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GLOBAL WARMING AND IT'S SUBDUED EFFECTS

Radical impact of the changing climate and exploring frontiers of new solutions for catastrophic risk management.

FIRE POLICY READINGS

Explosion, implosion and aircraft damage perils explained.



GLOBAL WARMING AND ITS IMPACT ON AOG RISKS COVERED IN INSURANCE POLICIES AND HENCE PRICING OF RISK

Claim costs of Hurricane Harvey, IRMA and Maria wrought havoc across the Caribbean. These are normal, one of Hurricane or they point to a systematic change brought about by global warming, which in turn, is making of mankind due to unbridled exploration and exploitation of natural resources far in excess of nature's capacity to recoup the same. There appears to be a connection between hurricanes frequency and severity and global warming. Global warming is resulting into more moisture being created in atmosphere. Which in turn is changing the climate of all regions of the world and this climate change is resulting in storms as well as sea levels rising and flooding seen across the world in areas hitherto unknown for such phenomenon.

Wherever insurance penetration is higher and awareness of insurance is high, in those geographies the insured losses due to these events are higher and are impacting the global insurance industry. Lloyd's of London is expecting the losses for F.Y.2017 to be in excess of GBP 150 Billion. This will subsequently result in higher premiums. Predictable and regular catastrophes, which regular hurricanes every year have become, could at certain point of time, go out of ambit of insurance due to enormity as well as their predictable nature, thereby excluded by very nature. Insurance is for fortuitous events and floods and hurricanes may happen every year on predictable models, thus fortuity is getting lost.

Munich Re has estimated based on its studies that domestic weather-related losses have increased fourfold since 1980 and that extreme weather events led to more than \$500 Billion in covered losses between 1980 and 2011. All over the world the insurer has taken protective steps and withdrawn or limited their exposures as also increased the rates for covering losses to properties. Lot of insurers have withdrawn from near -shore geographies risks. The Risk

Management is focussing more on catastrophic events arising out of natural causes and loss minimisation measures thereof. The pollution liability risk is increasing and so is premium rates for covering such liabilities. Based on the law suits and course they take in such events of disputes, the insurers and reinsurers are refinding the wordings to avoid absolute liabilities arising out of such events and limiting their exposures. a case of 2014 wherein a US insurance company filed law suits against various communities in Chicago state for failure to properly prepare for heavy rains and flooding which allegedly could have been anticipated because of global warming. Later however, these law suits were withdrawn, after garnering the desired effect from such communities.

It is inevitable that in future there could be more such law suits- from communities on insurance companies, from individuals against corporates for not following right practices or increasing pollution due to their industrial practices, shareholders suing companies for their wrong practices which may result in wiping out of capital and benefits of shareholders due to such events which could be moored to companies for their wrong practices in the past.

The future looks restrictive, the all risk wordings will have more restrictions in terms of exclusions, terms and conditions, limitation on the indemnity being provided, increase in potential premiums and reduction in coverage. This is inevitable and cannot be postponed.

We will soon see, the EQ and Flood and storm risk being provided with Stop loss limits. The coverage being provided in certain geographies and restricted in other geographies which are more prone to such hazards. Discounts for good environmental practices. All Risk wordings giving way to restrictive defined perils wordings in property insurance. etc.

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I. UNDERWRITING

Definitions of explosion, implosion and air damage as per fire policy readings.

Explosion is defined as a sudden, violent burst with a loud sound. An explosion is caused inside a vessel when the pressure within the vessel exceeds the atmospheric pressure acting externally on its surface. An explosion may cause fire damage or concussion damage.

So, the ingredients of Explosion are:

- Sudden event, it happens suddenly. Gradual event of breaking up of vessel is not explosion. Gradual cracking or breaking may attributed to ageing or fatigue.
- Violent burst- it is violent burst- the parts of the vessel will fly and may cause damage to objects/properties in the immediate vicinity of the vessel. The contents inside the vessel will also be spread in all directions.
- Accompanied by loud sound- the difference in pressure inside the vessel and outside the vessel, when go
 beyond a limit, the vessel bursts and breaks into pieces, in the process, the different level of pressures
 come together and this results in a loud sound on breaking of the vessel as well as on release of pressure
 on bursting of the vessel.
- The damage caused due to this explosion could be Fire damage, as heat and energy inside the vessel, on violent explosion, spreads to near by objects and properties and set them on fire. The other damage is concussion damage due to sound waves which are generated by the sound of burst. Also the physical damage to the objects and properties in the vicinity with which the damaged pieces of vessel or it contents will fly and hit.

Implosion means bursting inward or collapse. This takes place when the external pressure exceeds the internal pressure. The Fire policy however does not cover destruction or damage caused to the boilers (other than domestic boilers), economisers or other vessels in which steam is generated and machinery or apparatus subject to centrifugal force by its own explosion/implosion. These risk can be covered separately under Boiler and Pressure Plant insurance policy, which is specifically designed to handle these risks.

