

IN THE COURT OF CHIEF JUDICIAL MAGISTRATE BHOPAL MP

(Presided By- Mohan P.Tiwari)

Cr. Case No. 8460 / 1996

Date of Institution -01.12.1987

State of Madhya Pradesh through CBI

----- Complainant

Vs.

- 1- Sri Warren Anderson S/O Sri John Martin Anderson Former Chairman,
Carbide Corporation, 39, Old Ridgebury Road, Danbury
USA 06817 (Absconder)
- 2- Sri Keshub Mahindra S/O Lt. Sri kailash Chandra Mahindra Former
Chairman, Union Carbide India Ltd. 15, Mathew Road Bombay r/o
Ft.No.9&10 St. Helen's Court G.Desmukh road Bombay
- 3- Sri Vijay Prabhaker Gokhle S/O Sri Prbhaker N.Gokhle Former Managing
Director, Union Carbide India Ltd. r/o 15, Mathew Road Bombay
- 4- Sri Kishore Kamdaar former Vice President i/c AP Division Union Carbide
India Ltd. r/o kshitij 19th Floor Napean Bombay
- 5- Sri J.Mukund former Works Manager AP Division Union Carbide India Ltd. r/o
6D - Landsend Downersi Road Bombay
- 6- Dr.R.B.Roy Choudhary former Asst.Works Manager AP Division Union
Carbide India Ltd. r/o Satya Ft. No.10, 15th Road Bandra(W) Bombay-(**dead**)
- 7- Sri S.P. Choudhary, former Production Manager AP Division Union Carbide
India Ltd. r/o 12 Akor Park behind Meera Society Shankersheth road
Gulatkhedhi Pune
- 8- Sri KV Shetty Plant Superintendent AP Division Union Carbide India Ltd. Bhopal

- 9- Sri SI Qureshi former Operator AP Division Union Carbide India Ltd. Bhopal.
- 10- Union Carbide Corporation , 39,Old Ridgebury Road Danbury
Connecticut ,USA 06817 (Absconder) **-(Absconder)**
- 11- Union Carbide Corporation ,(Eastern) Inc. 16th Floor New World Office
Building (East Wing) 24, Sabury Tsimsa Tsu Kowloon Hongkong,
-(Absconder)
- 12- Union Carbide India Ltd. 1,Middleton Street Calcutta-16

----- Accused persons

For the CBI Senior Public Prosecutor- Sri Sahai

For the Accused No. 2 ,Mr. Keshub Mahindra ,Former Chairman, Union
Carbide India Ltd. Bhopal & Accused No 12 Union Carbide India Ltd.

1,Middleton Street Calcutta-16Sri Amit Desai Senior Counsel with Sri Ajay Gupta Adv.

For the Accused No. 3-9 ,Sri D. Prasad Senior Counsel, and Sri Ajay Gupta Adv.

(Delivered on 07, June 2010)

- 1- Accused persons have been charged under Section 304-A 336,337 and S.338 r/w
section 35 of Indian Penal Code 1860.
- 2- The facts are not disputed that the accused persons namely Sri Warren Anderson S/O
Sri John Martin Anderson Former Chairman, Union Carbide Corporation,Danbury Connecticut ,USA
Sri Keshub Mahindra ,Chairman, Union Carbide India Ltd. Bhopal, Sri Vijay Prbhaker Gokhle
Managing Director,Union Carbide India Ltd Sri Kishore Kamdaar,Vice President i/c AP Division Union
Carbide India Ltd ,Sri J. Mukund former Works Manager AP Division Union Carbide India Ltd., Sri
Dr.R.B.Roy Choudhary (dead) Asst.Works Manager AP Division Union Carbide India Ltd. , Sri
S.P.Choudhary, Production Manager AP Division Union Carbide India Ltd. , Sri KV Shetty Plant
Superintendent

Works Manager AP Division Union Carbide India Ltd. Bhopal and Sri SI Qureshi former Operator AP Division Union Carbide India Ltd. Bhopal were employed in the Union Carbide of India Limited (In short UCIL). It is also undisputed that in the UCIL Bhopal Plant pesticide under brand name Sevin and Temik were manufactured with the help of MIC, Phosgene and Chloroform. There were three storage tanks in the plant for the storage of liquid MIC. These tanks were designated as E-610, E-611 and E-619. On the intervening night of 2nd and 3rd Dec. 1984 from the tank no. E-610 a huge quantity of MIC escaped which caused the death immediately of thousands of human beings and also caused simple and grievous injuries to a number of people, some of whom became permanently disabled and the number of effected persons is near about 5 lacs. Thousands of animals and other creatures had also been effected.

3- The brief facts of the case are that the Union Carbide India Ltd. (in short UCIL) is a subsidiary company of the Union Carbide Corporation (in short UCC) USA. UCC Inc. was the Regional Office of UCC, USA which controlled the UCIL, India and others. The UCIL was incorporated on 24th December, 1959. The UCC was a major shareholder with 50.9% of the share holdings in the UCIL. The UCC was nominating its own Directors to the Board of Directors of the UCIL and was exercising strict financial, administrative and technical control over UCIL. UCC business worldwide is conducted principally through the Divisions, subsidiaries and affiliates. Subsidiary companies are those operating anywhere in the world in which UCC's direct or indirect ownership is more than 50%.

4- Vide letter dated 14.9.1972, the UCIL had submitted application for foreign collaboration with UCC, USA which was considered at length and in the meantime the company vide letter dated 29.11.1972 represented that the foreign collaborating company had established technical knowledge for several years on the basis of which the foreign company at USA was manufacturing

MIC successfully. On 13.11.73 UCIL entered into an agreement with UCC according to which the best manufacturing information then available had to be provided to UCIL, India. This necessitated the UCC to supply design, know how and safety measures for production, storage and use of MIC which ought to have been an improvement on the factory of UCC, USA based on experience gained there.

5- Vide letter dated 1.1.70 UCIL applied for the License from Progress Section, Industrial Development Internal Trade and Company Affairs, Govt. of India, Udyog Bhawan, New Delhi for manufacturing of 5000 tones of MIC based pesticides. The industrial license for manufacture of MIC based pesticides was granted to UCIL by the Ministry of Industry of Industries & Civil Supplies vide order dated 31.10.75, inter-alia on the condition that it should be free from air, water and soil pollution. Vide letter dated 30.9.82 the UCIL requested for renewal of the foreign collaboration for the manufacture of MIC based pesticides. Further vide letter dated 12.11.82 the UCIL requested for expeditious clearance of the application for foreign collaboration mentioning therein that the production of MIC started in 1980 only and the manufacturer of MIC is known to involve extremely hazardous process with complexity of areas of efficiency, material balance, corrosion and safety and the agreement of foreign collaboration was to terminate in 1982 may be extended. Vide order dated 24.03.83 the Govt. of India extended foreign collaboration with UCC, USA for manufacture of MIC based pesticides from Oct., 1982 to Jan., 1985.

6- Union Carbide of India Ltd. (UCIL) was running a factory at Berasia Road Bhopal for the manufacture of Methyl Isocyanate ($\text{CH}_3\text{N}=\text{C}=\text{O}$)(MIC) based pesticides Sevin and Temic . The MIC was also being manufactured in the plant and being stored in the under ground tanks namely tank no. 610,611 and 619. On the intervening night of 2nd and 3rd Dec. 1984 from 12.00 – 12.45 AM. onwards ,MIC started to escape from one of the tank 610 in the factory of UCIL, Bhopal in the large quantities causing death of thousands of human beings and animals and injuring the health of lakhs of

human beings. It was of unprecedented nature and has continuing tragic and disastrous effect on human beings and animals. No information was available at the factory site, no warning was given to the people residing around the factory. The case was registered with P.S.Hanumanganj, Bhopal on 02.12.1984 at crime No.1104/84 dt. 03.12.84 u/s 304-A IPC by the then SHO Surinder Singh.

7- Later, on 6.12.84, a case was registered with CBI as RC.3/84-ACU-I. After thorough scientific investigation, with help of the team of scientists headed by Dr. S.Vardarajan Director General of CSIR with other scientists, the facts were noticed that MIC was stored in large quantities, the valves and other pipelines used in the UCIL, Bhopal were made up of Iron Steel, Galvanized Iron, Aluminium, Zinc, Copper or their alloys and a fact also revealed that possible entry of water into the Tank 610 when the water washing was going on. Thereafter a detailed report was submitted to the CBI and after other necessary investigation, CBI filed this Charge Sheet u/s 304, 324, 326, 429 IPC read with Section 35 of IPC against the accused persons, namely Shri Warren Anderson, the Chairman, Union Carbide Corporation, USA; Keshub Mahindra, then Chairman, UCI Bombay; Vijay Gokhle, then Managing Director and presently Chairman-cum Managing Director, UCIL, Bombay; Kishore Kamdar, then Vice President Incharge, A.P, Division, UCIL, Bombay; J. Mukund, then Works Manager, A.P. Divisions, UCIL,Bhopal; Dr. R.B. Roy Choudhary, then Asstt. Works Manager, A.P. Divisions, UCIL, Bhopal; S.P. Choudhary, then Production Manager, A.P. Division, UCIL, Bhopal; K.V. Shetty, Plant Superintendent, A.P. Division, Bhopal; S.I. Qureshi, Operator, A.P. Division, UCIL, Bhopal; the Union Carbide Corporation, U.S.A; Union Carbide Eastern Inc. Hongkong and Union Carbide India Limited, Calcutta was filed on 01.12.1987.

8- My predecessor committed the case to the Court of Sessions for the trial according to law vide Order dated 22.6.1992 and at last the matter went to the Supreme Court and the Hon'ble

Supreme Court in Criminal Appeal No.1672/1996 dated 13.9.1996 directed that the case be tried u/s 304-A of IPC and the matter was remanded to this Court for trial u/s 304-A, 336, 337, 338 and section 35 IPC Accordingly, the charges were framed.

9- Prosecution has examined 178 witnesses in his favour. accused persons have been examined u/s 313 Cr.P.C. They have submitted that they are not liable for any incident. They were even not present on the site when the gas leaked. They further submitted that it is a mistake of one or the other local employee of the UCIL. They further state that the factory was designed by the UCC, USA which is having expertise in the field of MIC based pesticides business through out the world having lot of experience, therefore, they can not be held guilty for the alleged offense. In their support they have examined eight witnesses in defence.

10- Now, the points for consideration are:-

- 1) whether on or about the night intervening 2nd & 3rd December, 1984 at Bhopal caused the death of 3828 or more people by doing an act to wit by running a defective plant of MIC a dangerous volatile and poisonous substance having a number of operational defects without reasonable care which resulted in leakage of the poisonous gas from tank No.610 of AP Division of UCIL Bhopal, which was a rash or negligent act not amounting to culpable homicide and sharing the common knowledge of the same did not do anything to avoid the escape of the gas.
- 2) Whether the accused persons can be held guilty of the same negligible act by running the same defective plant of MIC without reasonable care and caution without informing the local people about the remedial precautions which resulted in the leakage of the gas from tank No.610 endangering human life and personal safety sharing the common knowledge.

3) Whether the accused persons can be held guilty of the same negligible act by running the same defective plant of MIC without reasonable care and caution without informing the local people about the remedial precautions which resulted in the leakage of the gas from tank No.610 endangering human life and personal safety sharing the common knowledge thereby causing simple injuries to the people.

4) Whether the accused persons can be held guilty of the same negligible act by running the same defective plant of MIC without reasonable care and caution without informing the local people about the remedial precautions which resulted in the leakage of the gas from tank No.610 endangering human life and personal safety sharing the common knowledge thereby causing grievous injuries to the people.

Point No. 1 to 4

11- Before discussing the detailed evidence adduced by the prosecution in this case it is very much relevant to point out the facts which are either not disputed, or, are, at this stage, beyond the pale of controversy, may briefly be noticed. The Union Carbide Corporation is a company with the Head Quarter in USA having affiliated and subsidiary company through the world. The subsidiaries were supervised by four regional office which were controlled by UCC USA. Union Carbide Corporation of India Ltd. (UCIL) is a subsidiary of UCC USA and having fourteen factories in India. The factory situated at Bhopal is one of them. Union Carbide Eastern Inc. with its office in Hongkong, regional office at UCC USA, which controlled the UCIL Bhopal besides others. It was incorporated in India on 20th June, 1934, known as Eveready India Ltd. It was registered under the Union Companies Act. The name of the company was changed from 24.12.1959 into Union Carbide India Ltd. and further registered under the Indian Companies Act, 1956.

12- UCC USA has been a majority shareholder with 50.9% in the UCIL Bhopal. UCC had nominated its own director to the Board of Directors of the UCIL and was exercising financial, administrative and technical control over the UCIL. UCIL initially started importing Sevin, a pesticide from US in 1960 and after importing it UCIL was marketing the same after adding dilutants to it. Subsequently they have decided to manufacture the brand Sevin in Bhopal Plant and accordingly created facilities for production thereof with MIC.

13- MIC was being imported in 200 Ltrs of capacity Stainless Steel Drums from UCC US from their Plant situated in West Vergenia, USA and later on in 1973 with foreign collaboration agreement they manufacture of MIC. The accused persons at the relevant time were employed in the capacity written against their names:-

1. Warren Anderson - Chairman, UCC USA
2. Keshuv Mahendra - Chairman, UCIL
3. Vijay Gokhle - MD UCIL
4. Kishore Kamdar - Vice President, Incharge, A.P. Division UCIL.
5. J. Mukund - Works Manager, A.P.Div. UCIL
6. Dr. R.B. Roy Choudhari - Asstt. Works Manager, A.P. Div. UCIL.
7. S.P. Choudhary - Production Manager, A.P. Div. UCIL
8. K.V. Shetty - Plant Superintendent, A.P. Div. UCIL
9. S.I. Qureshi - Operator, A.P. Div. UCIL

14- The leakage of gas on 2nd-3rd December, 1984 and death of number of persons, animals are the some most important admitted facts.

15- It is argued on behalf of Mr. Vijay Gokhale that he was appointed as MD on 26th

December, 1983 and was located in Mumbai. Plant was designed and installed successfully and running smoothly for over three years and Mr. Gokhale had no connection with day to day affairs of the Company. The same argument have been advanced regarding Mr. Keshub Mahindra that Mr. Mahindra was Non-executive Chairman of the Company, therefore, both of them can not be convicted.

16- The learned Counsel, Mr. D. Prasad, for the accused persons namely Shri K.S. Kamdar, Shri J. Mukund, Shri S.P. Rai Choudhary, Shri K.V. Shetty and Shri S.I. Qureshi, has further argued that it was the design defect why the incident took place and there is no recklessness or negligence on the part of any of the accused persons.

17- It is further argued by Shri D.Prasad I.c that there is no substantial evidence led by the prosecution that the plant was running in losses therefore, there was plan to shift the same to Brazil or to some other Country is only a hypothesis of the prosecution. Shri Prasad argued that UCC USA was running at the relevant point of time 17 other profit making companies through out the World and UCIL Bhopal was only a small unit., Therefore, there was no plan pending with the Board of Directors to shift the UCIL Bhopal plant to Brazil or els where.

18- Bhim Singh PW-1, Lalit Shrivastava PW-2, Uma Shanker PW-3, S.K. Dubey PW-4, Dolamani Bhoi PW-5, Mohd. Qadir Khan PW-6, Shri Mohan Lal PW-7, Prem Narayan PW-8, Jairam PW-9, Mathura Prasad PW-10, Saptnarayan Mishra PW-14, Ramesh Prasad PW-15, Ramesh Badriprasad PW-16, Ram Lal PW-18, Niyamat Ali PW-19, Kishan Bahadur PW-21, Babuchand Yadav PW-22, Bhaiyalal PW-24, Mohd. Imran PW-25, Roshan Lal PW-27, RP Sharma PW-31, Mohd. Saeed PW-32, Umrao Singh PW-33, Sannawar Ali PW-36, Ashok Kumar Sharma PW-37, Lt.Col. A.K. Rashtogi PW-40, Gyan Singh Parihar PW-42, Umashanker Tigger PW-43, Baidnath Yadav PW-46, Ashraf Nadeem PW-52, Moti Singh the then collector Bhopal PW-54, the then Collector Bhopal,

Madan Gopal Parashar PW-65, Mohd. Ubed PW-81, Mohd. Khawaja PW-82, Y.N.Singh PW-86, Mudlapatti Prabhudas Prabhunanda PW-92, Keshav Rao PW-93, Ramlakhan Sharma PW-95, Shivnandan Singh PW-98, G.V.Iyer PW-99, Mahesh Kushwaha PW-104, Kishore Singh PW-105, O.P. Kochar PW-106, Gopilal Maran PW-108, Ashok Kumar Shukla PW-112, Bhanwarlal PW-113, Thoman P. Mathew PW-117, Kunji Lal PW-120, Keshav Pratap Singh Chouhan PW-121, Syed Aslam Ali PW-122, Mubariq Ali PW-123, Raqib Mohd. PW-124, Roop Singh PW-125, P.D. Joshi PW-126, Sheikh Mehtab PW-130, Ashok Kumar Sharma PW-135, LT.Col. Rakesh Sharm PW-136, Mohd. Rayes PW-137, Syed Azhar Ali PW-140, Jagdish Narayan PW-141, Capt. A.K. Inani PW-143, Brig. J.N. Daviya PW-145, Ahmed Rashid PW-146, Head Constable Matlub Khan PW-148, Lt. Col. Rajkumar Tiwari PW-152, Col. V.R. Pathak PW-163, Nathulal PW-168, Shah Nawaz Khan PW-169 Rajkumar keswani PW 172 a journalist, are the witnesses, who deposed about the leakage of gas on 2-3.12 84. Kesharwani, PW 172 who published a news regarding the plant. The same can be considered as an alarm to the govt.as well as to the UCIL. Surendra Singh Thakur PW-58 is a witness, who has stated that in December, 1984 he was posted as SHO, PS Hanumanganj, Bhopal.

19- He further deposed that he was on petrolling. He saw a number of people were rushing and came to know that some gas has escaped from the UCIL Bhopal. He at once returned to the Police Station and informed the senior Police Officers. During this time the people of the city were rushing from here to there, then he went late night to the UCIL Factory, where he met Security Officer Mr. Chauhan and Mr. K.V. Shetty and at last he lodged a FIR against Mr. J. Mukund, J.V. Shetty, S.P. Choudhary, R.B. Roy Choudhari, S.I. Qureshi on the same day, 2.1284 and made entry in Rojnamcha Exh. P.900 and 901 and later on prepared a site map.Exh.P-903 and on the 3rd December, 1984 he has arrested Mr. J. Mukund prepared a arrest memo Exh. P-904 on the same day K.V. Shetty, Satyaprakash Choudhary, R.B. Roy Choudhari, S.I. Qureshi were also arrested and

arrest memo 905 was prepared. On 7th December, 1984 Keshub Mahendra, J.P. Ghokale and absconded accused Warren Anderson was arrested vide arrest Memo 906 and started investigation.

20- Other police officers, Vipin Tiwari Sub Inspector Police PW-59, Daulat Singh PW-67 stated that he was posted on the date of incident in P.S. Hanumanganj as ASI. A number of people were lying dead on the roads, therefore, he prepared a report regarding these deaths. G.S. Rajput PW-68, Bholaram PW-74, Ramswaroop Sharma PW-75, C.L. Sonkar PW-149 are some of the Police Officers, who stated regarding the death of a number of people because of the gas leak from the UCIL Bhopal Plant.

21- Dr. Manju Mathur PW-23, Dr. R.K. Shrivastava PW-30, Dr. Rekha Bhagel PW-38, Dr. G. Kumar Makhan PW-37, Dr. Lakhman Das Waswani PW-41, Dr. Manmohan Nanda PW-44, Dr. Balkrishna Tiwari PW-45, Dr. Bhanupratap Dubey PW-47, Dr. N.R. Bhandari PW-78, Dr. K.N. Agarwal PW-80, Dr. P.N. Bisaria PW-85, Dr. R.N. Tandon PW—96, Dr. Neeta Sahani PW-129, Dr. Ashok Sharma PW-151, Dr. Kailash Kaushal PW-154, Dr. S.S. Kaushal PW-159, Dr. Lalit Mishar PW-176 are some of the witnesses, who had conducted MLCs or the autopsies of the victims of the gas. As the fact is not disputed that the gas was leaked and the people were affected and thousands of people were died, therefore, detailed marshaling of the evidence is not required.

