# integrated

Bringing clarity to complex insurance claims

*Issue Three 2017*

## INTEGRA EXPAND TEAM – LAUNCH UPSTREAM ENERGY

## MAKE IN-HOUSE ENGINEERING EXPERTISE COUNT

## UPSTREAM ENERGY IN FOCUS

## MINING: DEFINING CLAIMS PRINCIPLES

## CONTENTS



**"Having a multi-skilled in-house team working in an environment that encourages collaboration and teamwork has been shown time and again to deliver benefits to clients"**

PAGE 15

We would like to thank Dominik Adamus (Transmission Capital Partners), Jonathan Blackstaffe (AIG), Charles Bush (Zurich), Alan Long (Willis Towers Watson), Mike Ritson (Cwind) and Michael Van Bergen (Marsh) for their invaluable contribution to this edition of **integrated**.



Content marketing and design services provided by Chantry Associates Limited. www.chantryassociates.com

integra
TECHNICAL SERVICES

Integra Technical Services Ltd.
6th Floor, 117 Houndsditch,
London EC3A 7BT
Tel: +44 (0) 203 879 8320
www.integratechnical.com

Welcome to the third edition of **integrated**, our magazine devoted to the specialty insurance lines marketplace and sharing knowledge, experience and insight to improve claims management. We hope you enjoy reading this edition and, as always, would welcome your feedback and ideas for articles.

The second half of 2017 has seen a hive of activity as we continue to enhance our capabilities and broaden our service offering. New strategic alliances have expanded our footprint and enable us to offer a joined up adjusting proposition for both local and Reinsurance markets in new countries (page 2); nine new appointments means we now have 38 Loss Adjusters, enhancing our Construction, Marine Liabilities, Ports & Terminals and Renewables propositions in Houston, London, Philadelphia, Singapore and Sydney; in addition we've hired a Chief Financial Officer to join our Executive Management Team and to take responsibility for our financial planning and reporting (page 4); and we've introduced the Upstream Energy line of business to our portfolio of services.

We are particularly delighted by our expansion into Upstream Energy as it means that we can now offer adjusting capabilities from 'well to market'. We'll be talking more about our proposition in the new year, but meantime on pages 10 to 13 we present the outcomes of a discussion set up by Sam Foster that considers root cause analysis and whether policy wordings require more clarity around issues such as corrosion. It raised some interesting debate about claims protocols and whether lessons could be learnt from other industries to improve the claims experience, see reference to The Mining Insurance Group's Claims Protocol (page 20). I would be interested in your views, so please do email me - leo.dixon@integratechnical.com

We go into the new year as a stronger company with broader capabilities; with an absolute focus on maintaining our style of adjusting losses and the quality of our work product that has served us well and which continues to provide added value to our clients. There is no better example than on page 14, where a case study articulates how our collaboration and teamwork combine with a highly qualified and experienced group of Loss Adjusters to provide our Reinsurer client, the Cedant and Insured with an excellent claims outcome.

It's been a busy year for Integra Technical Services both in terms of working on new and existing instructions and in terms of strengthening the company, and we look forward to continuing our momentum into 2018. This would not be possible without the excellent support we receive, for which we would like to thank you.

On behalf of the team at Integra Technical Services we extend our best wishes for the festive period and wish you and your families a happy and successful 2018.

**Leo Dixon BSc (Hons)**
*Chief Operating Officer*
Integra Technical Services Limited

# SCOR ANNUAL CLAIMS CAMPUS

**Integra Technical Services recently supported the SCOR Annual Claims Campus, attended by 25 Claims and Underwriting professionals from European, Middle Eastern and African Cedant Insurers.**

For more than 40 years, the SCOR Campus training program has provided partners with access to specialist seminars and conferences to support their learning and development. Leo Dixon, Chief Operating Officer at Integra Technical Services, explains "working with Chris Foster, a partner at law firm HFW, and Peter Reupke, Principle Associate of forensic investigation firm Hawkins, we took delegates through a hypothetical claim scenario involving fire and explosion to an apartment block, that had both commercial and residential tenants."

Engaging the audience by looking at the claim development step by step Leo, Chris and Peter set out some of the key activities and challenges the stakeholders face when handling the response to such an incident, from the immediate actions through to loss mitigation, root cause analysis and potential subrogation.

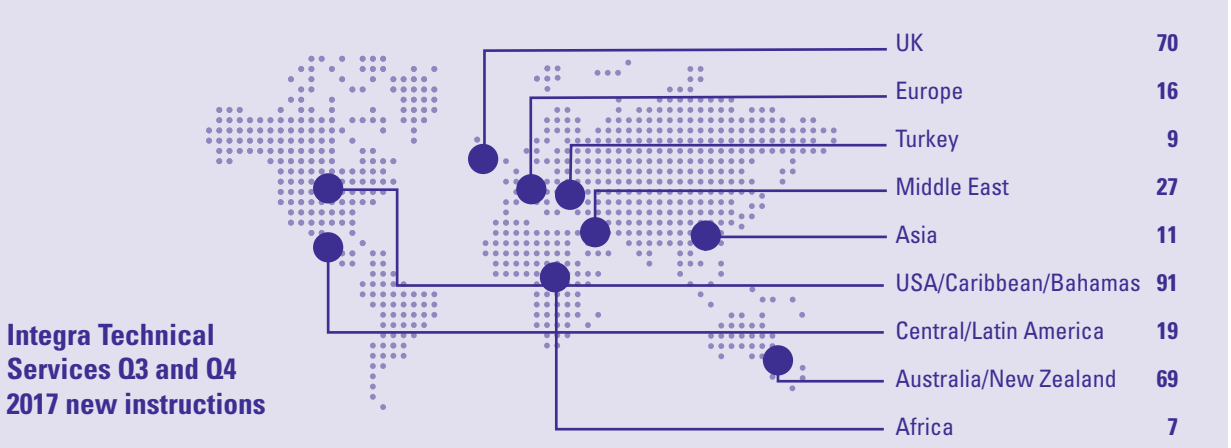
If you would like Integra Technical Services to support your in-house training and development then please email leo.dixon@integratechnical.com