The definition of implosion defines it as bursting inwards. That means it is also violent act of imploding. Imploding means squeezed in. Implosion concentrates matter and energy.

In implosion also the matter inside the vessel can be flung outside in the process of implosion. But this is not an essential component of process of implosion and not all kinds of implosion will do so. Normally the collapse of the vessel takes place in implosion.

Both explosion and implosion are mechanical process which happen due to different pressure levels inside and outside the vessel in which conditions these mechanical processes of implosion or explosion take place.



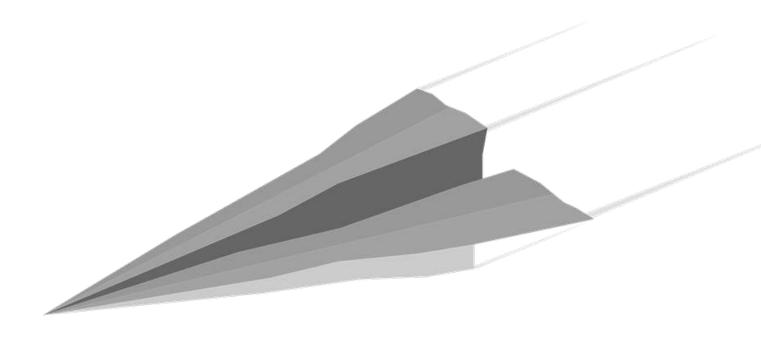
AIRCRAFT DAMAGE - Loss, destruction or damage caused by Aircraft, other aerial or space devices and articles dropped therefrom excluding those caused by pressure waves. The definition clearly defines the scope of Air Craft damage as under:-

The loss or damage to the property (by fire or otherwise physical impact) directly caused by :

- aircraft and other aerial devices.
- articles dropped from aircraft or aerial devices.

However, destruction or damage resulting from pressure waves caused by aircraft travelling at high speed is excluded from the scope of the policy.

Thus, what is covered is actual physical loss due to physical impact by any aircraft or aerial device or articles dropped therefrom. The shock waves are excluded, which do not physically impact the insured property. The importance in this peril is aerial devices or articles dropped from them coming into physical contact with insured property and then causing damage to them.





II. RISK MANAGEMENT

Risk management is a function which is equally important in all industries as well as activities we undertake in pursuit of our commercial gains. Risk Management in manufacturing plants specially auto ancillary units which dot the entire NCR region comprising of Delhi, Gurgaon, Manesar, Bhiwadi and Rewari, Chennai region and Pune region which are hub of auto industry is no exception. In this article we will examine the type of accidents which can happen in these manufacturing units and what are remedial steps to manage the risk emanating from these industrial activities in these auto hubs.

An accident is something which is unexpected and happens in the course of employment. It is neither anticipated nor designed to occur. It is uncontrolled and unplanned event in which an action or reaction of an object, a substance, a person, or a radiation results in personal injury.

The losses arising out these events could result in accidental injuries to those involved in the accidents, to properties which are impacted by the accident. The causes of accidents can be broadly categorised into three:-

- i. Unsafe working conditions
- ii. Unsafe acts
- iii. Other causes?

We will discuss each of the above, and then how to manage risks associated with them with strategy of prevention, minimisation or avoidance.

Unsafe working conditions: Unsafe working conditions could arise out of defective plant and machinery, tools and equipments and materials. Such causes are known as technical causes. These could emanate from:

- i. Not fenced machinery
- ii. Opening in machines without any guards
- iii. Lack of control mechanism/monitoring systems
- iv. Faulty electrical fittings and supply pipelines/systems
- v. Defective parts in machinery not aligned to the machines/production machinery
- vi. Faulty layout and location of plant and departments for movement of production process.
- vii. Inadequate lighting arrangements and ventilation
- viii. Unsafe storage
- ix. Inadequate safety devices

All these are causes which are related to plant and machinery and buildings.



RISK MANAGEMENT:

- 1. Periodical checking of machinery and maintenance of the machinery.
- 2. Replacement of defective machinery.
- 3. Adequate lubricating .
- 4. Replacement of the machinery after its useful life, though it may be working and not waiting for breakdown which may result in accidents.
- 5. Thermography studies by Insurance intermediary/companies for advance knowledge of developing flaws of the machinery.