22- Therefore, the initial effects of exposure were coughing, vomiting, severe eye irritation and a feeling of suffocation. People awakened by these symptoms fled away from the plant. The acute symptoms were burning in the respiratory tract and eyes, [blepharospasm](#), breathlessness, stomach pains and vomiting. The causes of deaths were [choking](#), reflexogenic [circulatory collapse](#) and [pulmonary oedema](#). Findings during [autopsies](#) revealed changes not only in the lungs but also [cerebral oedema](#), [tubular necrosis](#) of the kidneys, [fatty degeneration of the liver](#) and necrotising [enteritis](#).

23- Those who ran inhaled more than those who had a vehicle to ride. Owing to their height, children and other people of shorter stature inhaled higher concentrations. Many people were trampled trying to escape.

24- Industrial License relating to the pesticides was granted by the Director General of Technical Development during 1990-94. The fact has been proved by Vinod Kr. Tyagi PW-66, Asstt. Development Officer in the Office of the D.G. Technical Development. He further said that for foreign collaboration the Company was required to give information relating to technical capabilities, royalty, etc. vide letter dated 14.9.1972. An Application was moved by the UCIL for foreign collaboration with UCC USA and the same was considered vide letter dated 29.11.1972 (Exh. P-1145).

25- It was assured by the UCC USA that the Company had technical knowledge of several years of manufacturing the MIC in USA successfully and on that relying the same UCIL started manufacturing MIC in Bhopal Plant (Exh P-1140, 1142 and P-1147). On 26.11.1973 foreign collaboration was approved by the Govt. of India for the period of 5 years from the date of production. The witness has proved the Industrial License Exh. P-1147, P-1148, P-1149, P-1151, P-1153, P-1155 the same has not been challenged. Further the foreign collaboration was extended upto 1985 vide Order (Exh.P-1158). S.S. Gupta PW-71, Under Secretary in the Ministry of Chemicals & Fertilizers in 1993 has proved documents P-1340 to P-1345, according to that the UCIL was importing pesticides Sevin from UCC USA in 60's and was marketing it after adding some dilutants and thereafter started manufacturing of Sevin in Bhopal Plant under an agreement signed on 13.11.1973 with UCC. UCC USA was agreed to provide best manufacturing information, regarding design, safety measures, storage of MIC, than available to UCIL India.

26- The License was provided by the Industrial Deptt. Internal Trade and Company Affairs, Ministry of Chemicals & Fertilizers Govt. of India, Udyog Bhawan New Delhi for manufacturing of

5000 tons of MIC based pesticides (Exh.-P-1147, P-1148 & P-1151). The conditions were imposed that the plant should be free from Air, Water and Soil Pollution. (Vide letter dated 30.9.1982 exh. P-1157) UCIL requested extension of foreign collaboration for the manufacturing of MIC base pesticides in Bhopal Plant vide Order dated 24.3.1983 the Govt. of India extended foreign collaboration from October, 1982 to January 1985 (Exh. P-1158)

27- The team of scientists headed by Dr. S.Vardarajan Director General of CSIR with other scientists, the facts were noticed that MIC has to be stored and handled in stainless steel tanks of type 304 or 316 good quality stainless steel. Using any other material could be dangerous. In particular, Iron, steel, galvanized iron, aluminium, zinc, copper or their alloys could not be used for the purpose of storage or transfer / transmission of MIC. The tanks storing MIC have to be ,for the reasons of safety , twice the volume of the MIC to be stored .It was also advised by the UCC itself that an empty storage tank should also be kept available in standby position at all the time for emergency transfer of MIC. MIC was also advised to be stored in the storage tanks under the nitrogen pressure of the order of 1Kg/cm²g and a specific temperature below 15°C and preferably 0°C was also required to be maintained. However in tank no.610 the MIC was stored under nearly atmospheric pressure from 22.10.1984,therefore, free passage was available for the entry of back flow of the solution from the VGS into the tank. According to the report of the committee about 500 liters of water entered into the tank no.610 through RVVH/PVH lines .The thermowell and temperature transmitting lines were out of order for quite sometime and therefore, no temperature was being recorded .

28- As the prosecution story reveals that on 2nd of December 84 before 10.45 PM no deviation was noticed in the pressure of the tank 610 . Soon thereafter in the night shift ,some operators noticed the leakage of water and gases from the MIC structure and they informed the control room .The control room operator saw that the pressure had gone up in the tank 610,the

factory staff tried to control the situation but they failed. The storage and the transfer lines have to be free of any contaminants as even trace quantities of contaminants are sufficient to initiate the reaction which could be a runaway reaction, rapid trimerization. Induction period may vary from several hours to several days. The generation of heat may cause violent explosion. In particular contaminated water reacts exothermically to produce heat and CO₂. Consequently, the pressure in the tank rise rapidly if MIC is contaminated with water. The reaction may begin slowly, specially if there is no agitation, but it will become violent. All these properties of MIC show that despite all the safety precautions that could be taken, storage of large quantities of MIC in big tanks was fraught with considerable risk.

29- MIC from tank No.610 and tank No. 611 was being transferred to the Sevin plant through stainless steel pipelines. MIC is kept under Nitrogen pressure which is supplied through the carbon steel header common to all the storage tanks. There was a strainer in the Nitrogen line. Subsequent to the strainer the pipe is of carbon steel and leads to make up control valve which also have a body of carbon steel. These carbon steel parts could get exposed to MIC vapours and get corroded, providing a source of contaminant which could enter the MIC storage tank and cause a dangerous reaction with the MIC.

30- During the normal working of the factory MIC fumes and other gases that escaped first pass through a pipe line called **Process Vent Header (PVH)** of 2" diameter. The escaping gases were carried by the PVH line to a **Vent Gas Scrubber (VGS)** containing alkali solution which would neutralise the escaping gases and release to the atmosphere. Another way through which the gases from the tank can escape was th **Relief Valve Vent Header (RVVH)** of 4" diameter.

31- When the pressure in the tank exceed 40 PSI/g rupture of disk leading to a safety relief

valve had to break and the said relief valve in the **RVVH** line open automatically to allow the escaping gas to travel through the **RVVH** to the **VGS** for neutralisation. According to the prosecution story the PVH and RVVH and well as the other valves therein were of carbon steel so this was the design defect and valves also allowed back flow of the alkali solution from the VGS to the MIC tanks.

32- Again it is alleged that after investigation the fact was noticed that proper nitrogen pressure was not maintained in the MIC tank since 22nd October, 1984 and the attempts to pressurise the tank on 30/11/84 and 1/12/84 were failed because of the design defect on the date of incident. Tank No. 610 was nearly atmospheric pressure therefore free passes was available for the entry of back flow of the solution from the VGS into the tank.

33- The CSIR report reveals that the main causa- causans for the incident were the needless storage of large quantity of MIC in large tanks like tank No. 610. Insufficient caution in design choice of material other alarming instruments, inadequate control on systems of storage and on quality of stored materials and as well as lack of necessary facilities for quick effective disposal of material which lead to the incident. Moreso, on the date of incident ,the **Refrigerating System** was not working ,the **Flair Tower** was also out of order ,VGS was in capable of neutralilising the large quantity of MIC. The MIC which is a highly dangerous and toxic poison and stored in large quantity was an act of omission on the part of the accused persons . The prosecution story goes ahead that no step was taken by the then authorities namely Shri Warren Anderson, the Chairman, Union Carbide Corporation, USA; Keshub Mahindra,the then Chairman, UCI Bombay; Vijay Gokhle, the then Managing Director and presently Chairman-cum Managing Director, UCIL, Bombay; Kishore Kamdar, the then Vice President Incharge, A.P, Division, UCIL, Bombay; J. Mukund, the then Works Manager, A.P. Divisions, UCIL,Bhopal; Dr. R.B. Roy Choudhary, then the Asstt. Works Manager, A.P. Divisions,

UCIL, Bhopal; S.P. Choudhary, then Production Manager, A.P. Division, UCIL, Bhopal; K.V. Shetty, Plant Superintendent, A.P. Division, Bhopal; S.I. Qureshi, Production Assistant, A.P. Division, UCIL, Bhopal; the Union Carbide Corporation, U.S.A; Union Carbide Eastern Inc. Hongkong and Union Carbide India Limited, Calcutta regarding ensuring the safety against accidental emission of toxic gases.

34- **Now the points raised during the arguments shall be examined critically and thrashed out as under :-**

(A) - DESIGN DEFECTS:-

(a) - A principal of safe industrial design is that one does not guard merely against the most predictable ,routine type of accidents .Rather ,one tries to anticipate the worst that could happen ,even if unlikely ,and not only guard against it ,but prepare to contain it ,if the worst does not take place. The design flaws at Bhopal plant were not a matter of misplaced nuts and bolts i.e. deviation from an essentially sound plan.

(b) - It is argued by the learned CBI Counsel Mr. Sahay that the Plant was initially defective. He argued that best intermediary tanks were not provided for analyzing the product collected in the tank before it is transferred to the bulk storage tank. The MIC was being directly stored in large tanks instead of keeping it in smaller tanks. No online analyzer or alarm system was provided to continuous monitoring of the quality of the MIC before it stored in the tanks. He referred document No.164 (Exh. P-72). There was only one common Refrigeration System for all the three tanks. As aforementioned the MIC must be stored at the temperature of not more than 15°C. preferably at 0°C. But the Chiller System was inadequate and at the time of incident it was under repair or out of order. No spare compressor or standby Chiller System was available at the relevant

point of time. (Exh. P-74 Document No.164)

(c) - The temperature of Bhopal City is normally 39°C round the year and at this temperature the storage of MIC was quite dangerous. The Vent Gas Scrubber was also inadequate, ineffective and out of order at the relevant point of time. VGS was designed to neutralize a maximum of 3.5 tons of MIC @ 9.6 tons/hour in the vapour form. Therefore, neither the liquidity nor the gas disposal system was capable of handling the event, which occurred in the intervening on 2nd & 3rd December, 1984.

(d) - On the other hand it is argued on behalf of the UCIL that the accused company acquired the Plant from UCC USA, which was a 50.9% shareholder in the company at the relevant time. The Plant was acquired after obtaining of all Governmental approvals and license. It was set up sometime in 1979 under Designed Transfer Agreement & Technical Service Agreement dated 13.11.1973 (Exh. P-1406). Both these Agreements categorically record that UCC was a global leader in the field of MIC based pesticides having been engaged in this field for many decades prior to these Agreements. The accused Company made every efforts to acquire the best possible technology and design that was then available. The Plant was set up under the guidance and supervision of UCC and with the assistance of reputed company M/s Humphrey and Glasgow, M/s Larsen & Tubro Equipments Suppliers.

(e) - The learned Counsel for the UCIL has submitted further that every omission of an equipment does not amount "design defect". Further more, knowledge that may have been acquired post a particular incident or a event does not necessarily mean that the equipment upto that point of time was defective. Defect would necessarily have to be with reference to the knowledge of the necessary technology or availability of the necessary equipment at the time when the Plant is designed or set up. Regarding the Chiller System the learned Counsel argued that it was in working

condition. It has been switched off and was used only at the time when MIC was being transferred into Drums. The cause of accident was not on account of the fact that the refrigeration system was not in working order, even otherwise, a properly functioning Chiller System would not be able to prevent the escape of the gas.

(f) - As far the VGS is concerned, nobody has estimated that in 2 hours 28 tons of vaporized MIC would escape. The incident of escape of 28 tons of vaporized MIC in the history of MIC Plant is not known till today. Therefore, it could not be suggested that there was a defect in the design, which was known to the accused persons.

(g) - Undisputedly the MIC was started to be manufactured at Bhopal Plant from 1979 under the technology provided by the UCC USA as per the Agreement signed and the License was granted by the Govt. of India and till 1984 no major incident took place since than except one incident that occurred in the MIC Plant of UCIL at Bhopal on 24.12.81 when Mohd. Ashraf a Maintenance Fitter was working on one of the vaporizer line under the Supervision of Shri Kalyan Roy. A Criminal Case u/s 304-A IPC was registered. The same proceedings initiated on the FIR lodged by one Rajendra Prasad Bajpai, was quashed vide Order dated 13.12.1989 u/s 482 Cr.P.C. by the Hon'ble High Court passed in **M.Cr.C. No. 206/1989 (Satyprakash Choudhary Vs State of M.P.)**

(h) - The prosecution's main contention is that the Plant was defective and poor maintenance were the direct and proximate cause of the incidence. It is based on the opinion of the Scientists as given in the **Report on scientific studies on the factors related to Bhopal Toxic Gas Leakage (Exh. 575, Document No.164) , (Exh. 807,Exh. 808,) and Methyl Isocyanate (Exh. 576)**, a manual of UCC, It is argued on behalf of the accused persons by the learned counsel Shri D. Prasad that these reports have no evidential value as they are facts finding reports. On this point he

referred the case of R. Venkat Kishnan Vs Central Bureau of Investigation (2009) 11 SCC 737.

The brief facts of this case, are a Committee was formed in the Chairmanship of Shri R. Jankiraman, the then Dy. Governor of Reserve Bank of India, in connection with the transactions carried out by late Harshad Mehta in connivance with Officials of the Financial Institutions, Banks illegally as a result whereof Late Harshad Mehta was allowed to obtain some of Rs.40.00 crores, which was actually call money given as a loan by National Housing Bank to UCO Bank. Similar illegal transactions relating to Govt. securities and other non-Govt. Securities came to the notice of the Central Govt. The Committee submitted its report between May 1992 and April, 1993 on the basis of the report of the said Committee Special Courts were constituted in terms of the Special Court (Trial of Offenses relating to transactions and securities) Act, 1992. In Para 67 & 68 it has been observed by the Hon'ble Apex Court and the Committee was not a Court, it did not render any decision and was merely a fact finding body. It was constituted for a limited purpose. Contents of the report, therefore, without formal proof could not have been taken in evidence. Accordingly, the Jankiraman Committee Report is not admissible in evidence. The report may facilitate investigation, but can not form basis of the conviction and sentence of the accused for the said purpose the report was wholly inadmissible in evidence.

(i)- The circumstances as exists in the case at hand are quite distinguishable. The report (Exh. P-575) is not simply a fact finding report . It is a result of studies of a team constituted under the Chairmanship of Dr. S. Varadarajan, Director General of CSIR and the other Members – Dr. S. Varadarajan PW-57 , Dr. L.K. Doraiswamy, Dr. N.R. Ayyangar, Dr. C.S.P. Iyer PW-158, Dr. A.A. Khan PW-159, Dr. A.K. Lahiri PW-128, Mr. K.V. Muzumdar PW-139, Dr. R.A. Mashelkar PW-49, Dr. R.B. Mitra PW-, Dr. O.G.B. Nambiar PW-116, Mr. V. Nambiar, Mr. V. Ramachandran, Mr. V.D. Sahasrabudhe, Dr. S. Sivaram PW-48, Dr. M. Sriram PW-127 Dr. G. Thyagarajan, Dr. R.S.

Venkataraman.. The Report has been proved in the Court by examining the expert scientists Dr. Varadarajanh himself a highly qualified and experienced person have got his IIT from Mumbai and he obtained PhD from US in Chemical Engineering and worked in different reputed Organisations like Hindustan Lever Ltd., Mumbai, Due Pond, USA and Indian Institute of Chemical Technology under Council of Scientific and Industrial Research (C.S.I.R.).In and the other scientists who are highly qualified persons.

(j)- Dr. S. Varadarajan PW-57 ,in Para 2 of his statement has stated that after the gas tragedy Govt. of India, Ministry of Chemicals & Fertilizers has asked the Chairman to send a few experts. He came to Bhopal on 4th of December, 1984 alongwith two of his colleagues and later on a team of experts came to the Bhopal Plant to know how it happened. The team was headed by Dr. S. Varadarajan. In para 3 he further said that the team of experts including Dr. Iyanggar, Dr. Iyer, Dr. Khan, Dr. Lahiri, Mr. Majumdar, Dr. Mashelkar, Dr. Mitra, Dr. Nambiyar, Mr. Ramchandra, Mr. Sahasrabudhe, Dr. Sevaram, Dr. Tyagrajan and Dr. Venkataraman, visited the factory site on a number of occasions and took number of samples and studied the causes of the leakage of MIC and thereafter they have submitted a detailed report (Exh. P-575)

(k)- Dr.M.Sriram (PW48) further deposed that a document, which was a brochure of UCIL, which is exhibited as Ex.P-576 was given to Dr. Varadarajan. An objection was raised during the course of evidence that the said document is a Xerox copy of a document and therefore, can not be read in evidence. I am of the view that aforesaid objection was immaterial as document in question was issued by UCC itself and in the later stage the methods and precaution given in the same has been used as defence. Therefore, the objection raised by the learned defence counsel being devoid of merit and is not sustainable. Thus document Exh. P-576 can be read in evidence, It

is a brochure regarding the properties of Methyl Isocyanate, MIC, ($\text{CH}_3\text{N}=\text{C}=\text{O}$) and reveals the procedure regarding the storage and handling the same.

(l)- The learned Counsel for the defence, Shri D. Prasad, in his submission has said that this is a document (Exh. P-576) which is expected to be used by the retailers and not by the manufacturers. The argument advanced by the learned Counsel is not acceptable as MIC is a chemical and its storage, even at the manufacturing place or otherwise, can not be distinguished as it stored in large quantity the criteria of precaution would not be different. More so, the learned Counsel in his argument has referred this document for a number of times as a defence document. Therefore, two standards can not be offered for the same document at the same occasion.

(m)- Dr. M. Sriram further stated in Para 4 that the tanks for storage of MIC are designated as E-610, E-611 & E-619, out of these two were used for storage of MIC and the third one was kept as standby empty tank. The tanks were made of SS 304/ SS 316 with a diameter of 8 ft. and length of 40 ft. The MIC was stored under Nitrogen Pressure of 1.0 Kg./cm.sqr.g. The supply of the Nitrogen to the storage tanks by a common header of **carbon steel**. Excess Nitrogen from individual tank is taken to 50 mm common Process Vent Header (**PVH**) i.e. of **carbon steel**. There was a Relieve Valve Vent Header (**RVVH**) for individual tank. That was also of **carbon steel**. Both RVVH and PVH were interconnected. Therefore, use of carbon steel amounts to a gross negligence on the part of the accused persons as it is a restricted metal with regard to MIC.

(n) There was a **Vent Gas Scrubber (VGS)**, which was meant to neutralized the toxic exhausted from MIC Plant and Storage System. It is between 1.6 ft. of diameter to 3.6 diameter and about 15 meters of height where an accumulator dilute caustic solution was kept for circulation.

The VGS Accumulator was able to neutralize a certain quantity of MIC at a controlled rate. There was a **Flare Tower** which was used primarily to burn the vent gases from Carbon monoxide (CO) Unit. The flare tower also burnt normal vent gases from MIC storage tanks and VGS, was also adequate for a small quantity of the gases [3.5 tons (7700 lb of MIC @ 9.6 tons/hr {21200 lb/hr} in a vapour form)], but, not expected to handle large release of MIC vapour directly. (Exh. P-912)

(o) Therefore, there was no arrangement to handle such a huge release of gases from the Factory. Accumulator, volume of 80m³ (21000 gal) if fitted with the recommended 10% caustic solution can be utilized for a maximum of about 13 tons of MIC. It might have been stored in small quantities instead of large tanks like 610 & 611 looking to the production of Sevin in the Bhopal Plant, which is approximately 3-4 tons per day. Therefore, considering the nature of MIC it was not safe to store 90 tons of the material that too in large tanks. Therefore, it is again a gross negligence towards the safety measures of the MIC.

(p) The same facts have been corroborated in their court statements by another Scientist of team, Dr. R.K. Mashalker PW-49 in his statement has also drawn attention regarding the Report, which is in 2 Vol., Exh. P-807 & Exh. P-808, apart from Exh. P-575. Dr. S. Varadarajan PW-57, was the Head of the team of experts who visited the Plant Site very next day of the incident. He is an expert having excellent qualification. M.Sc. PhD. From Delhi & Cambridge several Honorary D.Sc.s also former President all three major Indian Academy of Science Bangalore, Indian National Academy Delhi started by Shri M.N. Shah and Indian National Academy of Engineering and a number of other Societies.