# STRATEGIC ALLIANCES EXPAND INTEGRA'S FOOTPRINT

Integra Technical Services announced in October 2017 that they had entered into strategic alliances expanding their footprint to include Russia, Ukraine, Uzbekistan and Pakistan, allowing them to work in collaboration on technical lines claims that are insured locally and/or reinsured in international markets.

LABB LLC take a leading position in the Russian loss adjusting community and are headquartered in Moscow. LABB, also, have offices in Ukraine and Uzbekistan.

Hanlay & Company (Pvt) Limited is Pakistan's leading Loss Adjusting and Risk Assessment firm, providing services to the Insurance and Risk Management Industry since 1963.



TEAM IN THE SPOTLIGHT

# NORTH AMERICA

*Integra Technical Services first established their North American team in 2013, with an office in Houston, Texas. In 2017 they expanded the team with two new appointments and opened an office in Pittsburgh.*

*With experience in Oil & Gas, Petrochemicals, Construction & Engineering, Mining and Property lines of business, the team have been rather busy this past few months following, the increased Hurricane activity.* **integrated** *still managed to catch up with them to learn more about this team.*

**John Nelson, Executive Adjuster, Houston**
John is the longest serving member of the team, having joined Integra Technical Services in 2013. With an interest in history, John enjoys the outdoors life having ascended Mt. Rainier, Mt. Hood and Mt. Baker. Originally from New Orleans he considers himself an armature saucier (we'll leave you to look that up – but no prizes I'm afraid!)

**Aaron Prefontaine, Executive Adjuster, Houston**
Aaron joined Integra Technical Services four months ago from York Specialized Loss Adjusting. Aaron is good with his hands and adept at woodwork (recently made a great chest for his youngest daughter), as well as casting silver jewellery. Apparently, he's also a film buff with a fully catalogued film library, his favourite film being American Werewolf in London!

**Fred Popko, Senior Executive Adjuster, Pittsburgh**
Prior to joining Integra Technical Services in September 2017, Fred practiced as both an in-house insurance company engineer/adjuster and an independent claims adjuster. Fred's another history buff and his favourite movie is Gladiator; he loves the opening scene. His other hobbies include enjoying his wine collection and cooking meats and fish on a smoker.

# ANOTHER CHARTERED LOSS ADJUSTER FOR INTEGRA

Andrew Gibson, Executive Adjuster, Integra Technical Services has recently qualified as an Associate of the Chartered Institute of Loss Adjusters. A qualified lawyer, shipbroker and commercial arbitrator, Andrew has worked in the marine, stevedoring and transport / logistics sectors since 1981 and joined Integra Technical Services in 2012. Ewan Cresswell, Chief Executive Officer, Integra Technical Services said "this is a magnificent achievement and our congratulations go out to Andrew. We see this as an important qualification and are delighted to have another Chartered Loss Adjuster in our team."

# INTEGRA TECHNICAL SERVICES ENHANCE CAPABILITIES

In response to continuing support from stakeholders and increased demand for their services, Integra Technical Services has enhanced their capabilities with the following appointments increasing the number of Loss Adjusters to 38:

**Keith Charles,** London
Ports and Terminals including Crane Operations, Marine & Upstream Energy

**Sam Foster,** Dubai
Upstream Energy, Downstream Energy and Renewables

**Benjamin Neat,** Sydney
Construction & Engineering and Property

**Steve Norrington,** London
Oil, Gas & Petrochemical, Power Generation and Construction

**Fred Popko,** Pittsburgh
Downstream Energy, Power Generation, Construction & Engineering and Property

**Aaron Prefontaine,** Houston
Environmental Liability, Downstream Energy and Property

**James Pummell,** London
Renewables, Power Generation, Upstream Energy and Construction

**Matt Robinson,** Singapore
Renewables, Construction & Engineering and Property

**Ian Watt,** London
Renewables, Power Generation, Property and Business Interruption

# CONSTRUCTIVE LEARNING

"I know how to operate this plant, but need advice to recover from this incident as quickly as possible". Adam Humphrey, Chartered Loss Adjuster with Integra Technical Services, was presenting at Capital Consulting International's (CCi) 'Annual Claims Debate' on 24th November 2017 at Lloyd's of London, when he recounted a conversation with a plant manager of a chemical facility, following a major fire.

Presenting "An introduction to fast tracking claims" with Henry Densham, Associate Director of CCi, and Keith Tuffin, Partner of RGL Forensics, the session looked at how project management principles that are well known in the construction sector can be used to good effect to manage large and complex insurance claims.

Adam explains "A collaborative approach with all parties working to a single loss management plan, incorporating agreed milestones, can benefit all stakeholders. It is particularly effective in time element claims, such as business interruption and delay in start-up, to facilitate business recovery and loss mitigation efforts. Time and again, I have seen the insured directly benefit from the advice of the experts appointed by their Insurers, demonstrating an added dimension to the value of insurance at a time when they need it most."