Unsafe Acts or Negligent acts: Almost 90 percent of claims arise out of negligent work practices of the employees or workers. These practices are done by workers because of:-

- Lack of knowledge and training by management of the company
- Lack of skill set required for the job.
- Pressure on meeting stiff production targets and thereby short-shifting of procedures
- Wrong attitude of the employees.
- Some of the examples of acts are:-
- Operating without authority
- Failure to use safe attire or personal protective equipment's
- Dumping of equipment and stocks or machinery at process plant location.
- Storage of finished products on production lines and gangs and ways.
- Using unsafe equipment/defective equipment
- Not following Hot work permit system
- · Removing safety devices
- Not following the process and procedure defined in OEM manuals.
- Fatigue at work place
- Distraction/teasing/abusing etc behaviour of supervisors/seniors.

RISK MANAGEMENT:

- Selection of the employees/workers after due checking their skill sets
- 2. Pre-online training and on job training and orientation of workers before putting them into production line.
- 3. Strictly following the Work permit system.
- Ensuring that workers are advised to strictly follow the safety norms and provided with security gear of working on the machinery.
- Ensuring that process and steps defined by OEM of the machinery are following while working on the machinery.
- 6. Ensuring the adequate fire fighting training is provided to all workers from time to time .
- 7. A key team is developed for accident handling in each floor and department.
- Regular training of the employees at regular intervals for learning new skills which are required for working on newer generation machinery.
- 9. Seeking suggestion from the workers for improving safety of the workers.

Other Causes of Accidents: There could be another kind of causes which may result in accidents at site of work in manufacturing units in auto ancillary units:

- Noise pollution due to working of machinery, which may result in accidents due to not hearing the noise of moving machinery.
- High temperature of working machinery, getting in contact with workers body.
- Slippery floors, unkempt floors and poor housekeeping.
- Rush to meet the daily orders resulting in over time working and reduced standards of work.
- Visit by outsider in the plant resulting in distraction of the workers.
- Sudden outage of power in the plant.
- AOG perils affecting the process location and thus accidental falling of roof or structure of the building into the machines.



RISK MANAGEMENT:

- 1. Noise dampener installation
- 2. Regular checking of the temperature, pressure and other parameters of the machinery to avoid accidents.
- 3. Scheduling the plant visit by outsider well in advance and taking the shop floor incharge into confidence well in advance for such visits.
- 4. Third party audits of the processes and work system to improve the working and safety culture in the organisation.

III. CLAIMS

Fire claim in Paint booth in an Auto parts manufacturing facility- Casting unit.

A fire occurred in a paint booth of a Aluminium casting parts manufacturing unit. The fire engulfed entire paint booth and damaged the painting guns, stock of paint in the pipelines, and stored for the usage in the paint booth, hanger line on which parts move inside the paint booth, structure of paint booth. The Fire extinguishing balloon did get activated and restricted the spread of fire to within the paint booth. However, due to highly inflammable nature of the paints the entire paint booth was damaged extensively.

The estimate of losses was approximately Rs.20 lakhs.

The surveyor was appointed within 30 minutes of intimation to the insurance company which was around 7.30 PM on the day of fire. The Surveyor was on site around 9 PM. And continued survey on the same day and then again visited in the morning of the next day.

The representative of client and intermediary were there all the time and insurance intermediary explained and helped the surveyor in the work of assessment and inspection of the damages.

The claim was settled within 75 days from the date of incident without any deduction for underinsurance.

The learning:

8

- i. The incident of fire specially in paint booth are more devastating and swift and can spread to other parts of the plant unless checked. Compared to other areas of plant the fire is fast and fuel availability in form of paints stock makes it very devastating.
- ii. Adequate fire fighting arrangement such as sprinkler system and Fire extinguishing balloon are very useful as they help in containing the fire in areas where human intervention is limited and cannot be done in such devastating fire.
- iii. Cooling of the other peripheral infrastructure by pouring water helps in containing the fire. Water damage in other portion of the plant is minimal in casting plant.
- iv. Stock of the paints should be for the same day or two days at the paint booth. The paints stock should not be kept in vicinity of the paint booth and should be stored in separate premises from where it should be brought on daily basis based on the requirement of the production for that day scheduled production.
- v. Surveyor should be helped in his job by providing access to entire area swiftly and following his advises on the salvage, care for the equipment damaged and safe and helping him in the process of inspection at the spot with all information and requirements then and there.

ARUNAYA

- vi. Break the glass windows and panes in vicinity of such fire, this will help in reducing the temperatures in the area and help workers breathe and escape without getting impacted in suffocating environment. The windows glass breakage will also help in directing the water hose into the vicinity area so that machinery and other items are cool and does not add to fuel of the fire.
- vii. Plant should have system whereby the slush automatically makes its way to nearby manhole or gutter system and plant is clean at the earliest.
- viii. Keep all important equipment damaged intact for surveyors examination for second or third time till surveyor is satisfied adequately.
- ix. Take permission in writing from insurer/surveyor before disposing off the salvage.
- x. High value items like paint guns should be kept separately for examination by surveyor about the nature of damages.
- xi. All documents sought by the surveyor, should be provided in one go to the surveyor so that the settlement of claim happens without delays.
- xii. Ensuring that the assessment is discussed with the management of the client and explained to client in detail so that settlement is achieved to the satisfaction of the client.
- xiii. Ensuring that the settlement is done in fair way with insurer and insured both being satisfied.
- xiv. Implementing the improvement measures suggested by surveyor, intermediary post loss for ensuring there is no repetition of such incident.