(q)- Dr. S. Vardharajan PW-57, in para 2 of his statement states that there were several defects, such as MIC is a liquid but it evaporates with air and is highly toxic on inhalation as it is made of carbon monoxide. Carbon monoxide converted into Phosogen, is required to be utilized

immediately and not to be stored. Storage of MIC should have been highly limited only to meet the requirements for conversion into Sevin as little as possible.

(r)- In Para 5 he further says that the design required inhibitor to prevent voluntary polymerization of MIC. Polymerization produces very high temperature and that accelerates polymerization in an explosive manner. There are design defects, such as use of *Carbon, Steel and other material and pipes and other materials* . *These are leading to corrosion in the presence of even quantities of Hydrogen Chloride, Hydrochloric Acid (HCL) arising from Phosegen, Chloroform and other Chloride materials.*

(s)- Dr. O.G.B. Nambiyar PW-116, Dr. S. Sivaram PW-127, Dr. A.K. Lahiri PW-128 and Dr. K.V. Mazumdar PW-139, Dr. C.S.P. Aiyar PW-158, Dr. A.A. Khan PW-159 are also well qualified with vast experience in the relevant field also are of the same opinion. They are the experts, who personally analyzed the various events, instruments and tests of various samples. Therefore, their opinion can not be discarded.

(t)- Now I consider the evidence of the Defence witnesses led by the accused persons. They are: Mr. V.K. Behl (DW-1), Mr.V.S. Subramanium (DW-2), B.R.D. Krishnamurthy (DW-3), T.K. Unnikrishnan (DW-4), N.C. Agnihotri (DW-5), A.V. Paralikar DW-6, V.R. Tadwalkar DW-7, T.R. Raghuraman (DW-8).

(u)- V.K. Behl (DW-1) says that from August 1978 to May, 1984 he was employed in UCIL, Bhopal in the capacity of Safety Manager. He is a B.Sc. Chemical Engineer from Punjab Chandigarh University and had been employed in different organisation in different capacities. He further says that very high standard of security was maintained in UCIL. There were several safety manuals for the Plant and compliance thereof, of very high standard, but, he did not utter a single word regarding the design of the Plant. All the manuals are in English language and how they were

understandable to the workers less qualified or did not know English language .Therefore, his statement as far as the design of the Plant is concerned serves no purpose .

(v)- Mr.V.S. Subramaniam (DW-2) says that he joined UCIL on March 1st, 1960 at Calcutta. However, he further says in Para 13 that he was never employed in UCIL Bhopal Plant and never visited and was quite unaware about the process that how MIC was being manufactured in Bhopal Plant. In Para 14 he again says that he has no idea about the MIC, therefore, this witness also serves no purpose for the defence.

(w)- Mr. B.R.D. Krishnamurthy DW-3, states that he was looking after the personnel matters of the UCIL. He is simply a Post Graduate (MA Personnel Management & Labour Welfare) Hence,he is not supposed to be an expert of Chemicals Engineering. He did not uttered even a single word about the design of the Plant.

(x)- The other witnesses, Shri D.K. Unnikrishnan DW-4 referred Exh. D-26 & D-27 in his statement, which is simply a Certificate received by the National Safety Council set up by Government of India. However, in cross-examination he says that he has never gone through a report about the safety measures and design of the Plant, therefore, Report Exh. D-26 & D-27 can not be considered as a Certificate of Design and Safety.

(y)- Other important witness is Mr. N.C. Agnihotri, he stated that he served UCIL Bhopal from 1977 to September, 1989 in different capacities. He had his B.Sc. Honours in Chemical Eng. from Bombay University and also obtained a special training of 3 months with some other UCIL employees in the Plant situated in South Charleston, West Verginia, USA. In para 3 he states that the Plant at Bhopal was designed in the same pattern as that of the Verginia UCC USA. In 1980s an American, Mr. Warren Woomeer came to India and remained here for two years in the capacity of General Works Manager. In Para 4 he further says that the Plant, which is situated in USA is

comparatively large twice to the capacity of UCIL Bhopal. The Storage Tanks in Verginia Plant were double in capacity.

(z)- It is worthwhile to mention here that the Government of India and the Team of Scientists admittedly was never permitted to visit the Plant at Verginia, USA. No brochure, or any other documentary evidence demonstrating the similarity between the two plants at Verginia and Bhopal has been produced before the court by the defence. So the statement of this witness regarding the similarity in design of two plants can not be treated as bare truth. Under Section 106 of Indian Evidence Act the facts within the specific knowledge of the party onus to prove the same shifted on the shoulders of that party. The same has not been discharged.

(aa)- He being expert of this field doesn't say that in the other parts of the world at the relevant point of time there were plants manufacturing pesticides by using less hazardous chemicals i.e. dimethyl urea, diphenyl carbonate. He is also silent that one crucial type of equipment was missing in the Bhopal plant was gas detector, capable of sensing and locating the toxic leaks. While in Bhopal the workers were used to sense the leak of gases by smelling. He kept mum that at the relevant point of time the plant at Antwerp, Belgium, and Dormagen, West Germany MIC is manufactured and processed directly with little storage.

(ab)- As far as the statements of Rajeev Kapoor PW-53, T.R. Chauhan PW-62, Dr. Arshad Ali PW-159, Subimal Bose PW-161, K. Parikh PW-164, Rajgopal PW-170 are concerned, they only state that the whole technology of the UCIL Plant was imported from UCC USA, but, they say nothing whether the technology was foolproof or the same as implanted in the Plant of UCC in West Verginia.

(ac)- Therefore, the arguments advanced by the learned Counsel that the UCC was well-known Company and world leader in the production of MIC based pesticides and the entire

design was that of UCC under the Design Transfer Agreement. The same was transferred to UCIL Bhopal. The entire plant of Bhopal was set up by the UCC personnels under control and supervision and start up procedure was done by one Mr. Warren Woomeer, who is the specialist in MIC and a Chemical Engineer of UCC USA and was in Bhopal till December, 1982 can not be considered that it was designed on the similar pattern as that of the USA and the other plants of the world.

(ad)- The learned Counsel, Mr. Amit Desai, has argued that the report which has been given by the team of experts after the incident and not before the incident, therefore, the knowledge that may have been acquired post a particular incident or event does not necessarily mean that the equipment up to that point of time was defective. He quoted an example of a new model Car. There may be a new safety devices that might have been invented, which were not available in the old model cars, this would not render the old model cars as defective cars.

ae)- He further argued that defects would necessarily have to be with reference to the knowledge of the necessary technology available at the relevant point of time. When the Plant was set up at Bhopal, there was no on line analyzer for determining the quality of MIC before it entered into the Storage Tanks coupled with an alarm system. This argument is not acceptable as the safety manuals of the UCIL itself reveals such type of devices attached to the concerning equipments in the Plant as the pressure guage temperature meter was not responding at the time of incident. Therefore, the comparison of a Car and a factory running with a hazardous gas like MIC, Phosgen, Chloroform, Carbon monoxide is farfetched one and holds no water. Therefore the report of the team of Scientists (Exh. P-575, P-805, P-807), can not be thrown out and discarded. They are the abstract of the study of the expert Scientists and not only fact finding reports.

af) Section 106 of Indian Evidence Act, 1872 is very clear that the facts which is specifically within the knowledge of any person, the burden to prove them upon him. The burden of

proving a plea specifically set up by an accused, which may absolve him from criminal liabilities, certainly lies on him, but, the question of evidence by which he may succeed in discharging his burden is lower than the burden resting upon the prosecution establish a guilt of the accused beyond reasonable doubt. **Sawal Das Vs State of Bihar, AIR 1974 SC 778 , Indore Municipal Corpn. Vs Caltrex (I) Ltd., 1991 AIR SCW 250**, the Hon'ble Supreme Court has specifically observed that the facts which are within the special knowledge of the party.

35- The burden lies on him to prove them. In the present case it is reiteratively said that the employees of the company are trained in the institution at Verginia, USA and the design of the Plant was similar to that of the Plant at Verginia. It appears appropriate to note that the visit of Verginia was never permitted. So the design of the Plant at Verginia could not be studied by the CBI. This specific fact is well within the knowledge of UCIL and the Management. However, no evidence regarding the design has been given by the Company. In this context a case of **Shahgurmanmal Vs State of Andhra Pradesh, AIR 1980 SC 790** and **Shambhu Nath Mehra Vs. State of Ajmer, AIR 1956 SC 404**, are very much relevant in the facts and circumstances of the present case.

36- As far as the training is concerned the fact is found proved that only 25 persons were sent to Charleston for training and how long they served in UCIL, is uncertain. Therefore, there was lack of training also.

37- **The following major design defects brought to the notice of the Court:-**

- The use of hazardous chemicals (MIC) instead of less dangerous ones . MIC can be manufactured without using the dangerous Phosgene (COCl₂) and Chlorene (Cl₂)
- Bulk Storing of MIC in large tanks instead of small stainless steel drums or processing the MIC as it was produced without storage. Union Carbide Publications acknowledge that the bulk storage of MIC heightens the danger of

both leakage and contamination.

- Possible corroding material in pipelines and in valves i.e. Iron , Copper. Zinc, and tin
- No on line analyzer or alarm system was provided to continuous monitoring of the quality of the MIC before it stored in the tanks. Off grade MIC can mix with previously stored MIC, introducing large scale contamination and great danger.
- The refrigeration system was inadequate and no standby system was available.
- The VGS was not design to the emergency situation

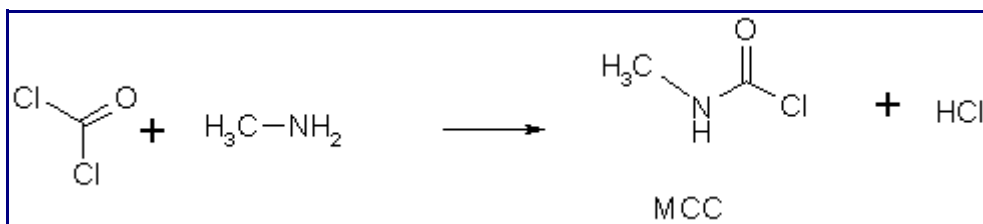
38- The problem was made worse by the plant's location near a densely populated area, non-existent catastrophe plans and shortcomings in health care and socio-economic rehabilitation. Analysis shows that the parties responsible for the magnitude of the disaster are the two owners, Union Carbide Corporation and the Government of India, and to some extent, the Government of Madhya Pradesh ,only invitation to certain doctors and other high officials was not enough.

(A)- OPERATIONAL & MAINTENANCE FAILURE :-

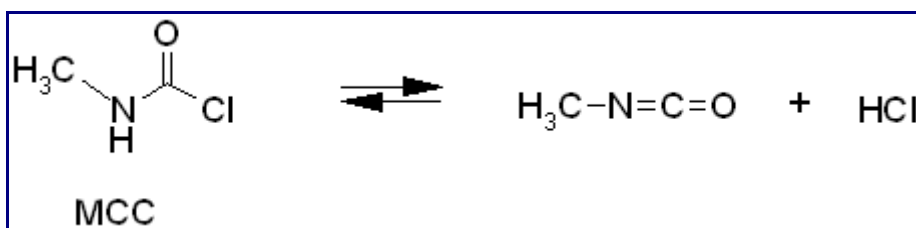
(a)- NATURE AND PROPERTIES OF METHYL ISOCYANATE (MIC) GAS:-

The fact that the MIC is a highly reactive, toxic, volatile and inflammable chemical. It is an organic compound with the molecular formula C_2H_3NO ($H_3C-N=C=O$). In gaseous form MIC is heavier than air and has a tendency to settle down. In this form it is subject to wind dispersal.

39- Methyl isocyanate is usually manufactured from [monomethylamine](#) and [phosgene](#). These substances react at a range of temperatures, but for large scale production it is advantageous to combine these reactants at higher temperature in the gas phase. A mixture of methyl isocyanate and two moles of [hydrogen chloride](#) is formed, but N-methylcarbamoyl chloride (MCC) forms as the mixture is condensed and leaves one [mole](#) of hydrogen chloride as a gas.



The methyl isocyanate is obtained by treating the MCC with a tertiary amine (e. g.: [dimethylaniline](#), [pyridine](#)) or by separating it by using distillation techniques.



Methyl isocyanate is also manufactured from N-methylformamide and air. In the latter process it is immediately consumed in a closed-loop process to make methomyl. Other manufacturing methods have been reported.

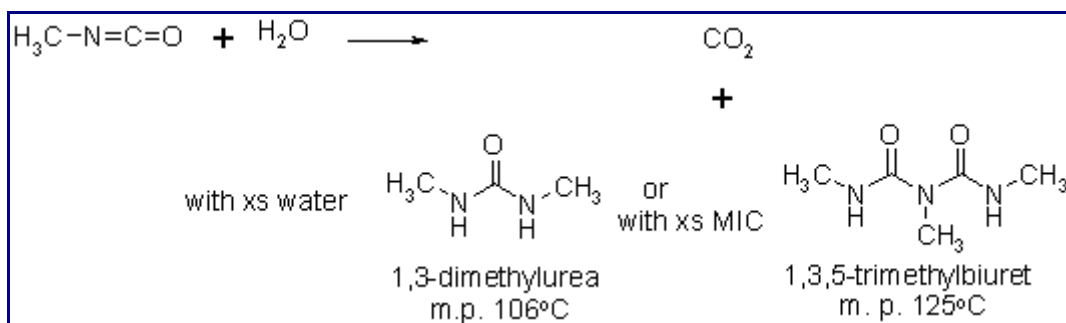
(1) PHYSICAL PROPERTIES OF METHYLENE ISOCYANATE :-

40- Methyl Isocyanate is a clear, colourless, lachrymatry, smelling liquid. It is highly inflammable boils at 39.1°C and has a low flash point. Methyl Isocyanate is soluble in water to 6-10 part per 100 parts, but, it reacts with Water. It also reacts with its own molecules.

Molecular Formula	-	C₂H₃NO (H₃C-N=C=O).
Molecular Weight	-	57.05
Boiling Point at 760 mm Hg.	-	39.1°C (102.4° F)
at 300 mm Hg.	-	16.7°C (62.1° F)
at 10 mm Hg.	-	-40°C (-40° F)
Vapour Pressure at 20°C	-	348 mm. Hg
Soluble in Water	-	about 6.7%
Practical Temperature	-	218°C

(2)- **CHEMICAL PROPERTIES-**

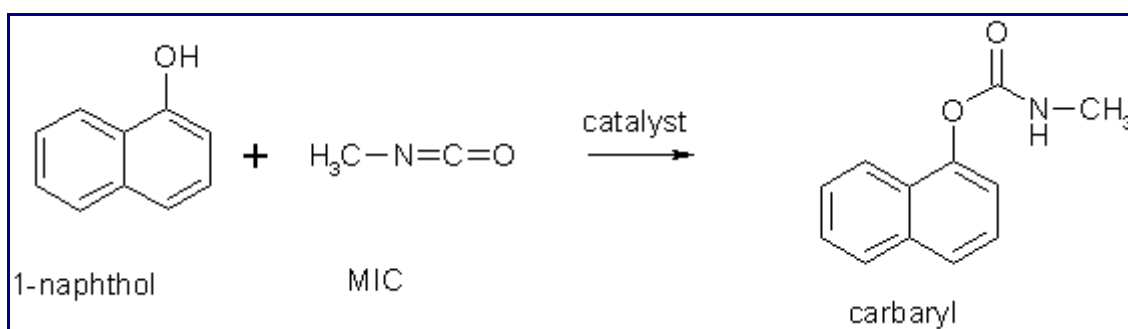
41- Methyl isocyanate reacts with water to form 1,3-dimethylurea and carbon dioxide with the evolution of heat (325 calories per gram of MIC that reacts).



At 25 °C, in excess water, one-half of the MIC is consumed in 9 minutes; if the heat is not efficiently removed from the mixture the rate of the reaction will increase and rapidly cause the MIC to boil. If MIC is in excess, 1,3,5-trimethylbiuret is formed along with carbon dioxide.

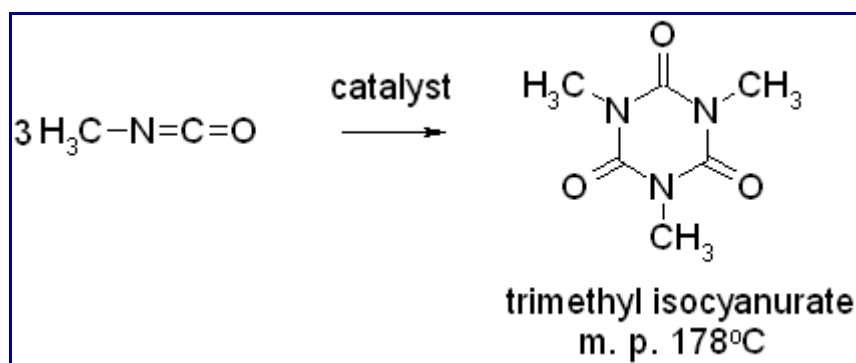
Compounds that contain hydrogen attached to nitrogen, such as ammonia or primary or secondary amines, will rapidly react with MIC to form substituted ureas. Other N-H compounds, such as amides and ureas, react much more slowly with MIC

Alcohols and phenols, which contain an O-H group, react slowly with MIC, but the reaction can be catalyzed by trialkylamines or dialkyltin dicarboxylate.



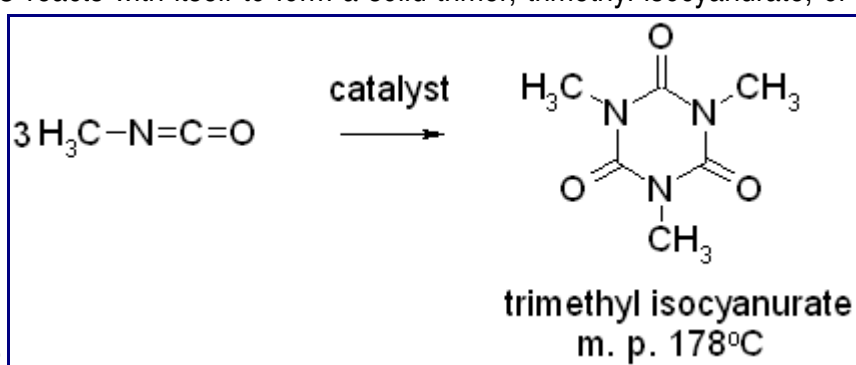
Oximes, hydroxylamines, and enols also react with MIC to form methylcarbamates. When treated with catalysts, MIC reacts with itself to form a solid trimer, trimethyl isocyanurate, or a higher molecular weight polymer.

31



[Sodium methoxide](#), [triethyl phosphine](#), [ferric chloride](#), and certain other metal compounds catalyze the formation of the MIC-trimer, while the higher molecular weight polymer formation is catalyzed by certain trialkyl[amines](#). Since the formation of the MIC trimer is [exothermic](#) (298 calories per gram of MIC), the reaction can lead to violent boiling of the MIC. The high-molecular-weight-polymer hydrolyzes in hot water to form the trimethyl isocyanurate. Since catalytic metal salts can be formed from impurities in commercial grade MIC and steel, this product must not be stored in steel drums or tanks. [Oximes](#), [hydroxylamines](#), and [enols](#) also react with MIC to form methyl carbamates. When treated with [catalysts](#), MIC reacts with itself to form a solid trimer, trimethyl isocyanurate, or a higher

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43- Therefore, admittedly even MIC in itself can react under the influence of a catalyst to form a cyclic trimer or a highly molecular weight polymer. This may be catalysed by Sodium Hydroxide (NAOH). Sodium Methoxide, Sodium Acetate, Ferric Chloride and Stannic Chloride since the reaction is exothermic, contamination of MIC with traces of the catalyst can cause violence reaction. (Ref. Exh. P-576)

44- Manual Exh. P-576 is undisputedly issued by UCC itself, 270 Park Avenue, New York, N.Y. 10017. It was advised that how the Methyl Isocyanate be stored and handled, What should be the emergency procedure, etc. Even it is advised that the MIC ought be stored in small drums. This should be protected from direct exposure to the Sun, Rain and Snow. Drums should be used on a first-in-first-out basis. MIC should be transferred from one drum to another by means of Nitrogen Pressure.