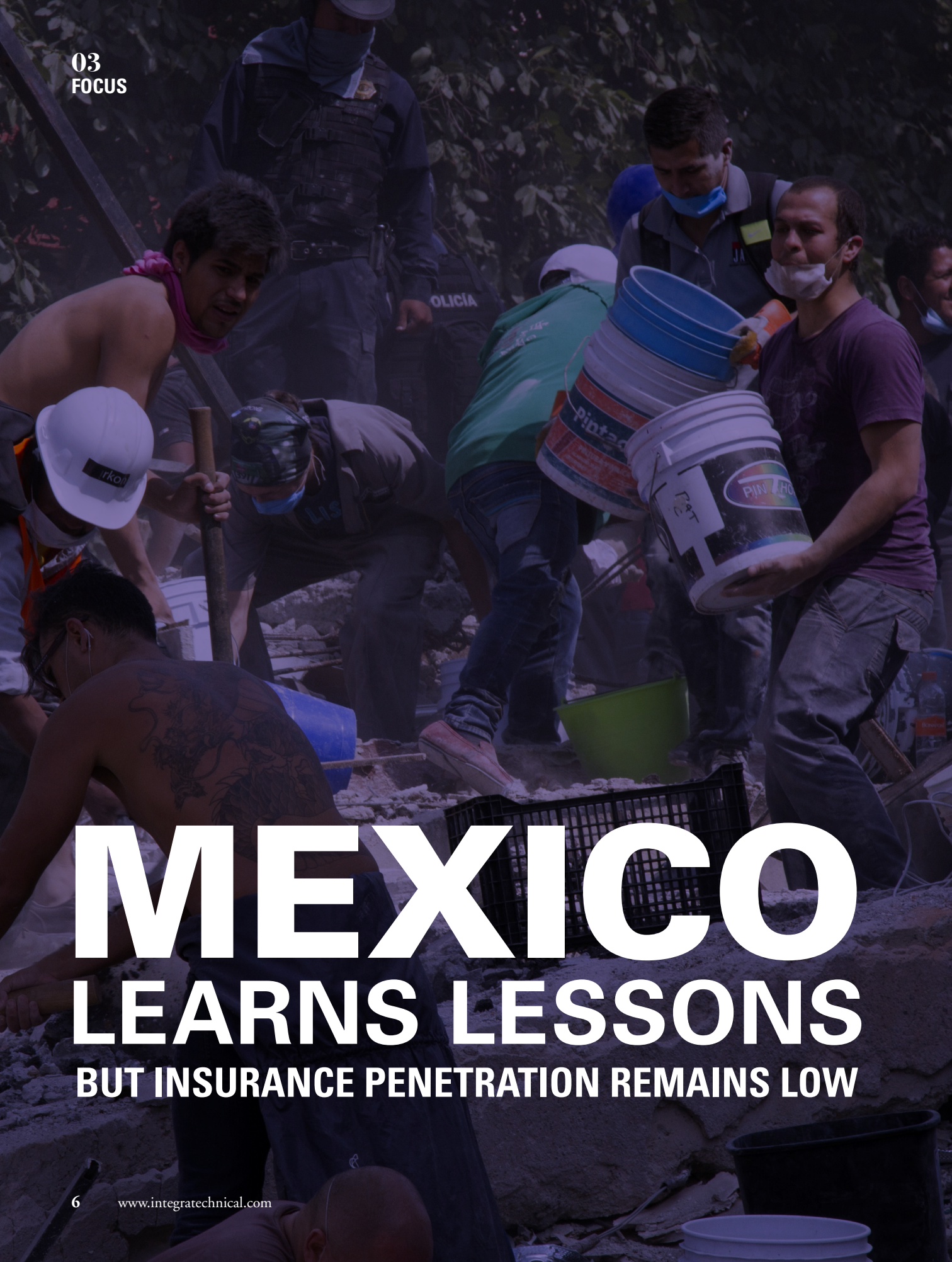
***Find out more about Adam's presentation and Integra Technical Services' Fast Track Service by emailing*** adam.humphrey@integratechnical.com

# RACING AROUND THE ISLAND

The annual Round the Island Race is a one-day yacht race around the Isle of Wight, an island situated off the south coast of England. The race regularly attracts over 1,400 boats and around 15,000 sailors, with competitors coming from all over the UK, other parts of Europe and as far away as the USA.

This year saw Integra Technical Services enter the race with a team made up of David Lammond, Luc Tricard, Dom Johnson, Chris Ling, James Evans, Danny Brooks, John Pryce, Angus Bradley, Ewan Cresswell and Leo Dixon.

With a 5.50am start time on Saturday 1st July, the Integra Technical Services team chastened themselves for a breezy day on the water. In the Match 40 class, they led the fleet up in the middle of the Solent towards the Needles, but were pipped to this first milestone by two others. After going the long way around the wreck at the Needles, they took their time hoisting the spinnaker and slid back to 6th place. From that point on the team had the 'afterburners' on and started working their way up to 3rd place by Ryde Sands and as they closed in on the finish line they had cut the first two boats lead from approximately 10 minutes down to two minutes coming 3rd overall with a racing time of 7hr 31m.




# MEXICO LEARNS LESSONS

## BUT INSURANCE PENETRATION REMAINS LOW

**In September 2017 two huge earthquakes struck Mexico. Damage and losses have been lower than expected due to the implementation of different measures in Mexico City. However, while construction regulations have come to the forefront once again, one of the challenges facing the country is how to educate the population about the benefits of insurance.**

Under most measures, Mexico is one of the top ten earthquake prone countries of the world. It is located where five tectonic plates interact - North America, Cocos, Pacific, Rivera, and the Caribbean - and this causes constant movement of the earth in the south and central regions of the country. On average, Mexico reports 40 low intensity earthquakes every day.

