Insuring Industrial Plants with Fluctuating Operations

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Contents

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“Providing flexible risk solutions to industrial plants with fluctuating operations may be necessary to retain and boost healthy portfolios.”
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Key Parties Involved:

1. Insurer – IGI General Insurance Ltd.

IGI is a public listed general insurance company headquartered in Karachi, with 9 offices nationwide offering a wide range of general insurance products including Fire, Motor, Marine, Travel, Health, Personal Accident, Engineering and Home Insurance.

2. Insured – Fertilizer Company Limited (FCL)

Fertilizer Company Limited (FCL) is a nitrogenous fertilizer manufacturing plant which owns and operates one of the most modern Urea manufacturing plant in Pakistan.

Note: Actual name of insured company has not been mentioned for the sake of anonymity.

Introduction:

Fertilizer Company Limited (FCL) manufactures around 1,000 Metric tons of Urea and 500 Metric tons of Ammonia per day. The fertilizer bags are packed and distributed in a radius of 100 to 150 km from the plant site.

In May 2017, FCL entered into an insurance contract with IGI whereby the scope of coverage included comprehensive machinery insurance. The policy also had a coverage for business interruption.

Background of the Case:

Urea manufacturing is an inherently hazardous process which involves production at extremely high pressure and temperature. Natural gas is used as a raw material for the process and poses serious threats to the site safety if dealt without appropriate safety protocols.

Natural gas being the lifeline of the process is essential for sustainability and growth of fertilizer business. Unlike other industries which use natural gas as a utility for power generation, fertilizer industry uses it as a basic raw material and not having gas means not having production. The province of Punjab, faces regular gas load-shedding in the winter season due to excessive usage by domestic consumers. Lack of prioritization by governmental authorities has resulted in continuous supplies for domestic usage while the industry has to suffer in terms of gas shortage and supply cut-offs. Unfortunately, FCL happens to be located in Punjab which faces regular gas outages in winters.

The Problem and Additional Details:

IGI General sought necessary support from the reinsurers and issued "Comprehensive Machinery Insurance" policy to the client in May 2017. Annual renewal was due in May 2018. However, FCL started the marketing process for the risk earlier than expected and approached all major players. It also informed the potential and existing insurers that the plant remains idle during the 4-6 months of winter season. Accordingly, maximum relief in terms of premium discounts was expected.

IGI approached the reinsurers to get the renewal terms earlier than expected and with a significant discount. The information about the plant being idle came up as a surprise for the reinsurers. They proclaimed that this information could be enough for the reinsurers to go off-cover. The information regarding the plant remaining idle for 4-6 months of the year should have been provided at the inception of policy. Revealing this information now could change the risk profile. They were of the view that any claim at this point in time may be repudiated due to the fact that the risk profile has changed than what it was at the time of initiation of risk. Reinsurers had a lot of critical questions and IGI needed to answer these satisfactorily to retain the market's confidence and approach a competitive renewal quote.

IGI's underwriters were also facing immense pressure from the marketing team to make a decision which would help retain the business and not cause any damage to the longstanding relationship of the two parties. A decision had to be made. In a competitive market, client would not wait longer!

Solution:

The underwriters and risk engineers at IGI sat together in the meeting room to reevaluate the case. Records of existing premium and prospective growth of business with FCL in other lines of business were also brought to discussion.

After a keen analysis it was decided that detailed information needs to be established for the reinsurers to get adequate support and discount. The team identified some key questions that a lot of reinsurers were repeatedly asking. These needed to be answered to complete satisfaction if IGI were to retain this business.