45- At page 7 the procedure for storage of MIC has been given. MIC should be stored in underground tanks of Stainless Steel Type 304 and 316 for safety reasons. The size of the tanks should be kept twice to the volume required for storage. As an alternative an empty tank should be kept available at all the times. If the MIC tanks become contaminated or fails, transfer part or all the contents to the empty standby tank. The tank must be under the Nitrogen Pressure. It must be cleaned ability to withstand full vacuum. The tank must be provided with a Vent Line and in addition to that with an emergency Vent and the tank must be cooled by oils on the outside walls of the tank

alternatively Methyl Isocyanate (MIC) recirculated through a heat exchanger so that no Coolant can leak into the MIC and a Coolant must be selected that will not react with MIC or catalyze the reaction. The temperature of the MIC must be maintained below 15°C (about 60°F) and preferably at about 0°C (32°F). The storage tank must be equipped with dual temperature indicators that will sound an alarm and flash warning lights when the temperature of stored material arises abnormally. Iron, Copper, Tin and Zinc must be excluded from contact with MIC, as they are catalyst and may result in a dangerously rapid trimerization. It is clearly mentioned at page 9 that although the drums are typically stored at ambient temperature, however, bulk system must be maintained at low temperature so that the possibility of violent reaction can be eliminated.

(B) STORAGE FAILURE :-

46- MIC was stored in accordance with the Operation Safety Manuals as stated by PW-62 T.R. Chouhan and Gourishanker PW-88 were posted in MIC Plant at that time. They state in different paragraphs that there were safety manuals Exh. P-912, P-913. According to these manuals a storage tank can be used up to 60% of its capacity. However they admit in cross examination that in the year 1983-84 which was increased up to the capacity of 80%, but, no such manual, which permits that the MIC can be stored up to the capacity of 80% of the storage tank, available to support the averment. On the contrary Mr. V. Gaurishanker PW-88 referring a document "Do not exceed Tank Level on 60%" (Exh. P-2606). Therefore, bare admission of T.R. Chouhan PW-62 in cross examination regarding the fact that the storage of MIC in storage tanks up to the capacity of 80% was technically possible can not be treated as a proven fact. TR Chouhan also proved a number of entries, which had been made in Exh. P-912--

47- The witness is an expert of UCIL, as he has visited a number of times New York,

Washington, Boston, New Jersey, Philadelphia, Arbania. He also took part in the Round Table Conference after the incident, however, he said in Para 26 that he received some information regarding the Verginia Plant where MIC is being manufactured. However, he never had been there. In Para 27 he further says that there are a number of differences between these two plants. As the accused persons are utterly failed to bring the technology used in the Virgenia plant of MIC in the notice of the court . Therefore, the argument advanced by the learned Counsel of the accused persons can not be admitted as a substantial evidence.

48- Other witnesses, who are known to be the experts in this field, Dr. M. Sriram PW-48 and Dr. R.M. Mashelkar PW-49, in his combined opinion in Exh. P-575, 807 & 808. Dr. S. Varadarajan PW-57, in Para 2 says that storage in large quantity of MIC was quite dangerous. There was no method of finding out what was inside the large storage tank of MIC, as they were buried under the concrete. Mohan Lal Verma PW-60 states about the operation of the MIC Plant. He says in Para 2 that earlier eight operators were operating the Plant, however, at the relevant point of time when the incident took place, number of operators was decreased upto 6 from January, 1983.

49- Because of these properties the MIC is usually advised to be stored and handled in Stainless Steel of 304 & 316 of quality equipments. Iron or Steel Aluminiums, Zinc or Galvanized Iron, Tin, Copper or their alloys are prohibited from coming into contact as they works as catalyst and lead to a dangerous and rapid trimarization of MIC that evolved heat and can result in a explosive violence.

50- Therefore, admittedly even MIC in itself can react under the influence of a catalyst to form a cyclic timer or a highly molecular weight polymer. This may be catalyzed by Sodium Hydroxide (NAOH). Sodium Myth oxide, Sodium Acetate, Ferric Chloride and Stannic Chloride since the reaction is exothermic, contamination of MIC with traces of the catalyst can cause violence reaction.

(Ref. Exh. P-576)

51- Manual Exh. P-576 is undisputedly issued by UCC, 270 Park Avenue, New York, N.Y. 10017, itself . It was advised that how the Methyl Isocyanate be stored and handled, What should be the emergency procedure, etc. Even it is advised that the MIC ought be stored in small drums. This should be protected from direct exposure to the Sun, Rain and Snow. Drums should be used on a first-in-first-out basis. MIC should be transferred from one drum to another by means of Nitrogen Pressure.

52- At page 7 the procedure for storage of MIC has been given. MIC should be stored in underground tanks of Stainless Steel Type 304 and 316 for safety reasons. The size of the tanks should be kept twice to the volume required for storage. As an alternative an empty tank should be kept available at all the times. If the MIC tanks become contaminated or fails, transfer part or all the contents to the empty standby tank. The tank must be under the Nitrogen Pressure. It must be cleaned ability to withstand full vacuum. The tank must be provided with a Vent Line and in addition to that with an emergency Vent and the tank must be cooled by coils on the outside walls of the tank alternatively Methyl Isocyanate (MIC) recirculated through a heat exchanger so that no Coolant can leak into the MIC and a Coolant must be selected that will not react with MIC or catalyze the reaction. The temperature of the MIC must be maintained below 15°C (about 60°F) and preferably at about 0°C (32°F). The storage tank must be equipped with dual temperature indicators that will sound an alarm and flash warning lights when the temperature of store material arises abnormally. Iron, Copper, Tin and Zinc must be excluded from contact with MIC, as they are catalyst and may result in a dangerously rapid trimerization. It is clearly mentioned at Page 9 that although the drums are typically stored at ambient temperature, however, bulk system must be maintained at low temperature so that the possibility of violent reaction can be eliminated.

53- Among the other experts Dr. Sivaram PW-127, Dr. A.K. Lahiri PW-128, Dr. A.K.

Mazumdar PW-139, Dr. CSP Iyyer PW-158, Dr. Arshad Ali Khan PW-159 also corroborated the theory. One more fact has come in the notice of the court that the required pressure was built in the tank with the help of a copper tube (P.I. Bladder) A. Venu Gopal (PW 83) for the transfer of MIC from one tank to another while the use of Copper etc. was quite dangerous, as they may take part in the chemical reaction as a catalyst. So the fact is found proved that the storage of MIC in such a huge quantity specially when all the safety systems were either out of order or shut down for this or that reason was like lighting the fuse forty ton dirty bomb. Hence it is found to be proved that the company and the management with the accused persons overlooked the safety measures regarding the storage of MIC in the tank.

(C) REFRIGERATION SYSTEM :-

54- The factory was provided with a Refrigeration System (30 TR) to maintain the temperature of MIC in the tank that is called 30 TR. On the date of incident, admittedly, it was not working. On the contrary it is said that it was not required to maintain the temperature of MIC While (Operation Manual Exh. P-2587) (1984) suggest maximum 15°C preferably 0°C as stated by A. VenuGopal (Production Sup. UCIL) PW 83. The learned defence Counsel has drawn attention of the Court towards Ex.D-34 and submitted that the Commercial MIC can be stored at ambient temperature. In February, 1979 Shri A.K. Tauri under the supervision of E.A. Borous prepared a report **Exh. P.2644**, Tauri Report. At page 2 it is categorically mentioned that the Commercial MIC could be stored at ambient temperature. Possibility of polymerization is nil as MIC is stored in the Tank with small percentage of Phosogen. However, there is no Manual Published by the UCC and UCIL following the Tauri report.

55- The team of the experts has given their report, according to which the temperature

ought to be maintained at the above mentioned level not beyond that, as at the high temperature the MIC starts Trimerization & Polymerization. Defence witness, Vinod Kr. Behl, who was the then Safety Manager and is a Chemical Engineer, in Para 24 speaks clearly that the MIC must be stored at a temperature not more than 15°C preferably 0°C. For this very purpose the 30 TR Chiller System was installed and also admits that it was closed down long before the incident.

56- Mr. Naresh Chand Agnihotri DW-5 is another important defence witness of this fact that whether the 30 TR System was required or not ? Whether the storage of MIC at ambient temperature was safe? He speaks that he was posted in MIC Plant from 1977 to 1989 in different capacities and had been on special training for three months in USA. In Para 10 he says that there was a 30 TR System in the UCIL Plant to cool down the tank, however it was used in the beginning, but later on it had not been in use. The directions for shut down was given by Production Manager, S.P. Choudhary and by Mr. Warren Woomeer, over all incharge of the plant at the relevant point of time.

57- In Para 15 of the Cross-examination, the witness first admits that he had gone through the Safety Manual of UCC USA, however, he ignores the fact that MIC is to be stored at 0°C. In Para 16 he further admits that neither Mr. Ballal, Production Manager nor anybody gave him written directions to shut down the Chiller System. In Para 6 Mr. Raghuraman DW-8 says that when he joined the UCIL in 1980, the Refrigeration System was not operative for cooling the stored MIC in tanks. The use of Refrigeration Plant was confined only for transferring the MIC to charges the spot in Sevin Unit or for drumming. He says that this decision was taken by Mr. Warren Woomeer. He referred in his statement document Exh. D-37 to D-46. In Cross-examination in Para 13 by the Court itself a specific question has been asked regarding the utilization of Refrigeration Unit. His answer was, as it was initially thought that the MIC can be stored at 0°C temperature, later on he came to

know from his superior Officer, Mr. K.D. Ballal that MIC can be stored at ambient temperature. A. Venu Gopal, Prosecution Witness-83 in Chief Examination stated that the Refrigeration System is still in working in the West Virginia Plant in USA and never been ordered to be shut down. Now the question arises that the temperature in Virginia is very low in comparesion to Bhopal, despite that a refrigeration system exists there. While in Bhopal it has been shut down over looking the safety manuals. Therefore, without any document, the oral statement made by the defence witnesses that the MIC can be stored at the ambient temperature is not acceptable,, There was no direction from the UCC or from els where that the said Plant be shut down. The accused persons, namely Kishore Kamdar, J. Mukund, R.B. Roy Choudhary, S.P. Choudhary, K.V. Shetty, S.I. Qureshi, those who were looking after the plant for years together, being the Chemical Engineers, are found to be quite negligent after having knowledge that the MIC is highly in-flammable reactive on high temperature and can not be stored at a temperature of 39°C ,behaved with gross negligence.

58- Hence, this argument that the Plant was running without a Refrigeration System for 2-3 years and no untoward incident took place, can not be presumed that the Plant was running safely or this argument that even if the Refrigeration System would have been in operation, it would not have stopped the escape of hazardous gases into the atmosphere and hence it is not a direct and proximity cause of the accident in the present case, can not be accepted

(D) VENT GAS SCRUBBER (VGS)

59- Another safety measure was installed in the Bhopal Plant vent gas scrubber.(VGS) It was designed to neutralize the off specification MIC liquid from the tank, the gases from RVVH, PVH, etc. The said system was not capable of handling the huge escape of gases on the intervening of 2nd - 3rd December, 1984. It was just designed to neutralize the maximum of 7500 pound of MIC

@21200 pound/hr. It consist of a 5'6" diameter scrubber supported on a 21000 gallon accumulator. A solution of 10% free caustic circulated at 1200 gpm. It is critically mentioned int he document Ex.D-34 that the gases in case pressure in the safety valve exceed about 12 psig, the seal provideed by E 410 A will break. Then the gases bubbling through the caustic will have a partial chance of getting absorbed prior to dispersion into atmosphere via the line V-403-8"-#183.

60- According to the statements of TR Chouhan PW-62 ,Ajay Pradhan PW-29 is a worker of UCIL, Bhopal in the capacity of Plant Operato(Document referred(Ex.P-63 and Ex.P- 64. ,Ex.P- 912) and it is very unfortunate that it was also not in working order on the date of incident,the 2nd -3rd December1984

61- The fact well within the notice of Mr. S.I. Qureshi, Gaurishanker, Rajeev Kapoor, S.P. Choudhary, Venu Gopal, and R.V.Choudhary were also there in the capacities of Supervisor/Production Asst. / Production Manager/Asst. Works Manager.

62- Ajay Pradhan PW-29 in para 5 he further says that at the relevant point of time MIC Plant was in operation. Supply of MIC to the Sevin Plant was in continuation. He himself supplied MIC from Tank No.611 to the Sevin Plant. He very clearly speaks that neither the Refrigeration Plant nor the VGS and Flare Tower were in working order.

63- Rajeev Kapoor PW-53 is also a trained person. He is a Chemical Engineer and worked with UCIL from 1979 to 1987. At that time Mr. R.B. Rai Choudhary was Asst. Work Manager . He was over all Incharge of the Plant Mr. Vijay Gokhale was MD of UCIL, Kishore Kamdar was Vice President, Mr. J. Mukund was Incharge of the Plant A.D. and Mr. Keshub Mahindra was the Chairman. S.P. Choudhar was Production Manager, K.V. Shetty was Shift Superintendent, S.I. Qureshi was Production Asst. He has produced Log Books Exh. P-809 to P-812, Exh. P-861 to P-866. The entries thereof shows that he was present on the relevant point of time. These entries have

been made from 1.11.1984 onwards.

64- In Para 15 he further says that on 2.12.1984 Flare Tower, 30 TR and VGS were not working. Though he said it was in operational condition, but, it was kept shut down. No explanation is there on the part of accused persons why it was kept shut down / in-operational.

65- Suman Dey PW-56 also says in Para 4 that VGS was not in working order though the Plant was fully automatic. But he made his statement in uncertainty in Para 5. He rectified his mistake and said that he made an effort to start the VGS, but, for no purpose.

66- A Venu Gopal PW-83 was working in the year 1984 in the MIC Plant of UCIL Bhopal in the capacity of Production Superintendent and had a training in 1979 in UCC Charleston West Virginia USA for three months, in Para 4 says that in February, 1984 it was decided that 30 TR is no more required. He has produced Master Card from dated 25.11.1984 to 3.12.1984 Exh. P-2586. According to that Flare Vent Header was under maintenance, and therefore, out of order. He also produced Master Card Exh. P-2589. According to that from 31.10.1984 the VGS was under maintenance and it was completed on 25.12.1984. So it appears that the Plant was in operation without a VGS.

67- Gaurishanker PW-88 was also working in the Plant at UCIL Bhopal in the capacity of Production Asstt. He is also a Mechanical Engineer. On the date of incident he was in MIC Unit with Mr. A. Venu Gopal, S.P. Choudhary, RB Rai Choudhary, K.V. Shetty and Mr. S.I. Qureshi. In Para 10 he says that the VGS was not in operation. Tejeshwar PW-91 in Para 12 has also supported that the VGS was not in working condition. He referred in his statement Master Card Exh. P-2583 and a note Exh. P-811 at Page 16. On the basis of the statement made to the Police u/s 161 Exh. D-3 that the maintenance of VGS was complete by 25.11.1984. Mere completion of the repairing is not enough. Ex.34 page 90 in itself reveals the importance of this instrument.

68- Therefore, the fact is proved beyond a reasonable doubt that Vent Gas Scrubber was not operational on the date of incident and the accused persons who were responsible for all the safety measures, were negligent about this fact.

(E) FLARE TOWER :-

69- It is a disposal system of vent gases including MIC, Carbon monoxide (CO) or other gases. According to report Exh. P-575 it is said that the Flare Tower was not adequate to handle the situation like 2nd- 3rd December, 1984. It was not operational on the date of incident as said earlier by the witnesses afore mentioned. So this was a lapse on the part of the accused persons. Merely saying that it was a design defect as the Flare Tower was in adequate in handling the situation, they were helpless, is not sufficient to avoid their negligence. As they were well educated, qualified Engineers from reputed institutes like IIT. So it can not be expected from them that they were unaware of the knowhow of the Flare Tower or the other Systems.

(F)- NITROGEN PRESSURE :-

70- It was the condition precedent for the storage of MIC in the storage tanks that it should be stored under pure Nitrogen Pressure of 1 Kg/Cm.Sq. On the date of incident, according to Dr. Sriram PW-48, the Nitrogen Pressure was 0.25 Kg./Cm². (Document referred Exh. P-576). Apart from this the different safety manuals of MIC reveals that the Nitrogen Blanket is important for the MIC Storage Tank.

71- It is argued by the learned Counsel of the defence that very slight Nitrogen Pressure was required to store the MIC, the requirement was only to transfer the MIC from one tank to another. It was not intended to prevent the entry of any contaminant/water in the Storage Tanks. It is further argued by the learned counsel Sri D.Prasad that it was a design defect. Mr. Agnihotri D.W. 5 Stated

that it was provided by the UCC that slight Nitrogen Pressure is required for the storage of MIC. He referred a document D-34 in his statement. However it could not be explained that why slight nitrogen pressure was required . Therefore ,the reasons given by the witnesses and the established principal of science regarding the pressure can be considered .

72- In para 6 Dr. Sriram PW-48 made it clear that till 21st October, 1984 the pressure in the Tank 610 was maintained at 1.25 Kgm./cm.sq.g. However, the night shift of 21-22 October, the pressure of nitrogen fell down to 0.25 Kgm./cm.sq.g. Therefore the Tank No.610 was continued to be under pressure from 22.10.84 to 21.11.84. The pressure in the Tank 610 as nearly as atmospheric pressure on the intervening night. Therefore,the possibility of entry of water into the Tank 610 can not be ruled out. As it is a principle of Physics that liquid goes from high pressure to low pressure.

73- Mr. J. Mukund in his examination u/s 313 Cr.P.C. states that the nitrogen pressure was only for transferring the gas from one tank to another. The learned Counsel has argued that nitrogen pressure only in use as a blanket above the MIC storage tank so that the atmospheric impurities could be kept out.

74- Dr. Sriram, PW-48 in Para 6, as mentioned above, referring brochure (Ex. P-576) stated that the nitrogen pressure was a necessity to keep out the contaminants from entering into the Tank. Again Shri D. Prasad, learned defence Counsel, argued that the said brochure (Ex. P-576) is not meant for manufacturers, it is only for retailers. Therefore, it can not be accepted as a manual for manufacturing process.

75- The brochure is meant only for handling the MIC. The detailed procedure has been given in the brochure regarding the Storage Tanks, Nitrogen Pressure, VGS, Flare Tower, etc. Therefore, its use can not be restricted only for the retailers. It is further said by Shri Agnihotri DW-5 that in the tank slight nitrogen pressure was required to be maintained. He referred a document Exh.

D-34, Design Report , to support his contention. The document is quite silent regarding the fact that what role has to play the Nitrogen pressure . Shri Agnihotri DW-5 himself no where explain the necessity of nitrogen pressure. Therefore, the report Ex.D-34 does not appears to be fruitful to the defence regarding the nitrogen pressure.

76- Dr. Smasher, PW-49, another expert of the field states that the high pressure of water then the nitrogen, the water would enter the tank. As it is an established theory that the liquid flows from the Higher Pressure to Lower Pressure and therefore, if the tank is kept under positive pressure, the liquid would not have entered. At the relevant point of time the tank was under pressure (0.25 Kgm./cm.sq.g.). Therefore, the water can very well enter into the tank, if was supplied at a pressure large enough to overcome the friction in the pipelines, valves and the fittings. If it is not sufficient to overcome this friction, then it would not.

77- A prudent man can easily understand that if a tank contains 60% -70% of liquid inside. The pressure naturally will be on the walls and at the bottom according to the quantity of the liquid inside. From outside the tank, the entry of water is only possible if the pressure is on a higher side. In the present case the same principle is applicable. Pascal's law states that when there is an increase in pressure at any point in a confined fluid, there is an equal increase at every other point in the container. A container, as shown below, contains a fluid. There is an increase in pressure as the length of the column of liquid increases, due to the increased mass of the fluid above So the entry of water was only possible when the pressure from the outside was on the higher side than the pressure in the tank or the tank might be empty. So the contention of the defence regarding the slight pressure of nitrogen. The theory is corroborated by other experts also.