Before 2017, the last major earthquake to hit the country was on 19th September 1985 when an 8.1 magnitude earthquake struck Mexico City, causing serious damage to the Greater Mexico City area and it is believed more than 10,000 deaths. In the aftermath of this incident construction regulations in Mexico City were changed, resulting in the construction of buildings that are more resistant to earthquakes.

Twenty two years later, to the day, these new regulations were seriously put to the test. On 19 September 2017 at 1:14 pm local time, a 7.1 magnitude earthquake, with its epicentre in the state of Morelos, struck Mexico city. Fortunately, the similarities between the 1985 and 2017 earthquakes ended there.

Earthquakes in Mexico City are usually considered to be more intense, as the city is built over a dry lake bed and, in general, lacks the bedrock to absorb the impact of the waves. However, this latest earthquake was an intraplate type, so the epicentre was located some 57 kilometers underground, on the Morelos and Puebla state line. Substantial building damage resulted in some 31,000 insurance claims, estimated insurance losses of USD529 million and 370 people were reportedly killed.

As well as the improved building regulations, residents had (at least) a 50 second warning. In 1991 Mexico City and its metropolitan area introduced a system that detects an earthquake and if the magnitude is greater than 5.5 on the Richter scale, a warning system is activated. This gives residents some 50 seconds to react before the earthquake waves impact the City.

Twelve days before the Mexico City earthquake, on 7 September 2017, a much larger earthquake struck the southern states of Tabasco, Chiapas and Oaxaca at 23.49 local time. With its epicentre in the Gulf of Tehuantepec and measuring 8.2 on the Richter scale, this earthquake caused substantial building damage, particularly in Chiapas and Oaxaca, and generated a tsunami with waves of 1.75 metres above tide level. 1.5 million people were affected, more than 40,000 buildings damaged and 98 people died. Some 7,570 insurance claims have been reported and losses are estimated at USD331 million[1].

According to Arturo Suaste, Senior Adjuster, Integra Technical Services Mexico "these earthquakes did not result in large and complex claims affecting Energy, Construction or Manufacturing, instead they caused damage to residential, office and retail property with many of the commercial properties belonging to Government entities. This helped to demonstrate the lack of insurance penetration in Mexico."

According to country risk maps, 41% of the territory is exposed to damage from natural disasters, but only 8.6% of households hold residential-type insurance. Insurance regulations in Mexico require Insurance Companies to set up technical reserves, capable of solving any insured eventuality. In the case of the recent earthquakes of the 7 and 19 September, basic protection schemes, specifically housing, were the most affected in the treaty markets, and facultative insurance coverage was considerably lower than expected.

It's clear that post-earthquake damage and deaths have been lower than expected due to the implementation of different measures in Mexico City.

However, as Arturo suggests "while construction regulations have come to the forefront once again, one of the challenges facing the country is how to educate the population about the benefits of insurance coverage. One possibility is the implementation of compulsory homeowner's insurance (in the same vein as automobile insurance) to alleviate the material and personal losses that accompany this type of catastrophic event."

The challenge is to continue improving Mexico's preparedness for a catastrophic event and insurance must be part of that solution.

1 Mexican Insurance and Surety Association (Asociacion Mexicana de Seguros y Fianzas, AMIS)

# THE WETTEST ATLANTIC HURRICANE EVER

**Hurricane Harvey was the first major (Category 3 plus) hurricane to make landfall in the United States since 2005. Dumping a years' worth of rain in a week, flooding was the major cause of loss with reports suggesting that sodden drywall, flooring, furniture and other damaged clothing and goods added up to an estimated 8 million cubic yards of rubbish in Houston alone, enough to fill up the NRG Stadium two times over.**

Hurricane Harvey first hit near Rockport, Texas on 25th August 2017 as a Category 4 hurricane, with wind speeds of around 130 miles per hour. Whilst it rapidly reduced in strength to a tropical storm, it made landfall on three different occasions as it loitered around Texas for more than a week, affecting a vast area.

What set this hurricane apart from others was the huge amount of rain that fell. More than 130 centimetres on some parts of Houston breaching two flood control reservoirs, as 27 trillion gallons of rain fell on Texas making it the wettest Atlantic Hurricane in history. It even led to the National Weather Service having to update the colours they use on weather charts. Chris Milliner, a geologist and postdoctoral fellow at NASA's Jet Propulsion Laboratory suggested that the weight of the water temporarily sank the city by two centimetres.

Houston was well prepared for the hurricane, with Energy, Construction, Manufacturing and other firms taking appropriate action to protect their property from wind damage, but there was little they could do to prevent damage from such catastrophic flooding. The economic cost has been estimated at around US$200 billion, with damage to more than 135,000 homes and a million vehicles.

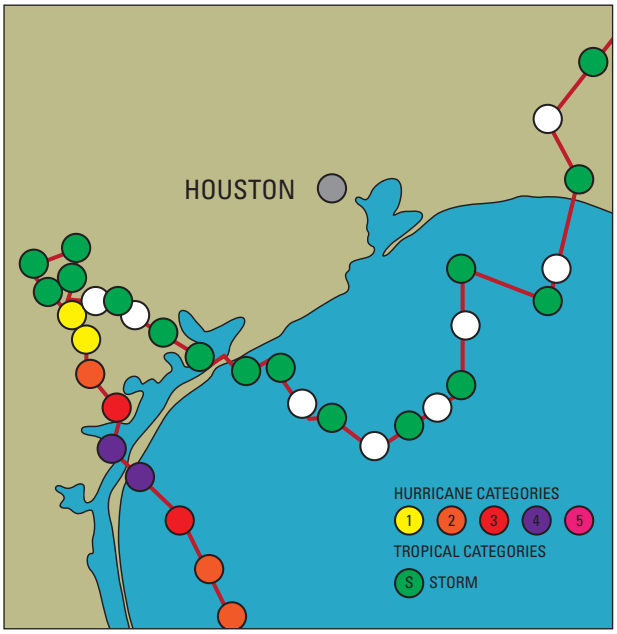
Similar to the Mexican earthquakes (pages 6 and 7), one of the personal tragedies to emerge has been the lack of insurance. More than 70% of homeowners were not insured and have had to rely on FEMA Disaster Recovery Assistance. Many will have lost everything and it would seem that the poorest have been most affected, living in the areas more susceptible to flood.