IGI planned a comprehensive risk assessment survey of the plant to get hands-on information and avoid any confusions. Risk Management team travelled to the plant and apprised the plant management of the existing situation. The "duty of disclosure" clause in the policy was read out to the plant manager to highlight that it is the responsibility of the insured to duly notify the insurers about any material change in risk status. Because the idleness of the plant was a material change in plant's risk profile, it needed to be discussed explicitly and comprehensively for the insurers to continue risk coverage. Any confusions in this regard could lead to untoward consequences. It was emphasized that the risk engineers would need a lot of critical technical information from the plant personnel to provide a competitive renewal quote and that all such information would be kept strictly confidential (for reinsurance arrangements and risk improvement only). It was essential to establish why exactly the plant was idle and how the company managed an idle plant situation. Risk Engineers asked specific questions and keenly collected the answers which were going to be of great importance for the continuation of this insurance contract. Some of these questions are discussed as below:

1. Reason for FCL stopping the operation in winter?

Natural gas is the basic raw material for urea production. 65-70% of the production cost of urea comprises of Natural Gas cost. Generally, in most part of the world (including Pakistan) gas is provided to fertilizer sector on subsidized rate.

FCL plant is located in the province of Punjab where gas demand is much higher as compared to its supply. The demand multiplies in the winter season where domestic consumption increases manifold. Consequently, many major industrial consumers of natural gas including FCL have been unable to get continuous supplies in winters. This is reflected in the form of down time of urea plant. An alternate to the natural gas is re-gasified Liquefied Petroleum Gas (RLNG). However, it costs much higher and has no subsidy from the government, thereby causing significant financial impact considering which FCL does not opt to produce urea on RLNG and stops operations in peak winter months. As a matter of fact, FCL has not been able to achieve its designed production capacity for the past 6 years due to lack of gas supplies.

2. Since when has the plant been shut down?

Plant is shut down for last six months. Despite the fact that plant is not operating for last six months, very good controls were observed during the survey. Housekeeping was very good, electrical safety was at par too; all the wires were in conduits. Thermographic analysis of all electrical fittings are conducted annually. Preventive maintenance of all plant equipment is conducted regularly. The situation related to plant health was fair. Annual turn around report of 2016-17 was shared and results were satisfactory.

3. Is the plant preserved during shutdown?

As the plant is shut down for last six months, its preservation is very critical. Preservation methods for long shut downs were shared by FCL management. Fertilizer plant has stationary and rotary equipment. Preservation of both these parts is necessary. Equipment list for preservation is as follows:

Equipment	**Preservation Method**
Ammonia Plant	Nitrogen Blanket (pressurized)
Urea Plant	Pressurized Air, Pressurized Nitrogen, Lube Oil Circulation, Rinsing with demineralized water
Boilers, Heat Recovery Steam Generators and Cooling Towers	Wet Preservation, Dry Preservation
Turbine	Pressurized Nitrogen
Compressor	Pressurized Nitrogen

For preservation of plant, pressurized Nitrogen, compressed air and water is required. Frequency of preservation activities varies from daily to weekly. Even In case of shut down when there is no urea/ammonia production, equipment are kept pressurized, some equipment are operated on regular basis. To summarize, despite the plant being shut down for last 6 months HSE protocols, maintenance and preservation controls were up to the mark.

4. Is there a schedule for plant shutdown and what is the total number of shutdowns per year?

Plant shutdown is essentially linked to the unavailability of gas. Unfortunately, there is no schedule for it from the relevant authorities and therefore total number of shut downs per year cannot be predicted by FCL.

IGI risk engineers identified that the inherent risk factor for such a plant with fluctuating operations and unscheduled shutdowns increases as compared to smoothly operating plant. A fertilizer plant is most susceptible to damage during its startup phase. Therefore FCL's plant which is operational only for say 200 days in a year with high frequency of shut down /start up is more vulnerable to damage/accident as compared to a plant which is operational throughout the year with minimal shut down/start up frequency. Despite this evident risk, the fact remained that FCL is facing financial crunch as a result of shutdowns and may not be able to bear hefty premiums. Plant preservation procedures incur a certain cost without productivity. The insured needs significant discounts to sustain its insurance program with IGI.

5. Why FCL failed to inform IGI of such a material change in risk profile in time?

FCL responded that fertilizer plant shutdowns in the province of Punjab during winter season is a normal occurrence. This is considered a routine practice in the industry and has been in effect for the past 6 years or so ever since the gap in demand and supply widened. They acknowledged that insurer should have been apprised of this situation however affirmed that this was nothing extraordinary in terms of the industry practices. FCL insisted that IGI should show good faith in the insured by accepting their stance and that any lack of information was unintentional. FCL had no intent of violating the "Duty of Disclosure". Considering the longstanding relationship, IGI had very little choice than to accept FCL's plea and find a way out of this situation.