(G) OPERATIAON SAFETY SURVEY REPORT :-

78- It is argued by the Prosecution that the Plant was running with various defects. Before this incident a team of experts headed by Mr. Poulson from UCC USA came to Bhopal after the death of Ashraf, an employee of UCIL in 1982. The Report (Exh. P-2585) reveals that the Plant was running negligently. On the contrary it is argued by the learned Defence Counsel that the Plant was running safely with care and caution, such operation and survey itself shows that the Company was being run professionally and it was constantly auditing its functioning and operation of the Plant and the shortcomings, which were found by the experts were rectified by the Company and a Compliance Report (Exh. D-1 & D-2) was submitted to UCC.

79- Umesh Nanda PW-87 in Para 6, 9 & 10 has stated that certain shortcomings were noticed by the team and the same were never complied with.

The shortcomings are:-

1. Major

2. Less Serious

1. Major

- a)- Lack of reliable automatic backup for cooling water on the CO converter shells.
- b)- Possibilities for air entry into the flare header at the CO unit.
- c)- Potentials for release of toxic materials in the phosgene/MIC unit and storage areas, either due to equipment failure, operating problems, or maintenance problems.
- d)- Lack of fixed water spray protection in several areas of the plant.
- e)- Possibilities for dust explosions in the SEVIN area.
- f)- Potentials for contamination, overpressure, or overfilling of the SEVIN MIC feed

tank.

- g)- Deficiencies in safety valve and instrument maintenance programs.
- h)- Deficiencies in Master Tag/Lockout procedure applications.
- i)- Possibilities of nitrogen header contamination.
- jj)- Problems created by high personnel turnover at the plant, particularly in operations.

The Reports (Exh. P-2585) opening summary states-

79A- The team was very favorably impressed with the number and quality of operating and maintenance procedure that had been developed and implemented in the past 1-2 years. These procedures together with the Safety Analysis detailed for most operations, constitute a major step for all concerned. Umesh Nanda (PW-87) in para 6, 9-10 states that the shortcomings noticed by the team were never complied with. On the contrary it is argued by learned Counsel that all the shortcomings noticed by the OSS Team were rectified and the detailed report Exh. D-1 & D-2 were forwarded to Mr. G.E. Merryman. Report Exh. D-1 has forwarded to Mr. J.L. Paulson on October, 1982 by Mr. J. Mukund informing him that an action plan is preferred for the correction of deficiencies noticed by the team, therefore, the report appears to be action plan only. Whether the shortcomings were rectified according to the plan and whether they were verified by Mr. Paulson or somebody else, is not proved.

80- It is argued that the said defects had been rectified by the UCIL and the report Exh. D1 & D2 were submitted to UCC that the above mentioned defects are no more in existence. The onus now shifted on the shoulders of the accused persons and they have utterly failed in establishing the fact that the shortcomings noticed by the UCC were rectified well in time and the UCC team was satisfied. Therefore, it cannot be relied upon that the defects were actually rectified. The learned

defence counsel in his submission has referred the court statements of TR Chouhan (PW62), Ram Chandra (PW 72), S. Bose (161) and KK Parekh (PW164). However, nothing important found in the statements of these witnesses.

(H)- POSSIBLE WATER ENTRY :-

81- The tanks storing MIC have to be, for the reasons of safety, twice the volume of the MIC to be stored. It was also advised by the UCC itself that an empty storage tank should also be kept available in standby position at all the time for emergency transfer of MIC. MIC was also advised to be stored in the storage tanks under the nitrogen pressure of the order of 1Kg/cm²g and a specific temperature below 15°C and preferably 0°C was also required to be maintained. However in tank no.610 the MIC was stored under nearly atmospheric pressure from 22.10.1984, therefore, free passage was available for the entry of back flow of the solution from the VGS into the tank. According to the report of the committee about 500 liters of water entered into the tank no.610 through RVVH/PVH lines. The thermo well and temperature transmitting lines were out of order for quite sometime and therefore, no temperature was being recorded.

82- On 2nd of December 84 before 10.45 PM no deviation was noticed in the pressure of the tank 610. Soon thereafter in the night shift, some operators noticed the leakage of water and gases from the MIC structure and they informed the control room. The control room operator saw that the pressure gone up in the tank 610, the factory staff tried to control the situation but they failed. The storage and the transfer lines have to be free of any contaminants as even trace quantities of contaminants are sufficient to initiate the reaction which could be a runaway reaction, rapid trimerization. Induction period may vary from several hours to several days. The generation of heat may cause explosive violence. In particular contaminated water reacts exothermically to produce heat

and CO₂. Consequently, the pressure in the tank rise rapidly if MIC is contaminated with water . The reaction may begin slowly, specially if there is no agitation, but it will become violent. All these properties of MIC show that despite all the safety precautions that could be taken storage of large quantities of MIC in big tanks was fraught with considerable risk.

83- Rishi Kumar (PW-20) stated in his examination in chief that, he was on duty when the incident took place. The plant was not in operation, on the intervening night at 12.30 o'clock he felt the odour of gas and also tried to know where from it was coming and he informed that Control Room. Control Room Operator saw that pressure had suddenly gone up in the tank 610 and found it was out of range. Mohd. Saleem PW-26 and Rahman PW-34, the two helpers were involved in the water washing activity. Gaurishanker PW-88 was supervising the same.

84- Mohd. Saleem Khan PW-26 was employed in the Union Carbide since 1971 and in 1977 he was posted in MIC Plant. On the intervening night of 2nd - 3rd December, 1984 he was on duty in the Second Shift. Mr. Rehman PW-34 was also with him. He was an Operator. Mohd. Saleem further states that he was doing some job and cleaning some valves through steam in the directions of the Superior Officers. In para 4 of the Cross-examination he further states that for half an hour he did water washing from 8.00 p.m. and completed by 9.00 O'clock and thereafter he went to his home at 11.00 O'clock.

85- Rehman PW-34, who was an Operator and was supervising the water washing. Mohd. Saleem Khan, PW-26 in Para 4 clarified that he was assigned to clean 4 valves, though he could clean only one, 3 valves remained uncleaned, he says that as it was the time for tea, therefore, he could not clean the remaining 3 valves and leaving them uncleaned he went for tea to the Canteen.

86- He further says that he remained in Canteen from 9.00 O'clock to 11.00 O'clock, but, nobody is there to explain that when Mohd. Saleem Khan was deputed to clean all the 4 valves and

was on duty till 11.00 O'clock, why he was sitting in the Canteen? It is the duty of the Plant Superintendent, who was an Engineer to look after such an important task of water washing.

87- Again this witness states that nobody has instructed him to place a slip blind or to check the isolation valve while the water washing was going on. A master card, which was placed there to assign the duties to the workers and it was maintained by an Operator, no such card was placed. Therefore, it can not be believed that being the senior supervising authorities, those who were present in the Plant and were in the knowledge that if the entry of water takes place in any of the storage tank or elsewhere, where the MIC is stored, the consequences may be hazardous. Hence the fact found to be proved that they were negligent and were not looking after this important job even after knowing the consequences. Just they have left the whole thing on a untrained helper, Mohd. Saleem Khan or the Operator Rehman.

88- Girija Pandey PW-28 also an ITI trained Fitter and was employed in the same Plant at the relevant point of time. In Para 3 states that on the 2nd December, 1984 in the presence of J. Mukund, the then Production Manager, Mr. Pillai and some other Officials of UCIL, he placed a slip blind in the Phosgene Tank and thereafter he left for his dinner. A master card No.6 to 55 indicates the name of this witness, but, who maintained this card is not clear. Therefore, the maintenance of the so called Master Card for fixing the responsibility appears not to be maintained as per the rules of the Company. In Para 5 Girija Pandey PW-28 again says that the placing of valve was a dangerous job because the water may enter in the reactor while placing it, as the pressure (10 PSI) was high in the tank. therefore, the above defects amount to the negligent conduct of the accused persons.

89- Abdul Rehman PW-34 is another witness of this sad story. He was an Operator and simply Intermediate. He nowhere mentioned in his statement that he obtained any training for his expertise in the field of MIC, therefore, he can not be treated as an expert and even then he was

employed for such important job. In Para 4 he averred that in the superintendence of R.B. Roy Choudhary, S.B. Choudhary, J. Mukund, S.I. Qureshi, K.V. Shetty the maintenance work was going on. On the night of incident he was on duty in Second Shift. Gourishanker PW-88 as Supervisor. Mr. Gourishanker informed him on telephone that "Phosgene flow off". After the call by Mr. Gourishanker he went to the Refriegration Plant where Mr. Gourishanker was sitting. Mr. Gourishanker instructed him that try to find out from where the pipe can be attached for water washing.

90- In Para 17 he averred that till 11.00 O'clock in the night he was in the Plant and the water washing was going on and the water was coming out from all the three bladder and no helper was there doing any job. He then informed the Supervisor, Gourishanker. In Para 12 he further states that in downstream line he found a blind placed there, while, in RVVH upstream line there was no blind and he was cleaning he same line with pressure.

91- Mr. V. Gaurishanker PW-88 states that he is a B.Tech Engineer from Madras University and was employed thereafter in UCIL as Graduate Engineer. On the intervening night of 2nd - 3rd December, 1984. He was on duty in the Second Shift from 2.45 p.m. to 10.45 p.m. Document referred Exh.P-2604 and he handed over his charge at 10.45 p.m. to accused, Mr. Shakeel Qureshi. Mr. Venu Gopal was also present.

92- In the Tank No.610 the pressure of nitrogen was 2 psig, that was below the normal and he made an entry in the log book at Page 27 (Exh. P-811) and signed the same. In Para 14 he averred that on 2nd December, 1984 as per the Production Log Book RVVH Line was cleaned with water upto PSV Filter 126, 127 and 160 as per the directions of Mr. Venu Gopal. The water washing was done by Mr. Saleem and Mr. Rehman. Before the water washing RVVH isolation valve was closed and it was master carded. The fact is mentioned on Page 30 of Production Log Book (Exh. P-811).

93- In Para 21 Mr. Gaurishanker states that the water washing was going on. He admits

94- Now the CSIR Report (Exh. P-575) is to be considered. The report reveals that approximately 500 Kg. of water entered into Tank No.610 with some contaminants through RVVH/PVH lines and led a run away reaction in the Tank 610. The report suggests that on the intervening night while the Phosgene Filters and Branch Pipe Line was water washing, the water could have entered the tank.

95- It is argued by the learned defense Counsel that the prosecution could not prove the entry of water through the route suggested by the Scientists. As this is an incident of its own kind in the whole world, and also pertinent to mention here that the UCC did not permit the Indian scientists to inspect the UCC's institutional plant at Virginia as referred in the statement of Dr.M.Sriram (PW-48) in para 13 of cross examination. Therefore, the comparison of the circumstances is not possible. It only can be ascertained on the basis of scientific studies after the incident. Either they may be a prosecution or by the accused persons.

96- The fact that the MIC escaped from UCIL Bhopal Plant on 2nd -3rd December, 1984 is an admitted fact. The water was found inside the Tank No.610. This fact has been proved by the various reports. Now the question how the water got entered into the Tank. The only test is the analysis of the residues of the of the Tank No.610. In Tank No.610 certain sodium or alkaline contaminants have been found and these contaminants only can go to the Tank No.610 through water and no other way is there they could enter.

97- Report (Exh. P-575) reveals that in the residue of the Tank 610 the Sodium was found. It is an admitted fact that the alkaline water (caustic soda) was used to neutralize the vent gases including MIC in the VGS. It is argued that if the sample is not taken properly the reports regarding the presence of Sodium in the samples are highly doubtful.

98- Dr. M. Sriram PW-48, Chemical Engineer and expert of this field states in his Court Statement that a team of experts headed by Dr. Varadarajan came to Bhopal and visited MIC unit a number of times, took samples and studied the causes of MIC leakage and after a thorough study Report Exh. P-575 was submitted. Mr. Gaurishanker PW 88 states that during water washing, to stop the further flow of water slip blinds were used according to the master card and he did not remember whether Mr. Rehman and Mr. Saleem put the slip blinds while they were doing water washing. In Para 22 he expressed his inability in answering the question that how much liters of water entered into Tank No.610 and what was the way of its entry. So only inference can be drawn that water washing in the plant was going on, but, on the basis of the statements made by the above mentioned witnesses it is not certain that how the water could have entered the Tank No.610.

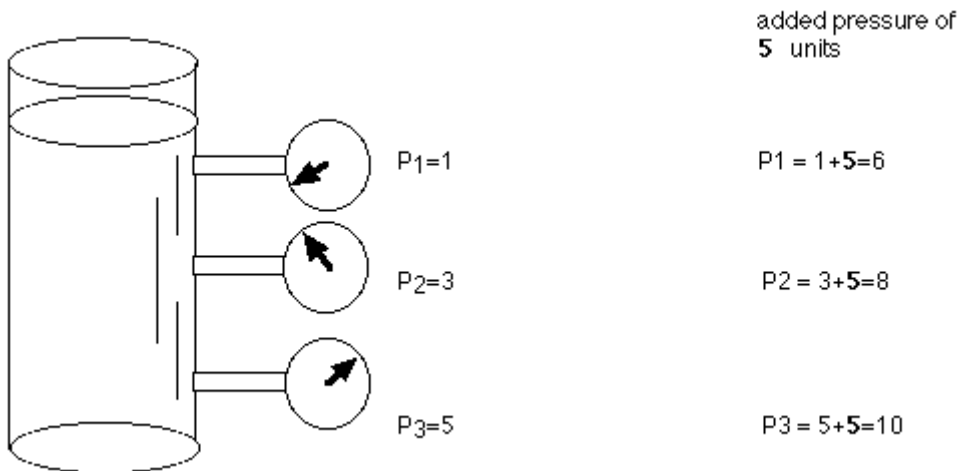
99- The entry of 500 kgs. (1100 lb) of water is analyzed on the basis of the quantity of the MIC present in the Tank No.610. It was near about 42 tonnes of MIC in the tank 610. The basis for this quantity, it is the analysis of the residues and the chemistry involved in the various products. The sodium was found in the residues, which could not have come only from ordinary water. The water, which comes from RVVH and RVH pipelines containing some sodium elements.

100- Dr. M. Sriram in Para 10 very elaborately stated that if the water entered the tank with contaminants, as MIC is highly reactive in the presence of contaminants, a violent reaction takes place and that may result in runaway reactions. In para 11 he further states that this opinion was a joint opinion of the scientific studies of the Plant given by the scientists after chemical analysis of the material.

101- Dr. R.A. Mashelkar, PW-49, is also of the same view and he states in Para 5 that entry of water alone in the absence of contaminant would not have resulted in auto-thermal and auto-catalytic runaway reaction. 500 lts. of water would have resulted in reaction with 3-4 tonnes of MIC

generating CO₂ building up pressure and breaking the rupture disc. He further states in para 5 the very specific reasons why and where from the water could have entered in to the buried tank. 610. The presence of corrosion products such as Iron trichloride ,which acts as strong catalyst ,for trimarization dramatically changes the picture and a auto catalytic reaction leading to major MIC leakage from the tank as was observed ,takes place.(Report Ex.P-808 page 1-98). He is of very firm opinion that if there was a positive N₂ pressure in the tank the water would not have entered into the tank 610. In the answer of a question he again expressed his firm opinion that when the water washing was being done with pressure the water entered the RVVH and the alkali solution from the vent gas scrubber finds its way into the tank 610. He is of the firm opinion that it is a well known engineering fact that the liquids flow from higher pressure to low pressure. Therefore, if the tank 610 were kept under positive Nitrogen pressure the water would not have entered into the tank. It is corroborated by the scientists also.

101A- Pascal's law is very much relevant in the case at hand which states that when there is an increase in pressure at any point in a confined fluid, there is an equal increase at every other point in the container. A container, as shown below, contains a fluid. There is an increase in pressure as the length of the column of liquid increases, due to the increased mass of the fluid above. For example, in the figure below, P₃ would be the highest value of the three pressure readings, because it has the highest level of fluid above it.



If the above container had an increase in overall pressure, that same added pressure would affect each of the gauges (and the liquid throughout) the same. For example P_1 , P_2 , P_3 were originally 1, 3, 5 units of pressure, and 5 units of pressure were added to the system, the new readings would be 6, 8, and 10.

102- Dr. A.K. Lahiri PW-128, who visited the Bhopal Plant. In his presence the buried tank No.610 was taken out. He was associated with the taking of samples of the tank. Two of the samples that taken for chemical analysis and thereafter the observations of micro structure. The test were carried out at HAL, Bangalore and he was personally involved in the examination and after the scientific studies, consolidate Report Ex. P-575 was prepared. According to the results of the analysis, the temperature of the tank at the relevant point of time should be in the range of 200-250°C as mentioned at Page 56 of the report.

103- Another scientist, Mr. K.V. Mazumadar also corroborates the views of the earlier scientists and he confirms the conclusion of the Report Ex. P-575 given at Page 81. In cross-examination Para 5 he states that he is working as Manager Instrumentation H.O.C.L., which manufactures variety of chemicals. Some of them are dangerous like Benzine, Quolavin, Lathenol, Sulphuric Acid, Nitric Acid, Hydrochloric Acid, Ammonia, etc. So the witness is very much expert of

the field. It is argued by the learned defense counsel that in large industries the hazardous chemicals use to be stored in large quantities can not be accepted in the present case as there was a number of design defects and maintenance fault have been proved.

104- Dr. C.S.P. Iyer PW-158 also says in his statement that he was also a member of the team of scientists and supports that the Report Exh. P-575 was a result of studies. According to the procedure given at Page 28 to 54 including the annexures giving details of the procedure.

105- The chemistry of the reactions based on the analysis of the residues in order to prove the presence of some of the components left over in the tank. A series of laboratory experiments conducted in details, which is given from Page 61 to 70. The possible causes of the event are summarized at Page 75 to 81. The summary of the cause is based on the analysis of the residue of the tank. It is corroborated by Dr. Arshad Ali Khan PW-159, who took the samples of the tank in the presence of CBI Officers. The details of which have been given in Exh. P-2899.

106- Dr. Arshad Ali Khan PW-159 further states that apart from the tank residues, the samples were taken from blind flange. Safety valve nozzle elbow was removed, process vent header, thermo well nozzle and some other parts of the tank were removed and the core sample was taken in four bottles. Blow down common valve of tank was scrapped to collect deposited solids and the samples were taken. He further states that on 13-14 February, 1985 in his presence and in the presence of CBI Officers, certain operations of MIC Plant, the detail of which has been mentioned in Exh. P-2900 to Exh.P-2905, were conducted.

107- He further says that he made extensive studies of the engineering aspects, besides study of the Plant and Machinery, at UCIL Bhopal and after all the studies, he is of the opinion that there were several aspects, which were not as per the standard for the safety of the Plant and Personnel. The design defects have been prescribed in the Report Exh. P-575 at Page 71 to 81. He

further states that there was no stigma of questioning the purity of MIC before it is being transferred to the other tank. There is no reason to disbelieve this witness, as he had personally examined the residues of the tank and different other instruments scientifically.

108- The theory of water entry in the tank is also supported by the defense witness, Avinash Balchandran Paralikar, DW-6, who took some samples of the residues of the tank E-610 and get them analyzed. He has given emphasis on the presence of sodium contaminants in the residue of Tank 610. Though he tried to establish a new fact, keeping aside the whole chemistry of MIC and its reactions with water, sodium, etc. He averred that he was employed in UCIL from 1972 to 1987 as a Senior Scientist. After the incident of 2nd -3rd December, 1984 he was assigned to analyze the residue samples taken out from the Tank 610. He received the first lot of samples between December, 1984 to March, 1985 and Second lot in 1986.

109- The samples taken out from the tank were shared by the CBI, CSIR, UCIL and UCC. He further states that large quantity of water entered into the Tank 610 and with some of the chemicals identified. The Tank 610 was weighed on a weigh bridge in the year 1986 basically to estimate the quantity of residue left in the tank. A memorandum (Eh. D-35) of this fact was prepared.

110- In para 6 he further states that special precautions were taken to make sure that no sodium level be introduced in the sampling procedure. The cleaning agent were acid and distilled water rather than soft solution or tap water. The bottles used for testing the residue were made of Pyrex glass bottles rather than soft glass bottles, as had been used by CSIR. The sample taken in 1984-85 shows the level of sodium between 50 to 100 ppm. The samples taken in 1986 were analyzed in Mumbai FMCO. He himself took the samples to Mumbai. The result was, the sodium level in the residue sample was around 10 ppm or less, which is comparatively very less than that of the samples taken by CSIR team in 1984-85.