The main challenge for insurance professionals and Loss Adjusters has been getting to the damaged property to assess the damage and help the Insureds recover. With more than one third of Houston under water, travel was difficult in the early weeks and many people were unable to leave their homes for days.

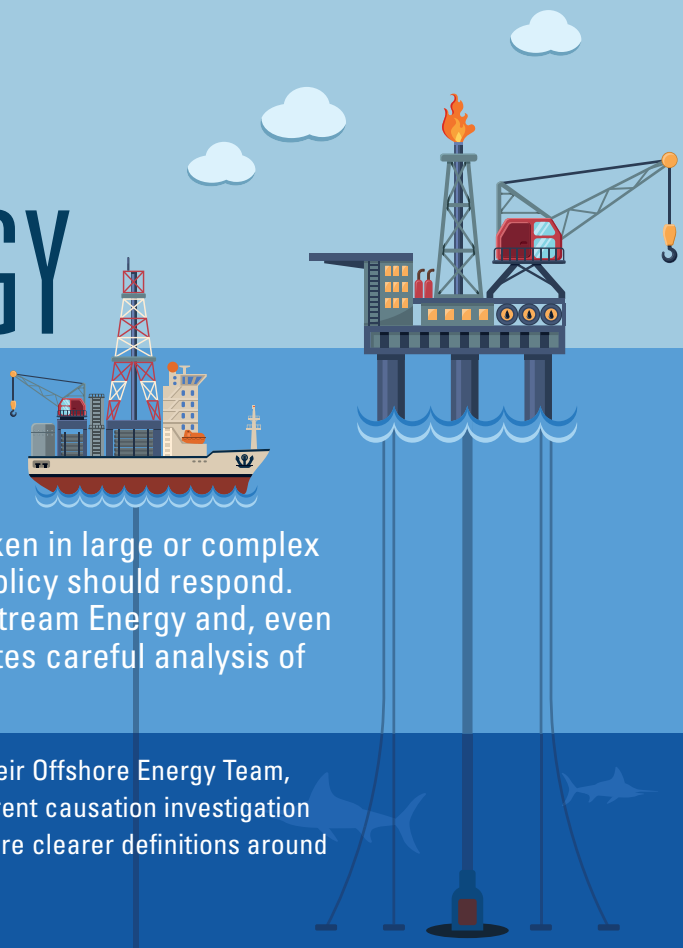
Aaron Prefontaine, Executive Adjuster at Integra Technical Services explains "many people could not get far from their home area. I was lucky as my home was not flooded, but we were still marooned for days. Even once I could travel to the damaged sites, for a number of locations it was a few weeks before the flooding had totally receded, and we could visibly see and assess the damage."

One of the more newsworthy stories led to many calling for chemical risk management to be reviewed. A chemical plant in Houston suffered explosions and fire damage after power supplies needed to refrigerate volatile peroxides were knocked out.

Aaron confirmed that Integra Technical Services were "playing their role in helping businesses recover, working on a number of losses mainly affecting energy related construction projects. In some instances the construction projects themselves did not appear to have sustained significant damage; however, support facilities such as control rooms, fabrication facilities and pipelines were affected which could still lead to delay in start-up claims."



# UPSTREAM ENERGY IN FOCUS



A technical root cause analysis is often undertaken in large or complex loss scenarios to determine how an insurance policy should respond. This can present some unique challenges in Upstream Energy and, even once the cause has been established, necessitates careful analysis of policy wordings.

Having recently joined Integra Technical Services to lead their Offshore Energy Team, Sam Foster set up a discussion to consider whether the current causation investigation process was working and explore if insurance policies require clearer definitions around issues such as corrosion and what constitutes damage.

## Root cause analysis - exploring improvements and best practice

When a Natural Catastrophe strikes, investigations into the cause of the loss or damage typically aren't required, however for the majority losses in the Upstream Energy an investigation into the root cause of the loss is essential for both the Insured and their Insurers. In some cases, cause is readily apparent so limited further work needs to be undertaken. In other cases much more involved root cause analysis is necessary to determine more precisely what caused the loss or damage, whether there is an admissible insurance claim and, if so, to what extent.

With Oil and Gas companies in the Upstream Energy Sector constantly pushing technological boundaries, operating in ever deeper waters and in more remote and hostile environments, conducting a root cause analysis can be inherently challenging; for example, requiring specialist vessels and being dependent upon the right weather conditions to inspect the damaged equipment.

This brings complexity, cost and delay to the claims handling process, with no guarantee that the insurance claim will be recoverable. It's easy to see why Insurers and Insureds aren't enamoured at the thought of potentially spending millions of dollars to undertake a root cause analysis, especially when, for Insureds, there's no guarantee those costs will be recovered or the claim itself indemnified.