The Implementation:

IGI team went back to their office in Lahore and compiled a comprehensive risk survey report providing answers to all the questions posed by reinsurers. It was now time to reach out to the reinsurers and provide satisfactory explanation about the state of affairs. Only if the risk engineers could successfully justify reasons for shutdown and plant preservation, IGI could think of getting discounted terms for the renewal. This was a very critical stage of the business relationship with FCL.

The reinsurers were provided an in depth explanation of gas shortage faced in Punjab and why there had been shutdowns in the winter season. IGI risk engineers were prudent enough to gather statistics of demand and supply form the national gas regulatory authority. Also, they showed plant shutdown records for the past 6 years which they had collected from FCL to ascertain that this was not happening for the first time and that FCL had managed such situations safely for 5 years now. A professionally drafted risk survey report with sufficient pictorial evidences helped explain things in a useful manner.

A detailed account of plant preservation procedures was presented. Since the plant contains flammable chemicals, it was purged by nitrogen while in shutdown phase. Gas composition monitoring after purging of the equipment and pipeline was also followed strictly.

It was confirmed through sources on the plant site that no safety norms were bypassed as suggested by the Original Equipment Manufacturers (OEMs) and other related competent authorities while the plant is in preservation mode. Further confirmation was given that all installed fire protection system is always in active mode and there is a proper rapid response arrangement at the site to tackle any emergencies.

Having discussed the risk survey report at length and having satisfied the reinsurers on most of the concerns, it was now time to find a way out for premium discount. IGI risk engineers had given a comprehensive picture of the plant idleness and now the challenge was to reflect this comprehension into negotiations for lenient terms.

On the other hand, FCL was insistent to have terms as early as possible. IGI feared that some low rated companies had unfortunately offered unrealistically thin rates to FCL which were threatening IGI's prospects and repute. The marketing head at IGI was fearful of losing a nice portfolio, which would also impact the motor premiums. It was a time of severe distress for the underwriters. The deal could make or break fortunes for IGI.

After much deliberation, IGI came up with an innovative idea that could help retain the client by offering significant discount. This idea was the "Idle Plant Clause". The clause read as follows:

"In the event of the plant remaining idle for more than 30 consecutive days underwriters agree that the premium will be adjusted at expiry at 60% of the property damage and business interruption rates for the period of idleness in excess of the 30 days. In case the plant is idle, the coverage will be restricted to fire & allied perils – fire, lightening, explosion and aircraft damage."

Breaking down this clause shows that there is an inherent deductible of 30 days i.e. the clause only becomes applicable in case plant has been out of operation for more than 30 days. In case the plant remains idle for more than 30 days, the premium would be adjusted at 60% of the rate which means a 40% discount for the client. This happens to be a huge offer!

From the insurer's perspective the discount offered was for the period in excess of the 30 days. Another favorable factor for IGI was that it had to offer no upfront relief to the insured and the 40% discount would be adjusted in the next year's renewal. Also, it was part of the insured's obligation to keep the insurer posted about idleness of plant every month so that there were no surprises at a later stage. From the client's perspective, the plant would be at "Comprehensive Machinery Insurance including Business Interruption" during operational stage however the cover would shift to "Fire and Allied perils including Business Interruption" during shutdown. So the plant would still be fairly covered when shut down and all this would be backed up with 40% discount for the idle period in next year's renewal.

This proposal was presented to the reinsurers in a high profile meeting which included IGI's top management including the Chief Technical Officer, Chief Executive Officer and the Chief Underwriting Officer. Reinsurers appreciated IGI's proactive approach to come up with a solution on their own and gave positive feedback on the idea of providing an idle plant clause with premium adjustment at 60% for idle period.