111- In cross-examination Mr. Avinash Balchandran Paralikar DW-6 stands nowhere, as nobody asked him to take such samples. Why he did not assist the CSIR team. Therefore, the testimony of this witness can not be relied upon.

112- The presence of various metallic constituents of Iron, Chromium, Nickel in addition to Sodium, Calcium, Magnesium. The findings of the Committee shows metallic impurities were also present in the MIC, that indicates the possible corrosion of the material of construction of the tank, pipelines, etc. Presence of concentration of Sodium indicates the possibility of caustic soda ingress into the tank from the VGS through PVH/RVVH. If the nitrogen pressure would have been maintained in the tank, no ingress of water with caustic soda or other contaminants was possible.

113- Now the factor of running in loss of the company appears to be very relevant factor in the above circumstances. Admittedly Bhopal Plant, as Mr. Kumaraswamy PW-70, Mr. K. Ramachandran PW-72, Mr. Umesh Nanda PW-87 and Mr. Kamal Krishna Parikh PW-164 has stated that documents, which were regarding the shifting of Bhopal Plant to Brazil (Exh. P-1334 and Exh. P-1335) was sent to Mr. R. Natarajan. K. Ramachandran PW-72 a Chartered Accountant based in Calcutta, also states the plant was running in losses at relevant point of time. Exh.P-1332, which is signed by Mr. Natarajan, co-worker, based in Hong Kong also reveals the fact that the Bhopal Unit was running in losses.

114- Umesh Nanda PW-87 at the relevant point of time was Mechanical Engineer in UCIL. He also verifies that the Plant was running in loss. Kamal Krishna Parikh PW-162 in his statement averred that the Plant was running in loss and because of that an economic drive was launched and it was instructed that manpower be curtailed, if some pipeline get corroded, instead of changing it, it was used to be got repaired by welding or otherwise.

115- The data of UCIL reveals that Bhopal Plant was implanted and had been granted

permission by the Government of India for manufacturing of 5000 tons of Sevin and Temic in a year, while peak production was nearly about 50% of the capacity. The accounts of the UCIL also shows that in the last 10 months from the incident it was running in loss of near about five crore rupees.

116- Therefore, the reason are very much clear that apart from the design defects the Plant was not maintained according to the norms established by UCC itself. The Refrigeration Plant was shut down long before the incident VGS and other alarming systems were out of order and the accused persons were negligent toward this aspect. The Pipelines were choked and corroded, Valves were leaking and nobody was hardly caring about and because of this on the intervening night of 2nd - 3rd December, 1984 the hazard of this Methyl Isocyanate had happened.

117- It is argued on behalf of Mr. Keshub Mahindra, the then Chairman of the UCIL, Bhopal that Mr. Mahindra was not concerned with the day to day business of the Company and prosecution could not prove even a single fact that Mr. Mahindra was reckless or negligent regarding the business of the Company here in Bhopal. Even Mr. Mahindra had no knowledge about any of the circumstances regarding the escape of MIC. The prosecution is merely relying upon the presumption that by virtue of being the Chairman and Director of the Company, Mr. Keshub Mahindra is liable to be convicted with the other co-accused persons.

118- This is an admitted fact that Mr. Keshub Mahindra was the then Director and Non-executive Chairman of UCIL. A number of witnesses viz. Mr. S. Kumaraswamy, Mr. P. Ramachandran, Mr. Subimal Bone and Mr. Bhaskar Mittal have stated that Mr. Keshub Mahindra was neither working in UCC nor working in UCIL, Bhopal. He only used to Chair the meeting of the Board alongwith the other Directors of the Board. He was not concerned with the safety aspect of the Company.

119- It is further argued by the learned defence Counsel, Mr. Amit Desai that there was a

team of highly professional people for running the Company on day to day basis. Except Mr. Keshub Mahindra no other Director has been mentioned in the list of accused persons. The Company had a whole time Managing Director/Deputy Director, therefore, Mr. Keshub Mahindra was not involved or engaged in the day to day functions of the Company. There is no reason to select Mr. Keshub Mahindra as an accused for his prosecution in the present case.

120- In the Annual Reports of the Company (Exh. P-869 to P-878) Mr. Keshub Mahindra has been designated as Chairman of the Company and return show that he was Non-executive Director, though the fact is not disputed. Section -5 of the Companies Act defines an Officer in default reads as under:-

“For the purpose of any provision in this Act, which enacts that a Officer of the Company, who is in default, shall be liable to any punishment or penalty, whether by way of imprisonment, fine or otherwise, the expression “Officer who is in default” means all the following Officers of the Company, namely:-

- (a) the managing director or managing directors;*
- (b) the whole-time director or whole-time directors;*
- (c) the manager;*
- (d) the secretary;*
- e) any person in accordance with whose directions or instructions the Board of directors of the company is accustomed to act;*
- (f) any person charged by the Board with the responsibility of complying with that provisions;*

Provided that the person so charged has given his consent in this

behalf to the Board;

(g) where any company does not have any of the officers specified in clauses (a) to (c), any director or directors who may be specified by the Board in this behalf or where no director is so specified, all the directors

Provided that where the Board exercises any power under clause (f) or clause (g), it shall, within thirty days of the exercise of such powers, filed with the Registrar a return in the prescribed form.

121- Thus, the provisions of Section 5 of the Companies Act are not applicable in the present case, as it is not a case of any offense punishable under the provisions of Companies Act, 1956.

122- It is further argued by the learned Counsel of the defence that Mr. Mahindra was resident of Mumbai and his office premises was also different from that of the UCIL and because of his high position in the business community he had been appointed the Chairman of the Company.

123- Mr. Keshub Mahindra Vijay Prabhaker Gokhle Kishore Kamdaar accused persons, who were not personally present in the factory and was not directly involved in the affairs of the Company regarding the operation and manufacturing of the Sevin and Temik.

124- Section 35 of Indian Penal Code provides that whenever an act which is criminal only by reason of its being done with a criminal knowledge or intention, is done by several persons, each of such persons, who joined in the act with such knowledge or intention is liable for the act in the same manner as if the act was done by him alone with that knowledge or intention.

125- Section 35 of the Indian Penal Code provides that , there must be :-

- (i) an act which is criminal;
- (ii) criminal knowledge or intention;
- (iii) several persons
- (iv) each person must join in the act with criminal knowledge;

126- As the present case, the accused have been charged with Section 35 read with Section 304-A, 336, 337, 338 IPC. Therefore, there is no question regarding the criminal intention or mens rea ,in India under the Penal Code only knowledge is enough .

127- The learned counsel of the accused persons has drawn the attention of this Court towards the law laid down by Hon'ble the Supreme Court in the case of **Anda and others Vs. Steel of Rajasthan, AIR 1966 SC 148** and also drawn the attention regarding the dictionary meaning of the word "Knowledge".

128- In P. Ramanath Iyer's Law Lexicon III Edition, the word "Knowledge" as been defined as:-

***"Knowledge** - the certain perception of truth, belief which amounts to or results in moral certainty indubitable, apprehension., information, intelligence, implying truth, proof and conviction, the act or state of knowing, clear perception of fact that which is or may be known acquaintance with things ascertainable, specific information, settled belief, reasonable conviction; anything with may be the subject of human instruction.*

Conversely, there may be knowledge without intention, the consequences being fore known as the inevitable concomitant of that which is desired, but, being itself an object of repugnance, rather than desire, and therefore, not intended.

129- The learned Counsel of the defence further drawn the attention towards the

case of Jai Prakash Vs. State, JT 1991 (1) SC 228, in which the Hon'ble Apex Court has held that *knowledge signifies the state of mantle realization with bare state of conscious awareness of certain facts in which human mind remains supine or inactive.*

130- In the case of Emperor Vs Zamin (AIR 1932 Audh 28) the word knowledge has been explained that it means :-

"state of mind intended by a person with regards to existing fact which he has himself observed or the existence of which has been communicated to him by persons whose veracity he has no reason to doubt."

131- Shri Amit Desai and Sri D. Prasad learned counsels for the defence further argued that Section 35 of Indian Penal Code does not give rise to any presumptive liability. It requires an act which is criminal and knowledge thereof. For this he relied upon the case of Anda & others Vs Steel of Rajasthan (*Supra*) In para 9 it is observed that the word 'act' in all the clauses of S. 299 or S. 300 of the Penal Code, denotes not only a single act but also a series of acts taken as a single act. When a number of persons participate in the commission of a criminal act the responsibility may be individual, that is to say, that each person may be guilty of a different offence or all of them may be liable for the total result produced. This depends on the intention and knowledge of the participants. The subject is then covered by Ss. 34, 35 and 38 of the Code. The facts of this case also tells us that all the accused persons were engaged in running of the factory without caring the necessary safety measures or rather disregarding the possible consequences.

132- The learned counsel for the defence further drawn the attainment of this court towards the decision of hon'ble the Supreme Court of India in in the case of Jacob Mathew Vs State of Punjab, AIR 2005 SC 3180 in para 14 and 15 it is observed by the ho'ble court that the moral

culpability of recklessness is not located in a desire to cause harm. It resides in the proximity of the reckless state of mind to the state of mind present when there is an intention to cause harm. There is, in other words, a disregard for the possible consequences. The consequences entailed in the risk may not be wanted, and indeed the actor may hope that they do not occur, but this hope nevertheless fails to inhibit the taking of the risk. Certain types of violation, called optimizing violations, may be motivated by thrill-seeking. These are clearly reckless.

133- In order to hold the existence of criminal rashness or criminal negligence it shall have to be found out that the rashness was of such a degree as to amount to taking a hazard knowing that the hazard was of such a degree that injury was most likely imminent. The element of criminality is introduced by the accused having run the risk of doing such an act with recklessness and indifference to the consequences.

134- Lord Atkin in his speech in Andrews v. Director of Public Prosecutions, [1937] AC 576, stated, "Simple lack of care - such as will constitute civil liability is not enough; for purposes of the criminal law there are degrees of negligence; and a very high degree of negligence is required to be proved before the felony is established." Thus, a clear distinction exists between "simple lack of care" incurring civil liability and "very high degree of negligence" which is required in criminal cases. Lord Porter said in his speech in the same case - "A higher degree of negligence has always been demanded in order to establish a criminal offence than is sufficient to create civil liability. (Charlesworth and Percy, *ibid*, Para 1.13)

135- Shri Amit Desai learned counsel for of the defence further states that Mr. Mahindra in his examination u/s 313 Cr.P.C. has clearly stated that none of the matters were ever placed before the Board of Directors. On the contrary the Board of Directors were advised about the

excellent safety records of the Company. This contention is not sustainable as running a factory with a number of hazardous substances like Phosgene Chloriform & MIC is not comparable job as that of a doctor as in the case of **Jacob Mathew (supra)**. As has been explained in the case of **Emperor Vs Zamin (AIR 1932 Audh 28)** the word knowledge means, "*state of mind intended by a person with regards to existing fact which he has himself observed or the existence of which has been communicated to him by persons whose veracity he has no reason to doubt.*" In the present case it is reiterated that the factory was run in the best hand the IIT ans. Then the fact can not be discarded that how the things are going on in the Bhopal plat would be well within the knowledge of the accused persons .

136- Now the question arises, that what is the dictionary meaning of chairman and non-executive director It is argued by the learned Counsel of the defence referring a number of prosecution witnesses have said that Mr. Keshub Mahindra, an excellent personality of the business world, being so, he had been appointed as the Chairman of the Company. He is a Non-executive Director of the Board of the Company along with some others. Here I would like to mention that there is utter respect to a persons intelligence and his achievements in life. However, his role is confined to a particular case.

137- Non-executive director – Means a Non-working director of a firm who is not an executive director and, therefore, does not participate in the day-to-day management of the firm. He or she is usually involved in planning and policy making, and is sometimes included to lend prestige to the firm due to his or her standing in the community. Non-executive directors are expected to monitor and challenge the performance of the executive directors and the management, and to take a determined stand in the interests of the firm and its stakeholders. They are generally held equally

liable as the executive directors under certain statutory requirements such as tax laws. Also called external director, independent director, or outside director.

138- **chair-man (châr'm₃n)** means a person or a presiding officer of an assembly, meeting, committee, or Board having administrative control over the same.

139- An excellent business experienced person, how can be treated, as he could be unaware about the happenings of the companies. A Chairman without any knowledge of the company activities, how can preside over the meetings of the Shareholders and higher officials. How can he inspires the others, having no knowledge of the activities going on in such a reputed company like UCC, UCIL, etc. Meaning thereby leaving a Plant in the hands of less experienced engineers, operators or helpers with such hazardous, toxic substances, is amounts to recklessness and high degree of negligence towards the people, who were either directors or any other capacity, whatsoever it was. It is clearly covers under Section 35 of the Indian Penal Code, which incorporates the word 'Knowledge' and knowledge means the personal knowledge or knowledge acquired through the persons, whom the Chairman or the other persons, those who are accused in the present case can not distrust as envisaged by the Hon'ble Supreme Court in the Case of **Emperor Vs Zamin (AIR 1932 Audh 28)**. No periodic check-up was there. How the Plant was running, as it is noticed in the earlier paragraphs of this judgment, it is found proved that the pipelines were corroded, choked and valves were leaking. It is pertinent to note here that V.N. Singh PW-17, an Operator at the relevant point of time was working with Mr. S.I. Qureshi, informed Mr. Qureshi, says in his Court Statement that when he said to Mr. Qureshi that 3 bleader are even at the time of incident and the accused, Mr. S.I. Qureshi was saying that it is tea time, after enjoying the tea he will look into the problem. Meaning thereby, there was no command as it is expected from a talented, highly qualified Board of Directors.

There was no fear or discipline in the local staff. So this is a case of management failure also.

140- Admittedly, Mr. Keshub Mahindra used to preside over the meetings of the Board. It is not expected that a meeting of the Board can be held without the data of the Company. What sort of technology had been imported? What were the safety measures of UCIL of which Mr. Keshub Mahindra was the Chairman. It is impossible to rely upon that all these things were not in the knowledge of Chairman. Merely oral admission in cross-examination of Mr. S. Kumaraswamy PW-70, Mr. P. Ramachandran PW-72, Mr. O.P. Kochar PW-106, Mr. Subimal Bose PW-161 and Bhaskar Mittal PW-171 can not be accepted as Mr. Keshub Mahindra was not responsible for none of the business of the company affairs regarding the safety measures.

141- The safety manuals of the UCIL and apart from this the report of the UCC (Exh. P-2585) and a team of excellent engineers, it can not be supposed that during the meetings of the Board, the things of such importance would not have been discussed and the accused persons remained unacquainted with the ground realities. if this contention is accepted as said even then the accused persons can not be considered to be innocent as they know the hazards of the toxins used in the factory. Therefore, the facts of this case are not similar as those of the cases of **Anda & others (supra) and the case of Jacob Mathew (Supra)**

142- The other judgments cited by the learned defence Counsel are Ravindra Narayan Vs ROC, Jaipur (1994) 81 Comp Cases 925. Smt. G. Vijaylakshmi and others Vs. SEBI (2000) 100 Comp Cases 726 have no relevance to the fact of this case, as it is not a case of offenses punishable under various provisions of Companies Act, 1956.

143- It is further argued that there is no principle like vicarious liability in the criminal

law. The Hon'ble Supreme Court in a series of cases has reaffirmed and settled the ratio regarding the vicarious liability in respect of offences punishable under IPC. The learned Counsel has referred the recent judgment of the Hon'ble Supreme Court in the case of **R. Kalyani Vs. Janak C. Mehta, 2009 (A) SCC 516**. In this case it has been observed by the Hon'ble Supreme Court, that if there is special provision in the statute to fasten the responsibilities on the accused persons, only then the vicarious liabilities can be fasten and not otherwise. For the said purpose, a legal fiction is to be created. Even under a special statute when the vicarious criminal liability is fastened on a person on the premise that he was in-charge of the affairs of the Company and responsible to it, all the ingredients laid down under the statute must be fulfilled. A legal fiction must be confined to the object and purpose for which it has been created. In another case of **Magsood Syeed Vs. State of Gujarat (2008) 5 SCC 668**, the Hon'ble Apex Court has observed the same view expressing that without a special provision of vicarious liability in the statute, a Managing Director can not be held responsible. Similar view has been expressed in the cases of **S.K. Alagh Vs State of U.P. and Others (2008) 142 Comp. Cases 228**

144- In the case of **Dobey and the Metropolitan Bank Vs. John Cory (1901) AC 477** the Court observed that the charge of negligence appears to rest on the assertion that Mr. Cory, like the other Directors, without attend any details of business not brought before them by the General Manager, or the Chairman, and the argument raises a serious question, as to the responsibility of all the persons holding positions like that of Directors, how far they are called upon to distrust and beyond their guard against the possibility of fraud being committed by the subordinates of every degree. It is obvious if there is such a duty it must render anything like an intelligent devolution of labour impossible. Was Mr. Cory to term himself into a auditor, a managing director, a chairman and

find out whether auditors, managing directors and chairman were all alike deceiving him? That the letters of the auditors were kept from him is clear.

145- Further on Page 486 it is observed that *“I can not think that it can be expected of a director that he should be watching either the inferior officers of the bank or verifying the calculations of the auditors himself. The business of life could not go on if people could not trust, who are put into a position of trust for the expressed purpose of attending to details of management. If Mr. Cory was deceived by his own officer and the theory of his being free from moral fraud assumes under the circumstance that he was – there appears to be me to be no case against him at all.”*

146- In **Huckerby v. Elliott** that facts were these: Miss Huckerby was a co-director with one Frank Selwyn Lunn. They had together started a gaming club called Windmill Clubs Ltd. Frank Lunn was a director of Windmill Club Ltd. And also the secretary. One John Beveridge was in fact the manager. N offence under Section 305 of the Customs and Excise Act, 1952 being committed, in as much as without a licence a gaming was arranged in the New Embassy Club, the directors and the manager were prosecuted. Frank Lunn the director secretary and the manager John Beveridge pleaded guilty and were convicted. Miss Huckerby, however, did not plead guilty of the charge. The stipendiary Magistrate, however, convicted her by observing that to escape liability by saying, “I have delegated all my duties to a servant” seems to make nonsense of the position of a director. An appeal being preferred against that order of conviction Lord Parker C.J. did not agree with the above observations and observed as under at Page 193-194:-

“.....I cannot think that in general at any rate it is the duty of each director of a company to exercise some degree of control, to use the words in the oral judgment,

over what is going on, or there is no point in being a director; nor do I think it is right to say that there is a duty to supervise the running of the company and in particular a co-director who is the secretary.

Counsel for the respondent concedes that these words 'attributable to any neglect on the part of the directors' refer to the omission to do something which the director was under a duty to do. It is unnecessary to go through the cases, which deal with what different circumstances may or may not be the duty of a director, but I know of no authority for the proposition that it is the duty of a director to, as it were, supervise his co-directors or to acquaint himself with all the details of the running of the company. Indeed it has been said by Romer J. in (Re City Equitable Fire Insurance Co. Ltd.) 6, 1925 Ch. 407 that amongst other things it is perfectly proper for a director to leave matters to another director or to an official of the company, and that he is under no obligation to test the accuracy of anything that he is told by such a person, or even to make certain that he is complying with the law."

147- The above observations have been made by the Hon'ble Bombay High Court in the case of **State of Maharashtra v. Shantilala K. Somaiya**, while deciding a **criminal revision No.31/1975 on 24.6.1975**. The facts of that case are, it was simply a transaction of a Generator Set of Skoda Company and the case in hand does not relate to any such transaction. Similarly in Huckerby v. Elliott the duty was assigned to the co-director and was a gambling club that can be looked after by a person, there was no storage of hazardous gases like Phosgene, MIC, Chloroform, therefore, the degree of standard is high in the case in hand and the facts of the case are distinguishable. The report of CSIR has noticed a number of design and maintenance failures.