## Appoint a single expert

Michael van Bergen, Claims Consultant, Marsh, suggests "those losses where the Insured and Insurers appoint multiple experts can often become more contentious and add extra layers of complexity, especially when you consider multiple parties investigating proprietary information and assets, with varying scopes of work and agendas, and where we need them to, at least, come to complementary conclusions."

Whilst there might be a good argument for all parties to agree at the outset to be bound by the decision of a single expert, Jonathan Blackstaffe, Oil Rig Technical Lead, AIG warns "this option can cause nervousness that the root cause analysis will not meet your expectation and you will not be comfortable with the integrity of the investigation."

Appointing a single expert would not always be appropriate. Insurers may, for example, have opposing views to those drawn by the Insured or be reluctant to share cost, when in their consideration the loss seems highly likely not to be covered. However, Alan Long, Executive

Director Natural Resources, Willis Towers Watson believes "that working with the Insured's own investigation findings would most certainly reduce the frequency and amount spent by Insurers undertaking root cause analysis and ultimately stop unnecessary and frustrating delays in the claims management process."

Sam Foster, Regional Manager Middle East & Africa and Offshore Energy Lead, Integra Technical Services, believes "having a single expert in certain scenarios can be helpful, as it brings speed and clarity to the process. Insurance Brokers can play a key role by encouraging the Insured to get the Loss Adjuster involved in the investigation as early as possible and ensuring that the Insured makes the process as transparent as possible."

When the Loss Adjuster can agree the claims strategy before key decisions are taken, it allows them to play a pivotal role between the Insured and Insurer - agreeing the scope of the root cause analysis, potentially organising for costs to be shared and working in partnership with the Insured to assess potential engineering experts. Michael considers "this streamlines the whole claims process and lessens the work for the client, meaning they are less inclined to become frustrated by the claims process. The alternative is that the Insurers are always playing catch up and if they don't agree with the work carried out they are left with little choice but to appoint their own experts, which can delay the claim by months, or even years."

## Narrow the RCA scope

Controlling the scope of the expert review has time and again been seen to speed up the claims resolution. Without clear instruction, experts can go into molecular levels of detail, searching for deeper reasoning as to the cause of the loss or damage when it is not needed.

There can, also, be a tension between what Insurers' Risk Engineers want to see in a root cause analysis and what those handling the claim need, to confirm how the policy will respond.

Charles Bush, Head of Property, Energy & Construction claims, Zurich Insurance concurs "where the policy is 'All Risks', we should just be trying to establish whether any exclusions apply. Once you can confirm the claim is covered then the claims process should move along to considering the scope of damage and what the policy is going to indemnify the Insured for."

When an incident occurs, the Insured's own processes invariably trigger an investigation to identify lessons learned and actions for the future. Alan would like to see "the Loss Adjuster working with the Insured's own incident investigation, bringing their expertise to the team and ensuring that an area of the report is devoted to the Insured's views on the likely cause and the necessary requirements of Insurers, with that part of the report shared so that Insurers can determine policy liability."

If the Original Equipment Manufacturer is involved it is virtually impossible to be part of their causal analysis as they keep their 'intellectual property' away from the commercial insurance market. Sam considers that "this can be further complicated by the requirement for the Loss Adjuster to sign Non-Disclosure Agreements to even read the root cause analysis report produced, which can handcuff the Loss Adjuster from reporting to their principals."

## Pragmatism

With subsea infrastructure installed in depths of over 10,000 feet (3km) of water, where the pressure is around 4,400 psi / 300 bar, recovering damaged equipment in order to determine the proximate cause of the failure can sometimes neither be technically nor commercially viable. Mobilising expensive vessels and equipment with experts having to remain on board during the investigation can quickly escalate costs. The Insured could potentially be committing a sum of money that could be equal to or more than the potential claims recovery or, if their policy includes a Claims Preparation Clause, it could significantly increase Insurers' exposure to the loss.

In these circumstances, it's important to take a pragmatic approach and this often means all claims stakeholders sitting down and working through the options. Sam suggests "in our experience the Insurers, Insurance Broker and Insured are usually keen to come to an agreement that prevents prolonging the claim and damaging long term relationships. Protocols for this can be put in place before the event, which have been shown to significantly improve the claims process".

Charles adds, "Like some of the other Insurers, Zurich advocates pre-loss workshops with their Insureds and involving Insurance Brokers and Loss Adjusters to work through hypothetical claims scenarios. We find they build trust and allow open discussion and agreement as to what the different parties will do and how they will behave when faced with such decisions."

Many would rightly question whether this commercially driven approach is sufficiently robust when you have a USD50 or USD100 million loss. Charles is of the opinion that "these workshops are a start, and are clearly not going to provide all the answers. The only way to be completely confident would be to fundamentally restructure the insurance policy, such that there was no longer the scope to debate policy clauses and definitions.

## Toward a claims protocol?

Root cause analysis remains hugely challenging because ultimately the concluding five lines of a 50 page report defines whether a client has a claim or not. Sam believes "a market wide protocol that confirms how root cause analysis should be carried out would be a major step forward. The aim would be to engage all the various types of stakeholder to produce best practice guidance to streamline the root cause analysis process and make it better for the Insured and Insurers,"

Fresh from the inaugural Mining Insurance Group Conference (MIG) (pages 20 and 21), Leo Dixon, Chief Operating Officer, Integra Technical Services points out that "The Mining Sector looked to the Lillehammer Terms of Engagement (LTOE) to help them draw up a Claims Protocol. Ultimately the MIG Board sanctioned a Claims Protocol that tackles this issue and others in the claims process that had historically caused disputes. In doing so the MIG Claims Protocol goes further than LTOE, in that it goes beyond what is expected of the Loss Adjuster, providing guidelines for each of the claims stakeholders (Insureds, Insurers, Insurance Brokers and Loss Adjusters) to collectively navigate and resolve the potentially difficult issues that polarise opinion and that, ultimately, can have a negative effect on relationships and brands."