With reinsurance support now available IGI was delighted and went back to the client with a whooping discount offer of 40% (in the form of idle plant clause). Considering the relationship with IGI and excellent service standards in other lines of business, the client showed intent to place the risk with IGI again. With this confirm order, FCL also requested to cancel the existing policy (which happened to be without the "idle plant clause") and issue a fresh policy with immediate effect (which would now include the "idle plant clause"). This would mean that all the duration for which the plant now remained shut down could be accounted for a premium adjustment at the end of policy period. Also, this meant that since the plant was currently shut down so the existing cover would be Fire and Allied Perils and it would only shift to Comprehensive Machinery Insurance once the plant became operational. It was further agreed that FCL would send a monthly update to IGI on the plant status and apprise them of any changes in risk profile as soon as practically possible. IGI officials had a detailed discussion with FCL on how significant "Duty of Disclosure" was and how keeping the insurers unaware about any developments could compromise FCL's coverage. FCL's management showed a mature attitude and agreed to all the concerns raised. Things finally looked in order!

Reaping Mutual Benefits:

While IGI as an insurer was able to retain a healthy business relationship, FCL got a fair offer of 40% premium discount on idle duration of the plant.

A risk that mutually looked quite unacceptable for the reinsurers was finally accepted on account of prudent risk management services and keen understanding of the scenario.

Rigorous questioning regarding the plant preservation procedures and OEMs compliances from IGI helped the reinsurers establish that FCL was doing all the necessary measures to keep the plant safe even during shutdown and therefore, they were confident to continue cover.

IGI's underwriters were highly acknowledged for coming up with an innovative thought of "Idle Plant Clause" which resulted in a truly win-win situation.

Learning Outcome:

Insurance operations are pre-dominantly focused on complying with the underwriting guidelines and philosophy. On the other hand, the changing industry and innovation may require new insurance offers not previously available or rarely used in the market. Not being considerate of the changing demands of the industry may lead to losing clients.

This case study has cracked a common myth that the best way to operate is to stick with the norms. Instead it has been established that extraordinary circumstances require extraordinary understanding and innovation in coverage. Using a rarely used clause can make the difference between winning or losing a business prospect. Avoiding a clause merely because it is not used often may not be a sufficient justification for a well-versed underwriter. The insurers have to develop the ability to think out of the box to cater for emerging customer needs. Innovation and fluctuation in industrial operations asks for innovation in insurance too. In fact insurers who think out of the box tend to attract businesses which are themselves innovative and growing.

Vigilant risk analysis by the underwriters in liaison with risk engineers can help offer coverage for any risk at all. Terms that seem unrealistic and difficult to be backed by reinsurance, can be justified and even acquired if the insurer has a sound technical understanding of the risk.

As insurers, it is essential that underwriting guidelines are not used as impediments to doing business. With a soft market and industries facing financial crunch, insurers may be required to come up with new ideas to make insurance sustainable. Once the insurers develop the confidence that risk is well managed, pricing adjustments should be made realistically to cater to client needs. Not to forget, that offering hefty premium discounts to the clients just in search of a business portfolio without actually understanding the risk and controls, may back-fire for the insurer. From real experiences it is confirmed that adequate information collection and analysis can do wonders. Insurers need to have a humble and convincing attitude where they can make the insured realize the significance of disclosing information to the insurer and treating them as valuable business partners. Listening keenly and speaking wisely can help resolve a lot of problems.

Testimonials from FCL's General Manager:

"IGI surprised us with their understanding of risk in a fertilizer plant. We never thought so highly of insurers. However, because of IGI, we now see insurance as an industry with impressive technical capabilities backed by sound understanding of financial matters.

Thanks to IGI, we were able to sustain our insurance program in testing times when the plant was shut down. We were able to avail a fair discount of 40% which was adjusted at renewal.

We have learned that sharing information openly with insurers can be of much help. I appreciate IGI risk engineers who keep visiting our site for a regular analysis of how things are going on and ascertain that all required procedures for plant maintenance are being followed. A third eye coming to observe our procedures, really helps in terms of improvement and stringent control.

Our directors were reluctant to continue the insurance program at such high premiums last year, so I am glad that IGI could offer us a significant discount for the idle period thereby making the program more sustainable for us. I am also glad that the plant is covered under a Fire Policy even when it is shut down."

General Manager, Fertilizer Company Ltd.