According to the different manuals of UCIL itself reveal that the decision was taken by the Board of Directors and the higher authorities of the Company and not by the subordinate staff. To look after the maintenance of the factory, though job the engineers locally employed, however, the control over them is that of the Management. As the company was dealing with the manufacturing of pesticides with the help of hazardous substances. Everybody was well aware with the fact that in case of any negligence, the incident as took place on 2nd-3rd December, 1984, may happen and for these reasons the responsibility can not be shifted on the shoulders of the others. Therefore, the facts of the case in hand are distinguishable.

148- The present case is not a case of fraud or a deceit of the subordinate officers of the UCIL. It can not be supposed to be an act of God, if so then it may be assumed that the factory was run by the Almighty God and whose mistake or negligence the hazard of toxic MIC had happened in the city of Bhopal on the night of 2nd- 3rd Dec.1984.

149- The learned Counsel of the defence further drawn the attention of this Court towards the decision of Malaykumar Ganguly v. Dr. Sukumar Mukherjee and Others, 2009 SCC 221. The facts of this case in brief are that a patient was a child Psychologist and her husband was a Doctor engaged in research of HIV/AIDS in USA. Both of them came to India in March-April 1988, while staying in Kolkata the patient, Child Psychologist complaint of skin rash sometime in the third week of April, 1998, for which both of them consulted to the Dr. Sukumar Mukherjee, who advised them to rest, but, did not prescribe any medicine. However, on 7.5.1998 rash appeared more aggressively, and therefore, the lady Child Psychologist were again taken to the Doctor for treatment. This time Dr. Mukherjee prescribed injection of 80 mg., Depomedrol twice daily for next 3 days. On assuming that it was a case of Vasculities, the condition of lady did not improve and ultimately she

was admitted to the Hospital (AMRI) on 11.5.1998 under the supervision of Dr. Mukherjee. On the next day another doctor also came and found that the lady is suffering from Toxic Epidermal Necrosis (TEN).

150- Despite the treatment of several doctors in the Hospital, the lady's condition deteriorated and ultimately shifted to Bombay on 17.5.1998 by Air Ambulance. She improved for two days, but, unfortunately on 28.5.1998 the lady got expired and a criminal case was filed by her husband against the Doctors u/s 304-A IPC.

151- The criminal court found some of the doctors guilty of criminal negligence, but, the High Court reversed the decision and matter came to the Hon'ble Supreme Court. The Hon'ble Supreme Court was of the view that the patient was dead due to the negligence of some of the doctors, treating the patient at the Hospital. In the instant case, negligent action has been noticed in respect to more than one respondent. A cumulative incidence, therefore, has led to patient's death. Doctrine of Cumulative Effect (Doctrine of Aggregation) is not available in criminal law.

152- Standard of proof as also culpability requirements u/s 304-A of the IPC stands on altogether different footings. On comparison the provisions of IPC with thresholds under tort law or Consumer Protection Act, a fundamental that attributes of care and negligence are not similar under civil and criminal branches of medical negligence law, is borne out. An act which may constitute negligence or even rashness under torts may not amount to the same under Section 304-A of IPC.

153- It is not necessary that what negligent conduct in civil law may be a negligence in criminal law for an offence. There must always be an element of *mens rea* for an offence. The degree of negligence should be much higher in criminal negligence than the degree for action in civil

law.

154- Negligence is a breach of duty may be caused by omission to do something, which a reasonable man guided by those circumstances, which ordinarily regulate conduct of human affairs would do, or doing something, which a prudent or reasonable man would not do. Negligence means either subjectively a careless state of mind or objectively careless conducts. It is not an absolute term, but is relative one, it is rather a comparative term. All these facts ought to be taken in consideration while determining the negligence whether exist in a particular case. *mens rea* has no place for an offence like 304-A ,336,337 and 338 of IPC, the knowledge is enough to constitute the offence.

155- In the present case the conduct of the directors and the engineers of the factory , though every body can not be identified,found proved beyond reasonable doubt that they neglected the deteriorations reported to them by the US Team and by the the local employees. The maintenance was poor. Some important systems were found to be shut down for months together. MIC was stored in huge quantity (42 tons), while the requirement for manufacturing of Temik and Sevin was very less (3-4 tons). While the Plant was shut down for maintenance. This was an omission on the part of the Management, the US team was also silent about some of the above facts. A doctor's negligence and negligence of factory management is quite different, The degree of negligence is much higher in the instant case, hence there is no comparison between these two cases.

156- It is argued by the learned defence Counsel that the conviction can not be solely based on the opinion of the experts, as in the present case.

157- Though a report has been submitted by the CSIR experts, otherwise also the prosecution led a number of witnesses, who were working at the relevant point of time in the factory. Their detailed statements, thoroughly explained in the foregoing paragraphs of this judgments. Therefore, it is not required to reiterate them.

158- Section 45 of the Evidence Act says when the Court has to form an opinion upon a point of foreign law or of science or art, or as to identity of handwriting or finger impressions, the opinion upon that points, persons specially skilled in such foreign law or of science or art, or as to identity of handwriting or finger impressions, are relevant facts.

159- In the present case a team of expert engineers specially skilled in chemical engineering working with reputed institutions in much higher capacities had inspected the Plant personally and after analysing the residues and different divisions of Bhopal UCIL Plant, prepared reports (Exh. P-575, (Exh. P- 807, and (Exh P-808) and they have been duly proved in the Court by the evidence of the experts, as mentioned in the foregoing paragraphs.

160- The attention has been invited by the learned counsel for the accused persons to the decisions of the hon'ble Apex Court in the case of **Kurban Hussein Mohammed Ali Rangwalla v. State of Maharashtra, AIR 1965 SC 1616,** brief facts of the case are ,a factory was licensed on certain conditions to manufacture paints. The manager and the working partner did not have a license for manufacturing wet paints but nevertheless the factory manufactured them. Certain burners were used for the purpose of melting rosin or bitumen by heating them in barrels and adding turpentine thereto after the temperature cooled down to a certain degree. While this process was going on froth overflowed out of the barrel and because of heat, varnish and turpentine which were

stored at a short distance caught fire and resulted in the death of seven persons working in the factory. The question was whether the manager and the working partner of the firm which run the factory was guilty under Ss. 304-A and 285 of the Indian Penal Code.

161- It was held that the mere fact that the burners were allowed to be used in the same room in which varnish and turpentine were stored even though it might be a negligent act would not be enough to make the appellant before this court responsible for the fire which broke out. The cause of the fire, it was observed, was not merely the presence of burners in the room in which the varnish and turpentine were stored though this circumstance was indirectly responsible for the fire which broke out. The requirement of S. 304-A was the causing of death by doing any rash or negligent act and this meant that the death must be the direct or proximate result of the rash or negligent act. It was found that the direct or proximate cause of the fire which resulted in seven deaths was the act of a laborer who acted in a hurry and who did not wait until the bitumen or rosin cooled down and thus it was his negligence which was the direct and proximate cause of the fire breaking out. The appellant, namely the manager and the working partner of the firm could not be held to have committed the offence under S. 304-A of the Code.

162- The ratio of the above decision was applied in Suleman Rahiman Mulani v. State of Maharashtra, AIR 1968 SC 829. In that case the question was whether the first appellant who had only a learner's licence and was driving a jeep which knocked down the deceased had been rightly convicted of an offence under S. 304-A of the IPC read with certain provisions of the Motor Vehicles Act. On the material on the record the court found it impossible to discover under what circumstances the accident had taken place. The court held that it was not known what was the proximate cause of the accident and the possibility that it had been caused due to the fault of the

deceased could not be ruled out. The mere fact that the appellant in question held a learner's licence did not establish that he did not know driving. His proficiency might furnish a defense which the learner could not have but the absence of proficiency did not make him guilty. His conviction under S. 304-A was therefore set aside.

163- The facts of the present case are somewhat different and distinguishable from those of the above two cases as will be clear from a close examination of the material evidence relating to the substances which were being used in the manufacture of the fire works etc. in the factory of the appellants. The factory was situated in close proximity to residential quarters. It became therefore all the more incumbent on the appellants to have completely avoided the use of highly sensitive compositions of the nature mentioned above.

164- The decision which is apposite to the present case is the **Rustom Sherior Irani v. State of Maharashtra, Criminal Appeal No.72 of 1965, D/-3-4-1968 (SC)**. There the chimney of a bakery had collapsed and 11 persons were killed and certain persons were injured. The appellant had submitted no plan for the alteration of the chimney for the third time and had asked just a mason to remove the iron pipe which had corroded and to bring the height of the chimney to 65 feet. The mason had told him that while the work was being executed it was unnecessary to completely keep the bakery closed except during the period the repair work was being done. After the chimney fell down a number of officers visited the spot and inspected the bakery. The Chief Inspector of Boilers was of the opinion that the cause of the collapse of the chimney was the explosion which occurred in it because of the products of combustion and gases not being permitted to escape freely as a pipe of 6 inches diameter had been put instead of 12 inches diameter. It is unnecessary to refer to the detailed discussion of the evidence. It was established that the construction of the new chimney had been

done without the advice of a properly qualified person. The argument raised was on the lines similar to the one which had been advanced in (1965) 2 SCR 622 = (AIR 1965 SC 1616). It was maintained that no negligence on the part of the appellant had been established and it was on account of the negligence of the mason that the chimney had fallen down. This court was of the view that the proximate and efficient cause of the deaths was the negligence of the appellant in choosing a pipe of 6 inches diameter and asking a mason (who was apparently not a qualified person) to carry out the alterations and also continuing working at least one over there during the period while the alterations to the chimney were being made.

165- **Bhalchandra and another, v. The State of Maharashtra, AIR 1968 SC 1319**

the Hon'ble Supreme Court has held that the appellants who were license-holders for manufacturing explosive in the factory were liable to be convicted under Ss. 304-A and 337 IPC although there was no direct evidence of the immediate cause of the explosion. The manufacturers undoubtedly displayed a high degree of negligence by allowing or causing to be used explosives of sensitive compositions and substances in the manufacturing of fire works, which must be the efficient cause of explosion.

Rustom Sherior Irani v. State of Maharashtra AIR 1965 SC 1616 and **Suleman Rahiman Mulani v. State of Maharashtra, AIR 1968 SC 829,** distinguished.

166- In the case of **Bhalachandra** (supra) the hon'ble Supreme Court referred with approval to what was said by **Straight J. in Empress of India v. Indu Beg. (1881) ILR 3 All 776** that criminal negligence is the gross and culpable neglect or failure to exercise that reasonable and proper care and precaution to guard against injury either to the public generally or to an individual in particular, which having regard to all the circumstances out of which the charge has arisen, it was the imperative duty of the accused person to have adopted.

167- In Queen Empress v. Bhutan, (1894) ILR 16 All 472 the lessee of a government ferry having the exclusive right of conveying passengers across a certain river was held to be guilty under S. 304-A when he had committed the negligent act of putting a boat in the ferry which was in an unsafe condition and which sunk resulting in some of persons getting drowned. The Punjab Chief Court found a person guilty under Ss. 304-A and 338 in Kamr-ud-din v. King Emperor, 1905 Pun Re 22 (Cr) when he had consigned two boxes containing fire works to the Railway falsely declaring them to contain iron locks with the result that in loading one of the boxes exploded killing one coolie and injuring another. The inadvertence to the results of concealing the true character of the contents of the box which was the failure of duty to the public at large and the knowledge of the dangerous nature of the contents which must be inevitably presumed coupled with the consequences were regarded as constituting a complete offence under the sections.

168- In view of the fact that the factory was situated near residential quarters (as in the present case) and that mostly women and children below 18 years had been employed it was all the more incumbent on the manufacturer to have completely avoided the use of highly sensitive compositions.

169- The principal contention on behalf of the accused persons is that even on the facts found it is not possible to hold that they are responsible for the explosion or had done anything which could be regarded as a *Causa causan*, direct and immediate cause of the escaping of MIC. Thus, criminal liability could not be imposed on them under Ss. 304-A and 337 of the Code as it has not been established that the deaths or injuries caused were the direct result of any rash or negligent act on the part of the accused persons or that any such act had been proved which was the proximate and efficient cause of the escaping of MIC without the intervention of another's negligence.

170- The accused persons committed a number of hazardous breaches of the rules framed under the Act and the conditions of the licences issued to them. Thus, it was pointed out, showed a callous disregard for the safety of the employees (as in the present case).

171- Adverting to English law the case of Regina v. David Dant, (1865) 169 ER 1517 is highly instructive. This is what Erle C. J., observed:

"The defendant turned a dangerous animal on to a common where there was a public footpath. This has been found by the jury to be culpable negligence, and the child's death was caused by it. Ordinarily speaking these are all the requisites of manslaughter. It is contended, however, that no offence was committed, because as we must take it, the child was not on the path, the jury having found that it was very near, but that they could not say whether it was on or off. In my opinion the defendant is responsible for having brought so great a danger on persons exercising their right to cross the common; and it is not a ground of acquittal that the child had strayed from the path."

172- In another case, Rex v. Pitt wood (1902) 19 TLR 37 the prisoner was charged with manslaughter on the ground that he had been negligent in not closing a gate when a train passed which it was his duty to do with the result that White who was in a hay cart was killed while the cart was struck by the train which came when it was crossing the line. Wright J., was of the opinion that the prisoner had been guilty of gross and criminal negligence as he was paid to keep the gate shut when the train came and protect the public. It was a clear case of misfeasance as the prisoner directly contributed to the accident and he was guilty of

manslaughter.

173- *In R v H.M. Coronal for Eastcan Ex.p. Spooner [1989] 88 Cr.App.R.10 Vingan L.J. "for a company to be criminally liable for manslaughter... it is required that the mens rea and the actus reus or manslaughter should be established..... against those who were to be identified as the embodiment of the company itself.*

174- *All the above cases show that criminal negligence can be found on varying sets of circumstances. The tests which have been applied appear to be fully applicable to the facts of the present case including the one of direct and efficient cause. The appellants had, undoubtedly displayed a high degree of negligence by allowing or causing to be used dangerous and prohibited compositions and substances which must be held to have been the efficient cause of the explosion*

175- In furtherance of his arguments the learned Counsel of the defence argued that the direct and proximate cause of the incident of 2nd-3rd December, 1984 was the carelessness of one helper Mohd. Saleem PW-26, who did not affix a slip blind, while undertaking water washing, which resulted into the alleged entry of water into Tank 610. This carelessness of Mohd. Saleem can not be attributed to any of the accused persons. He placed reliance on the decision given by the Central Criminal Court Old Bailey London in the case of Regina V. Great Western Trains Company Limited. **There must be a law on similar footings as that of the British Law the health and Safety Act 1974.** In brief the facts of this case are Great Western Trains Company Limited (in brief GWT) is a limited liability company with at the material time an annual turn over in excess of £300 million. It operates under a franchise a fleet of high speed trains between Paddington and the west country at South Wales. Mr. George was the Managing Director and Director with over all

responsibility for safety.

176- The prosecution say that apart from Driver of the Train, the company too was guilty of gross negligence, but, that its negligence was separate from that of the Driver. Lord Mackey said at Page 187 “..... in my opinion the ordinary principles of the law of negligence apply to ascertain whether or not the defendant has been in breach of a duty of care towards the victim who has died. If such a breach of duty is established, the next question is whether that breach caused the death of the victim. If so, the jury must go on to consider whether that breach of duty should be characterised as gross negligence and therefore as a crime. This will depend on the seriousness of the breach of duty committed by the defendant in all the circumstances in which the defendant was placed when it occurred. The jury will have to consider whether the extent to which the defendant's conduct departed from the proper standard of care incumbent upon him, involving as it must have done a risk of death..... was such that it should be judged criminal.”

177- As far as the “company” is concern Halsbury's Law of England Fourth Edition Vol.II(1) re-issue observes at Paragraph 35. “Criminal liability of a corporation arises where an offence is committed in the course of the corporation's business by a person in control of its affairs to such a degree that it may fairly be said to think and act through him so that his actions and intent are the actions and intent of the corporation. It is not enough that the person whose conduct it is sought to impute to the corporation is a manager or responsible agent or high executive. Whether persons are the 'directing mind and will' of a corporation, so that their conduct in its affairs becomes the conduct of the corporation, must depend on all the circumstances. An important circumstance is the constitution of the corporation to the extent to which it identifies the natural persons who, by the memorandum and articles of association, or as a result of action taken by the directors or by the

corporation in general meeting pursuant to the articles, are entrusted with the exercise of the powers of the corporations.”

178- Lord Blackburn said in **Mersey Dock Trustees v Gibb (1866-67) Law Reports 1 House of Lords 1993 at Page 104 that:**

“..... a body corporate never can either take care or neglect to take care, except through its servants....”

179- Next comes the classic statement of viscount Haldane LC in **Lennard's Carrying Co. Limited v. Asiatic Petroleum Co Limited [1915] Appeal Cases 705 at page 713:**

180- *“My Lords, a corporation is an abstraction. It has no mind of its own any more than it has a body of its own; its active and directing will must consequently be sought in the person of somebody who for some purposes may be called an agent, but, who is really the directing mind and will of the corporation, the very ego and center of the personality of the corporation. That person may be under the direction of the shareholders in general meeting; that person may be the Board of Directors itself, or it may be, and in some companies it is so, that that person has an authority co-ordinate with the Board of Directors given to him under the articles of association, and is appointed by the general meeting of the company, and can only be removed by the general meeting of the company.”*

181- A company owes a duty of care and if its cooperation falls far below the standard required, it is guilty of gross negligence. A series of minor failures by Officers of the Company by add up to a gross breach by the company of its duty of care. There is authority for such a doctrine in the law of tort and concept of negligence is the same in the criminal law. The difference

being one of degree.... criminal negligence must be 'gross'. It is immaterial that the doctrine of vicarious liability in Todd does not apply in criminal law, because this is not a case of vicarious, but, of personal liability and that is a proper concern of the criminal law. Thus, a corporation might be possible liable for manslaughter on the aggregation principle, now, that it established that the offence may be committed by gross negligence. As it is observed in the case of Regina V. GWT, that a company moves with the acts of various employees and together amount to breach of duty owed by the company to the passengers, the culminating breach amounting to gross negligence.

182- **Tesco Supermarkets Limited v Nattrass [1972] Appeal Case 153** was a case involving a Prosecution under the Trade Descriptions Act, 1968. The company sought to raise a defence under Section 24(1) of the Act on the grounds that the commission of the offence was due to the act or default of another person, namely the manager of the store at which it was committed, and that they had taken all reasonable precautions and exercised all due diligence to avoid the commission of such an offence.

183- The House of Lords held that the taking of precautions and exercise of due diligence u/s 24(1)(B) involves the duty of setting up an efficient system of the avoidance of offences under the Act and a proper operation of system, that the defendants had adequately performed the duty and had not delegated to their store manager the functions of ensuring that the system was carried out and that according to the defendant has satisfied the requirement of the Section.

184- Again a case based on vicarious liability, therefore, the applicability of the principle laid down in this case is negated in the present case, as this is not a case of vicarious liability. Vicarious liability has no application in the present case. In the modern time there is an ever

increasing awareness and expectations of the duties and responsibilities of large corporations in matters of health and safety. It is a sad fact that despite advances in the modern technology from time to time, major disaster occur. Often, perhaps, more often than not, these are the results not of one isolated human error or technical failure, but, a combination of several operating together.

185- In **Adomako** the House of Lords followed the law as set out in **R v Batemen (1927) 19 Criminal Appeal Reports Page 8** and **Andrews v Director of Public Prosecutions 1937 Appeal case 576 and Lord Mackey** said it was perfectly appropriate to use the word 'reckless' in summing up to juries albeit in the appropriate connotation of the word rather than in the sense in which it was used in **R v Lawrance [1982] Appeal Cases 510**. He gave, as an example, what Jaufrey Lane L.J., as he then was said in **R v Stone [1977] 1 Queen's Bench 354 at 363** where the defendant has undertaken the duty of caring for an infirm person. He referred to a reckless disregard of danger to the health and welfare of an infirm person, he said, mere inadvertence is not enough, the defendant must be proved to have been indifferent to an obvious risk of injury to health or actually to have foreseen it, but, to have determine nevertheless to run it. In the present case the management and the engineers, those who are accused, I may also refer here that prosecution witness Mr. Gourishanker and Mr. Venu Gopal, although , have not been included in the list of accused persons, are found to be reckless, as they can foreseen the faults and hazards and they nevertheless determined to run it.

