all the three National Records of "GAIN OF ALTITUDE" of 19000 Feet, "ENDURANCE RECORD" of 10 hours 20 minutes and "CROSS COUNTRY" Flight of 120 Miles, all on Gliders; one cannot help but strongly recommend to the Authorities concerned to extend all ^{assistance} ~~help~~ to the Quetta Soaring & Flying Club generously so as to help it to get back on its feet and become operational at the earliest.



EXHIBIT-F-1



EXHIBIT-F-2



EXHIBIT-F-3



EXHIBIT-F-4



EXHIBIT-G-1



EXHIBIT-G



EXHIBIT-G-3



EXHIBIT-G-4



EXHIBIT-



EXHIBIT-H-2



EXHIBIT-I



EXHIBIT:



EXHIBIT-J-2



EXHIBIT-J--



EXHIBIT--



EXHIBIT-K-2



EXHIBIT-L-1



EXHIBIT



EXHIBIT-M



EXHIBIT-N



EXHIBIT-O



EXHIBIT- O-2



EXHIBIT-C



EXHIBIT-1