IV. IN THIN CLOUDS

Individual Cyber Risk Policy has been launched by Bajaj Allianz. This is a retail product and addressed to individuals who use e-commerce method and e banking. The policy is designed to cover various types of internet generated risks to once finance, social status and other criminal activities which may harm an individual.

The policy covers, theft of ID, social media cover, cyber stalking, IT theft cover, Malware cover, Phishing cover, Email spoofing cover, Media liability cover, cyber extortion cover, data and privacy by third party cover. Similar covers for small SME clients as of the counter cover can be designed and it can have wide market considering the fact that SME constitutes the 45% of economic activity in the e-commerce space.



INSURANCE NEWS

- Budget speech of Finance Minister declared that three Public sector insurance companies, namely, National Insurance, United India Insurance and Oriental Insurance will be merged to form one insurance company. New India is spared as Public issue has already come.
- 2. Bajaj Allianz launches INDIVIDUAL CYBER SAFE INSURANCE POLICY.
- 3. New Insurance Ombudsman names announced. Shri Sanath Kumar, Shri Milind Kharat, Shri Vasant Krishna and Shri Sujay Banarji (GIC).
- 4. IDBI to exist Life insurance venture.

ARE YOU BEING SERVED?

Familiarising with client's business and underwriting information so that this can be explained to an insurer and others.

This is another function of the broker as defined in Insurance Brokers Regulations. The breakup of this sentence gives us the detail job involved in this one simple line:-

- a) Familiarising with client's business: Familiarising with client 's business means, getting to know the various lines of business client is in. What are the processes and activities in those businesses. How many machines and people are involved. What types of machinery is involved. The business cycles of the client, to know which months stocks will be at peak and which months are lean months. The type of process will help understand hazards involved and precaution required.
- b) Underwriting information: this will be resultant factor of familiarising with client's business. The knowledge of process will help understand the rates to be applied and rating of the proposal. It will also help in designing the warranty and conditions and understanding the warranty and conditions under the policy being offered by insurer and getting it corrected wherever required.
- c) At time of claims like situation, the familiarisation of the insured's business will help the intermediary to properly help client when surveyor visits and seeks clarification on the presence of materials, process of manufacturing, and other various questions. These questions will be easy to explain, when intermediary is aware of the business of the insured.

An intermediary, has therefore to clearly understand and familiarise himself with the business and manufacturing process of the client. This helps him and his client in:-

i. Getting properly drafted policy wordings and avoiding the clauses and conditions which are not relevant. E.g., in marine policy, whether declaration will be sent every day, weekly or fortnightly will depend on the knowledge of the intermediary as regards the transits from the works. It will depend on the type of business. A manufacturer who despatches say auto parts daily 10 or 20 trucks to OEM vehicle manufacturer, can submit the declaration for every fortnight or every month, if the daily despatch is regular of same order. However, if the despatches are varying from month to month and from season to season, like in case of Sugar Mills, during the milling period the despatches will be very high but during the balance months there will be no despatch from the sugar plant but will be from godowns. In such cases, the daily despatch declaration will be better module.

- ii. Proper guidance in declaring sum insured from time to time, including inclusion of right clauses in the policy for financial interest, goods held in trust etc.
- iii. Helping client in claims processing by ensuring that information is furnished rightly to surveyor and explanation given to surveyor in timely fashion.
- iv. Review of sum insured at time of renewals.

PATHSHALA

Architect, surveyor and consulting Engineers fee

Architect, Surveyor and consulting Engineers fee and its coverage is Fire policy is one important aspect. This is charges incurred by insured for hiring architect, surveyor or consulting engineer to rebuild the damages arising out of a claim. These fee are covered in the Fire policy up to 3% of claim amount. This claim amount means adjusted claim amount. It however, does not cover cost of preparation of estimate of repairs post loss. This coverage is standard and automatic coverage as per wordings of the Fire Policy. In certain cases, it may be the case that Architect, Surveyor and consulting Engineer fee is expected to be on higher side due to unique design of the buildings or nature of the process etc. In such cases, it may be preferred by client that these fee and charges which he expects to be on higher side are covered. Insured is allowed to take such higher coverage at the time of taking insurance policy by declaring the sum insured under this head.

A definite sum insured can be declared for such fee and charges and it can be covered as a specific item under the Fire policy by charging the premium rate as per Policy rate applicable to other sum insured under the policy.

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