186- As has been proved by the prosecution that at the relevant point of time Tank No.610 containing 42 tons of MIC, the Refrigeration Plan,t was turned off without any written sanction of any expert/authority, VGS was out of order water washing was going on by untrained labours namely, Mohd. Saleem and Abdul Rehman. The safety manuals of UCIL reveals the fact that the staff

should be given an adequate training of handling the different divisions of the factory as it contains very high toxic substances. As we all are aware that how dangerous the Phosgene is. In the II World War the Ruler of Germany, Adolf Hitler, had used the same for assassinating the Nazis and such a gas, how can be handled by untrained or less trained workers.

187- As far as Gourishanker PW-88 is concerned, he was also a new comer in the factory and can not be said that he was very much expert in the said field. Mr. S.I. Qureshi, who was present himself in the factory, when the incident took place, was careless and opt better to had a cup of tea rather than handling the problem, and therefore, the poor maintenance, poor management apart from the design defects were the main *causa causans* of the incident. Criminal negligence is the gross and culpable neglect or failure to exercise that reasonable and proper care and precaution to guard against injury either to the public generally or to an individual in particular, which having regard to all the circumstances out of which the charge has arisen, it was the imperative duty of the accused person to have adopted.

188- The learned counsel further argued that the present case is based on the circumstances which do not make a complete chain. He placed reliance on Musheer Khan @ Badshah Khan and Anr. V. State of Madhya Pradesh , AIR 2010 SC 762 in this case the hon,ble the Apex Court referring the cases of Raghav Prapanna tripathi & others V. State of UP, State of UP V. Ravindra Prakash Mittle ,Mohan lal Pagasa. State of UP has held in para 46-55 that in case of circumstantial evidence one must look for circumstantial evidence and not on snapped and scattered links which do not make a complete sequence and all the links must be proved beyond reasonable doubt. If the conviction is solely based on the circumstantial evidence ,it must create a network from which the no escape to the accused.

189- All the above mentioned cases are not related to any of the industrial disaster like the Bhopal Gas disaster. It is of its own kind in the world and the circumstances of the present case are not comparable to the other case. The prosecution is able to prove beyond reasonable doubt the complete sequence and all the links circumstances responsible for the disaster. Therefore, the present case is distinguishable from the above referred cases. Hence serve no advantage to the accused persons.

190- It is argued by the learned Counsel that the normal rule is that cases involving criminal liability is against vicarious liability. No one can be held liable for an act committed by the others vicariously without a specific provision in the statute extending liabilities to others. But, the reliance placed on the case of **S.M.S. Pharmaceuticals Ltd. v. Neeta Bhalla" AIR 2005 SUPREME COURT 3512.**

191- The normal rule is that in criminal cases there is no principle that the person, who has not committed a crime, can not be punished for the act done by the others. Principles like vicarious liability *res ipsa loquitur* are non-applicable. There must be direct and proximate cause resulted in the incident against the accused person, only then he can be punished. A similar view has been observed in the case of **Sham Sundar v. State of Haryana" AIR 1989 S C 1982.**

192- In the present case there is a chain of circumstances supported by expert witnesses and the evidence of the employees of the UCIL that prove the negligent conduct of all the accused persons, who were working in different capacity at the relevant point of time and were able to avoid such type of incident by proper care and caution. However, they did not take any action and there is clear cut omission on their part. They are also having good knowledge that if the shortcomings in the

instruments is not rectified, such incident could happen at any time. Knowing all the things, they omitted to do what they were entrusted to do. Therefore, the officers of the company responsible for the acts to be done by themselves personally, liable for the acts, which resulted in the incident of 2nd-3rd December, 1984. At the relevant point of time every person, who was the in charge and responsible to the particular division of the Factory including the management, as this act can not be done by a single person, as imposed by the defence on PW-26, Mohd. Saleem, rather the job of the higher officials to look after the functioning of different important equipments, valves, pipe, tank capacity and other important aspect, due to failure of which this incident took place. By making elusive averment, a route for their escapement can not be provided, that the incident happened without their knowledge or they had exercised all due diligence to prevent the hazard of 2nd-3rd Dec., 1984.

193- **Consequently**, the evidence adduced by the prosecution is sufficient to prove beyond reasonable doubt that the accused persons viz. Sri Keshub Mahindra, Chairman, Union Carbide Corporation, Bhopal, Sri Vijay Prabhaker Gokhle Managing Director, Union Carbide Corp. Sri Kishore Kamdaar, Vice President i/c AP Division Union Carbide Corp., Sri J.Mukund former Works Manager AP Division Union Carbide Corp, Sri S.P.Choudhary, Production Manager AP Division Union Carbide Corporation, Sri K.V. Shetty, Plant Superintendent Works Manager AP Division Union Carbide Corporation, Bhopal and Sri S.I. Qureshi former Production Manager AP Division Union Carbide Corporation, Bhopal, the company UCIL itself, were negligent. The negligent conduct of all the accused persons, who at the relevant point of time could have confronted such incident by proper care and caution. Knowing all the things, they omitted to do what they were entrusted to do.

194- Therefore, the company and officers of the company responsible for the acts to be

done by themselves personally, liable for the acts, thereby the toxic MIC escaped from the tank no. E-610, a huge quantity, caused the immediate death of thousands of human beings and caused simple and grievous injuries to a number of people. Some of them become permanently disabled and thereafter a number of persons effected. Thousands of animals and other creatures had also been effected.

195- The following major contributors to the disaster:-

1. Gradual but sustained erosion of good maintenance practices.
2. Declining quality of technical training of plant personnel, especially its supervisory staff.
3. Depleting inventories of vital spares.
4. MIC is a highly dangerous and toxic poison, even then storage of huge quantity in large tanks was undesirable. The capacity and actual production in the Sevin Plant is not required such a huge quantity to be stored.
5. The VGS and refrigeration plant were not adequate to the need of hour and more so they were out of order at the relevant point of time.
6. The nitrogen pressure was not adequate for long before the incident, so it was not maintained and hardly cared about.
7. The Public Information System was failed, neither the State Govt. nor the UCC or UCIL took any steps to appraise the local public.
8. Other alarming systems were also failed.

196- Together these factors combined to cause the multiple failures that underlay the calamitous incident, causing a vast destruction of life.

197- **Accordingly** the accused persons namely Sri Keshub Mahindra, Chairman, Union Carbide Corporation Bhopal, Sri Vijay Prbhaker Gokhle Managing Director, Union Carbide Corp. Sri Kishore Kamdaar, Vice President i/c AP Division Union Carbide Corp., Sri J. Mukund former Works Manager AP Division Union Carbide Corp, Sri S.P. Choudhary, Production Manager AP Division

Union Carbide Corporation, Sri KV Shetty Plant Superintendent Works Manager AP Division Union Carbide Corporation Bhopal and Sri SI Qureshi former Production Manager AP Division Union Carbide Corporation Bhopal were employed in the UCIL. And the Union Carbide Corporation found guilty for the offences punishable under sections 304-A, 336, 337, and 338 r/w S.35 of Indian Penal Code, 1860 and liable to be punished.

198- Therefore, the judgment is adjourned for some time for hearing the accused persons on the question of sentence.

MOHAN P. TIWARI

CHIEF JUDICIAL MAGISTRATE,

BHOPAL, (MP)

199- It is submitted on behalf of the accused persons that most of them are old persons and first offenders and facing the trial for last 25 years. It is further submitted that the Company has deposited a sum of US \$470 million in compliance to the Supreme Court's Order. Therefore, they should be treated leniently.

200- It is submitted on behalf of Mr. Keshub Mahindra that he is an old man aged about 86 years of age and an excellent personality of the Industrial World. He was merely a non-executive director like the others.

201- Apart from being involved in the Industries, he has been associated and contributed to various fields, such as academic, cultural, legal and social reforms, Philanthropy, etc. Apart from all these, he is suffering from a number of diseases, like Cardiac, Spinal, etc. Therefore, considering the above mentioned facts a lenient view be adopted by enlarging the accused under probation of Offenders' Act or under the provisions of Section 360 Cr.P.C.

202- There are annexures attached to the submissions, **Annexure – B & C**, according to

them Mr. Mahindra is a director and member also founder of different prestigious industrial organisation and recipient of several awards.

203- The learned Counsel of the accused, Shri Amit Desai, in support of his above submissions placed reliance on the law laid down by the Hon'ble Apex Court in the cases of **Mohd. Giasuddin v. State of Andhra Pradesh, (1977) 3 SCC 297**. In this case the Hon'ble Supreme Court observed as certain elemental factors are significant stand of criminological thought. Since the whole territory of punishment in its modern setting is virtually virgin so far as our country is concerned, we may as well go into the subject in some incisive depth for the guidance of the subordinate judiciary. The subject of study takes us to our cultural heritage that there is divinity in every man which has been translated into the constitutional essence of the dignity and worth of the human person. We take the liberty of making an *Indian* approach and then strike a cosmic note.

204- Progressive criminologists across the world will agree that the Gandhian diagnosis of offenders as patients and his conception of prisons as hospitals – mental and moral – is the key to the pathology of delinquency and the therapeutic role of 'punishment'. The whole man is a healthy man and every man is born good. Criminality is a curable deviance. The morality of the law may vary, but is real. The basic goodness of all human beings is a spiritual axiom, a fall-out of the *adviata* of cosmic creation and the spring of correctional thought is criminology.

205- If every saint has a past, every sinner has a future, and it is the role of law to remind both of this. The Indian genius of old has made a healthy contribution to the word treasury of criminology. The drawback of our criminal process is that often they are built on the bricks of impressionist opinions and dated values, ignoring empirical studies and deeper researches.

206- India, like every other country, has its own crime complex and dilemma of punishment. Solutions to tangled social issues do not come like the crack of dawn but are the product of research and study, oriented on the founding faiths of society and driving towards that transformation which is the goal of free India. Man is subject to more stresses and strains in this age than ever before, and a new class of crimes arising from restlessness of the spirit and frustration of ambitions has erupted. White-collar crime, with which we are concerned here, belongs to this disease of man's inside.

207- In another case State of Maharashtra v. Chandra Prakash Keshavdeo, 1991 CRLJ 3187, the Hon'ble Mumbai High Court in para 15 observed that it is an essential necessity of public policy that accused who have committed crimes must be punished when facts are fresh in the public mind. If for whatever reasons, the judicial process had dragged on for an abnormal point of time and if the accused at that stage is faced with an adverse verdict, it would not be in the interest of justice to impose at this point of time jail sentence on the accused however serious the facts of the case are. Moreover, to my mind, what is ultimately alleged in this case is that the accused by committing the fraud with which they have been charged, did make a realistic attempt to make substantial gain to themselves and to this extent, to my mind, the interest of justice would be served by imposing on the accused a substantial fine and not a jail sentence.

208- Mr. D. Prasad, on behalf of Mr. D.P. Gokhale has submitted that he is reputed person never convicted for any offense, presently suffering from Hypertension, Ichmeic Heart Attack and he is continuously under medication for over 25 years. His wife also suffering from cancer.

209- Shri Prasad further submitted on behalf of Mr. K.S. Kamdar that Mr. Kamdar is a man of 79 years of age and have ailments like High Blood Pressure, Slip Disc and Back Pain, Enlarged Prostrate and urinary incontinence, chronic irritable bowel in digestive system. He is also holding

higher position in various organisations.

210- Mr. D. Prasad further argued regarding J.Mukund the then Works Manager UCIL Bhopal. Shri D. Prasad submitted that Mr. J. Mukund is having excellent qualification. His father was former Governor of Reserve Bank of India. He is an old man suffering from Diabetes alongwith High Blood Pressure and High Serium Cholesterol for which he has been undergoing treatment.

211- Regarding another accused Mr. S.P Choudhary, it is submitted by Mr. D.Prasad, that he is has excellent qualification, presently serving United Nation Breweries, South Africa in the capacity of Dy. President. He is a sole bread earned in his family and having aged parents.

212- Mr. D. Prasad submitted that Mr. K.V. Shetty is aged about 73 years of age and suffering from Cardiac Problems as he has three Arteries blocked and advised heart surgery. He and his wife stay at Udupi in Karnataka. He is simply a pensioner.

213- The last accused, Mr. S.I. Qureshi, as argued by learned Counsel, that he is seriously ill and suffering a sever paralytic attack.

214- Therefore, all the accused persons, as argued by the learned Counsels, are of old age, suffering from different diseases and has obtained excellent qualifications.

215- The Bhopal Gas Tragedy is the worst tragedy in the world that have shaken the whole world. . Therefore, in such world's worst disaster, if the accused persons are extended on probation, either u/s 4 of Probation of Offenders Act or under the provision of Section 360 Cr.P.C., there will not be justice with the people, who suffered a great. The end came horribly, but, at least the nightmare was brief. For those who survived the MIC leak, the release will not come so quickly. Thousands of the seriously affected survivors still suffer such extensive lung damage that they can no longer apply

themselves physically and walking briskly even for a few minutes sends them gasping to their knees.

Women have peculiar gynaecological problems and are still given birth to deformed children.

216- The tragedy was caused by the synergy of the very worst of American and Indian cultures. An American corporation cynically used a third world country to escape from the increasingly strict safety standards imposed at home. Safety procedures were minimal and neither the American owners nor the local management seemed to regard them as necessary. When the disaster struck there was no disaster plan that could be set into action. Prompt action by the local authorities could have saved many, if not most, of the victims. The immediate response was marred by callous indifference.

217- Union Carbide should have had the self realization to exercise the greatest care and take the precautions, when it was dealing with such lethal chemicals. It was the burden of local government also to play its supervisory and regulatory role with the at most sincerity. However, both, UCIL and Government, utterly fail in doing so. Thousands of people are still suffering. If the accused persons are dealt with sympathy, the sacrifice of the victims of Bhopal Tragedy will have been in vain. Therefore, in the circumstances of the present case, the accused persons can not be extended on probation.

218- Therefore, the accused persons namely under section 304-A read with Section 35 IPC (1)- Sri Keshub Mahindra, (2)- Sri Vijay Prabhaker Gokhle. (3)- Sri Kishore Kamdaar,(4)- Sri J.Mukund (5)- Sri S.P.Choudhary, (6)- Sri KV Shetty (7)- Sri SI Qureshi, holding guilty for the offence punishable under sections 304-A/35 of Indian Penal Code,1860 for an imprisonment of 2 years and fine of Rs.100,000.00 each, and under section 336 Indian Penal Code,1860 an imprisonment of 3 months

and fine of Rs. 250.00 each, and under section 337/35 Indian Penal Code,1860 an imprisonment of 6 months and fine of Rs. 500.00 each, under section 338/35 Indian Penal Code,1860 an imprisonment of 1 years and fine of Rs. 1000.00 each, In default of fine each of the accused person shall under go 6 months of imprisonment in addition. All the sentences shall run concurrently.

219- (8)- Union Carbide Corporation Bhopal is not a human being therefore, can not be punished with a jail sentence . Therefore, the law laid down by hon'ble the Apex Court in the case of "**Standard Chartered Bank v. Directorate of Enforcement**"- AIR 2005 SC 2622, is appropriate to be followed It is observed by the hon,ble Apex Court that there is no immunity to the companies from prosecution merely because the prosecution is in respect of offences for which the punishment prescribed is mandatory imprisonment. As the company cannot be sentenced to imprisonment, the Court cannot impose that punishment, but when imprisonment and fine is the prescribed punishment the Court can impose the punishment of fine which could be enforced against the company. Such a discretion is to be read into the Section viz., S. 56 of Foreign Exchange Regulation Act (1973) (FERA) and Ss. 276-C and 278-B of Income-tax Act (1961) so far as the juristic person is concerned. Of course, the Court cannot exercise the same discretion as regards a natural person.

220- As regards company, the Court can always impose a sentence of fine and the sentence of imprisonment can be ignored as it is impossible to be carried out in respect of a company. This appears to be the intention of the Legislature. It cannot be said that, there is a blanket immunity for any company from any prosecution for serious offences merely because the prosecution would ultimately entail a sentence of mandatory imprisonment. The corporate bodies, such as a firm or company undertake series of activities that affect the life, liberty and property of the citizens. Large scale financial irregularities are done by various corporations. The corporate vehicle now occupies

such a large portion of the industrial, commercial and sociological sectors that amenability of the corporation to a criminal law is essential to have a peaceful society with stable economy. The Hon'ble court **Overruled** the views observed in the cases of Assistant Commissioner, Assessment, Bangalore v. Velliappa Textiles Ltd., AIR 2004 SC 86 : 2003 AIR SCW 5647 : 2004 Cri LJ 1221 : 2003 Tax LR 1054 : 2003 AIR - Kant HCR 2878, Therefore, the company Union Carbide Of India Limited shall be liable to pay a fine under section 304-A of IPC Rs.5,00,000.00 under section 336 Indian Penal Code,1860 a fine of Rs. 250.00, and under section 337/35 Indian Penal Code,1860 a fine of Rs.500.00 , under section 338/35 Indian Penal Code,1860 a fine of Rs. 1000.00 each. Bail and bonds of the accused persons are cancelled.

221- At the last I would like to suggest a separate Act to be legislated as it prevails in United Kingdom **Health and Safety at Work etc. Act 1974** to make further provision for securing the health, safety and welfare of persons at work, for protecting others against risks to health or safety in connection with the activities of persons at work, for controlling the keeping and use and preventing the unlawful acquisition, possession and use of dangerous substances, and for controlling certain emissions into the atmosphere; to make further provision with respect to the employment medical advisory service

222- As far as the provisions of section 357 of Criminal Procedure Code are concerned, Bhopal Gas Leak Disaster (Processing of Claims) Act 1985 An Act to confer certain powers on the Central Government to secure that claims arising out of, or connected with, the Bhopal gas leak disaster are dealt with speedily, effectively, equitably and to the best advantage of the claimants and for matters incidental thereto.

223- The Hon'ble Supreme Court in the case of Dilip S. Dhanukar V. Kotak Mahindra Co.

Ltd. 2007, All MR (Cri.) 1775 SC, in para 27 has observed that compensation is awarded towards sufferers of any loss or injury by reason of an act for which an accused person is sentenced. Although it provides for a criminal liability, the amount which has been awarded as compensation is considered to be recourse of the victim in the same manner, which may be granted in a civil suit.

224- In the present case the Hon'ble Supreme Court, while deciding criminal Appeal Nos. 3187, 3188/1988 with SLP (C) No.13080/1988 dated 14-15.9.1989, 5.4.1989 and 4.5.1989 (Union Carbide Corpn. v. Union of India and Others) reported in AIR 1990 SC 273 in Para 5 of the judgment the Hon'ble Court has observed that there was a settlement finally disposing all past, present and future claims, causes of action and civil and criminal proceedings (of any nature whatsoever, wherever pending) by all Indian Citizens and all public and private entities with respect to all past, present and future deaths, personal injuries, health effects, compensation, losses, damages and civil and criminal complaints of any nature, whatsoever against UCC, UCIL and other subsidiaries affiliated as well as their former, present or future officers, the order was reviewed by the Hon'ble Court in Union Carbide Corporation etc. etc.v. Union of India, etc. etc., AIR 1992 SC 317 while disposing of Interim Appln. Nos. 1, 2 and 3 of 1989; in Civil Appeal Nos. 3187 and 3188 of 1988, D/- 3 -10 -1991 considered the points of compensation in Para 68, 69 of the Judgment.

225- Therefore, when the Govt. of India has enacted a special Act, the Bhopal Gas Leak (Process of Claims) Act, 1985 with his own distinct features to meet one time solution. It provides exclusivity of right of the representations of all claimants by Union of India and for diversifying the individual claimants of any right to pursue any remedy for any cause against UCC and UCIL. Therefore, the point of compensation is not supposed to be reviewed and turned down by the Hon'ble Court and hence u/s 357(3) Cr.P.C. is not required to be awarded. The claims can be settled within

the purview of the special Act.

226- Mr. Warren Anderson, UCC USA and UCC Kowlnn Hongkong are still absconding and therefore, every part of this case (Criminal File) is kept intact alognwith the exhibited and unexhibited documents and the property related to this case, in safe custody, till their appearance.

MOHAN P.TIWARI

CHIEF JUDICIAL MAGISTRATE,

BHOPAL, (MP)

Bhopal, Dated 07 June 2010