To agree a market wide approach to root cause analysis in the Upstream market would be challenging, not least because there is significant difference in the scope of investigation as between an incident on a fixed or floating object and one to subsea equipment that is fixed to or trenched under the seabed, but this may not be something that's insurmountable with the support of the market and broking communities.

**Jonathan Blackstaffe**

Oil Rig Technical Lead, *AIG*

**Charles Bush**

Head of Property, Energy & Construction claims, *Zurich Insurance*

**Leo Dixon**

Chief Operating Officer, *Integra Technical Services*

**Sam Foster**

Regional Manager, Middle East & Africa and Offshore Energy Lead, *Integra Technical Services*

**Alan Long**

Executive Director Natural Resources, *Willis Towers Watson*

**Michael Van Bergen**

Claims Consultant, *Marsh*

## Reducing policy wording ambiguity

Upstream Energy Insurance Policies have traditionally tried to exclude losses arising from corrosion, but in recent times wordings have been drafted that refer to terms such as 'accelerated corrosion', 'unexpected corrosion', or 'corrosion as a cause or a consequence'. Whilst the intent of these redrafts was to create clarity, if the newly introduced terms are not clearly defined, they can create further ambiguity, perhaps leading to claims outcomes not meeting Insured's expectations.

Jonathan suggests "it's actually often simple: did the corrosion get caused by something that's covered or not? If the corrosion is a consequence of some covered loss then you pick it up and if it's not you don't. Charles agrees "I think corrosion is one of these things where people have a tendency to talk about it a lot but, in reality, I do not consider it to be as much of an issue. I remember Sam saying that everything corrodes at the speed it should corrode given the environment which it is in. So arguably is there such a thing as accelerated corrosion? I think the move to 'expected vs unexpected' corrosion is one way of addressing this, but I agree with Jonathan that corrosion is more often than not the consequence of something else that has happened and would, therefore, likely be covered under the policy."

The trouble is that not all insurers approach the subject in the same manner. According to Michael "some insurers often look to deny claims involving corrosion entirely, from the outset, rather than putting some attention to understanding the potential fortuities upstream of the corrosion."

One stream of thought that came out of the Lillehammer Energy Claims Conference in 2012 was to remove ambiguity by having an absolute corrosion exclusion and then offer the Insured the ability to buy back cover. Whilst many Insurers, Insurance Brokers, Insureds and Loss Adjusters would agree that this would be a sensible approach, with the continued soft insurance market there is little appetite to change policy wordings.

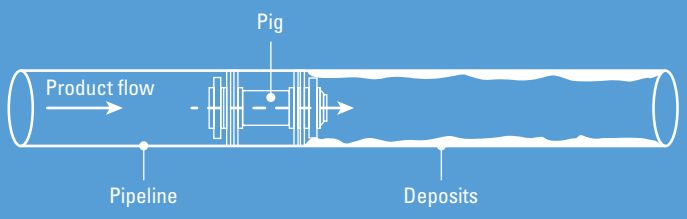
There are other similar discussions that arise in Upstream Energy loss scenarios, for example, relating to definitions of what constitutes damage. In Michael's experience "more sophisticated insurers would conclude that it is the inability to use the insured property as intended or put another way, its loss of usefulness." A good example for testing this interpretation is the 'stuck pig' in a pipeline loss scenario. Sam concludes that 'in this circumstance there is quite often no damage to the pipe and no damage to the pig, but the pipeline cannot be used for its intended purpose, which can lead to further consequential losses for the Insured'. Are the costs to remove the pig recoverable under the material damage section of the policy, or, taking it to the extreme, are the costs to lay a new pipeline recoverable? If the Insured buys Loss of Production Income cover (LOPI), has the material damage proviso been satisfied in order to trigger the LOPI cover?

Ambiguity in policy wordings would seem to be a feature at least for the foreseeable future, especially as there is a case to be made that this often benefits Insurers, Insurance Brokers and Insureds alike. Besides, the very nature of Upstream Energy means that there will always be losses that are novel, and if these are large and complex enough, the wording will come under scrutiny.

This places an increased emphasis on the Loss Adjuster's knowledge and experience. They need to be able to skilfully navigate the claim from 'cradle to grave' - from the damage assessment and root cause investigation, through the policy analysis and ultimately the audit and adjustment of the claim – working alongside a pragmatic Insurer whose first consideration is whether the loss triggers the policy, as opposed to how the claim can be denied.

### Did you know?

Pipeline 'pigging' is undertaken for a number of reasons, for example: to remove unwanted materials, such as wax, from the line; to examine the pipeline from the inside; to plug or isolate certain areas of the line; or to apply chemicals to the inside of the pipeline.



# IN HOUSE EXPERTISE, MAKING IT COUNT

When a shipment of naphtha became contaminated, Integra Technical Services brought together a multi-disciplined team that included Marine Cargo and Chemical Engineering expertise. They were able to reduce the claim cost and establish a potential subrogation action with a high likelihood of success against the vessel.

A petrochemical plant purchased 10,000 tonnes of naphtha, which was shipped in a product tanker from the supplier and then discharged into a storage tank that already held 22,000 tonnes of naphtha. The naphtha was intended as feed stock for a steam cracker in which ethylene and propylene are obtained by breaking down or "cracking" the naphtha rapidly in furnace tubes in the presence of steam and at a very high temperature, in this case about 800°C. The hydrocarbons produced, known as olefins, are reactive and can be further processed to give a range of polymers and other products, including plastics such as polyethylene and polypropylene.

It is normal procedure to test the purity of the feedstock naphtha before processing. In this case, organic chloride contamination of 50 parts per million was measured (against the specification of one part per million). Chlorides cannot be tolerated in this type of plant because they can cause corrosion in the processing equipment.

Integra Technical Services were appointed by international Reinsurers to establish the cause of contamination, investigate the extent of the loss and identify any opportunity for mitigation and recovery. Alistair Lamb, Managing Director – Singapore, Integra Technical Services explains "in addition to Marine Cargo knowledge, it was abundantly clear that we needed a Chemical Engineer. Knowledge of the petrochemical aspects of the product would be essential to assessing the loss mitigation options."

Collaboration and teamwork at Integra Technical Services really comes into its own when there is a complex claim. Andrew Gibson, Executive Adjuster, Integra Technical Services specialising in handling Marine Cargo losses, explains "having a highly skilled and qualified team means we are able to call on in house Loss Adjuster experts at short notice and bring them together quickly, without having to step outside our organisation." Given the specific petrochemical issues presented by this matter, Tony Thirkettle, an experienced chemical engineer with substantial petrochemical and claims management expertise and who has worked for Integra Technical Services since 2012, was brought onto the team.

Alistair, Andrew and Tony quickly agreed a strategy, roles and responsibilities - with Tony considering loss mitigation options, Andrew reviewing the marine elements (including the vessel charterparty contract and potential root cause of the contamination) and Alistair coordinating communications with the Reinsurer client, the Insured, local Cedant and the local surveyors they had appointed.

**MITIGATION OPTIONS**

Could the naphtha be de-contaminated, was there a way of removing the contaminant? Two options were considered, firstly whether it could be removed using a separation or adsorbent process and, secondly, was it technically possible to dilute the chloride to an acceptable level (below one part per million).

Tony explains "after thorough investigation, I found a patent for a process to remove the same chloride contamination from naphtha as in this case, which coincidentally had

CASE STUDY

been developed and registered by the Insured. Unfortunately, the plant described in the patent had not actually been built and no other similar facilities were available. Diluting the contaminant would have been theoretically possible but reducing the high degree of contamination to an acceptable level would have required a large amount of clean feedstock and posed logistical or tankage problems. The Insured needed the feedstock tanks back in use, so the contaminated product would have to be pumped into a vessel offshore. The whole process would have taken 18 months and been extremely costly, without any guarantee of success."

Two other options were then explored. Firstly, whether the contaminated product could be used as high-grade fuel to power boilers or gas turbines (an expensive but potentially workable option) or, as an alternative, finding someone prepared to purchase the contaminated product 'as is, where is' on a salvage basis. This final option proved successful and taking account of ancillary costs, enabled the claim to be substantially reduced.

**SUBROGATION**

At the same time as Tony was working through the loss mitigation options, Andrew was exploring the root cause and examining the marine cargo aspects, including whether standard operating procedures for cleaning cargo transfer pipes and vessel tanks had been applied prior to loading, identifying previous cargos that had been carried by the ship, and establishing the relevant responsibilities of the vessel owner under the charterparty contract.

Through these investigations it was established that neither the discharge facility nor the receiving plant had handled organic chlorides through the naphtha handling facilities (tanks, pipes etc.). Furthermore, it was identified that the cargo carried by the tanker immediately prior to this naphtha shipment was a cargo of organic chlorides. The vessel's crew had not thoroughly cleaned the tanks and pipes prior to loading the subject naphtha cargo which allowed the chlorides still present in tank bottoms and transfer pipes to contaminate the naphtha parcel. A subrogation claim is now being pursued against the vessel.

**IMPORTANCE OF EXPERTS**

Alistair concludes 'having a multi-skilled in-house team working together in an environment that encourages collaboration and teamwork has been shown time and again to deliver benefits to clients. In this case significant savings and most likely a successful subrogated recovery.'

**Alistair Lamb**
**BEng (Hons) LLM ACII**
*Managing Director - Singapore*
*Integra Technical Services*

Alistair is an experienced engineer with specialist working knowledge of rotating equipment, including gas turbines, power generation units and compressors, along with experience working on offshore oil & gas platforms and within petrochemical facilities.

He joined Integra Technical Services, Singapore, in 2015 as a Senior Adjuster and was promoted to Managing Director – Singapore in 2017. Since 2011 he has been involved in numerous energy claims onshore and offshore across Europe and Asia.

**Andrew Gibson**
**BA LLB, ClArb, ACILA**
*Executive Adjuster,*
*Integra Technical Services*

A qualified Lawyer, Shipbroker, Commercial Arbitrator and Chartered Loss Adjuster, Andrew has worked in the marine, stevedoring and transport / logistics sector since 1981 for companies such as Sydney Ports Corporation, P&O Ports and Horsell International.

He joined Integra Technical Services in 2012 and is responsible for handling major and complex Marine and related losses in the Australian and Asian regions.

**Tony Thirkettle**
**M.Sc. M.I. Chem. E.**
*Chemical Engineer,*
*Integra Technical Services*

Tony's career began with Bechtel, before working with Fluor and Davy in the Middle East and Europe. Experience includes project engineering for the design of several "secondary-recovery" projects in Iran and as a process engineer on petrochemical plant design.

Prior to joining Integra Technical Services in 2012, he worked for Munich Re as a property claims engineer specialising in oil, gas and petrochemical claims.

# SUSTAINING CONNECTIVITY

Offshore wind is becoming an important part of the energy mix for the UK. With 30 offshore windfarms generating more than 5.1GW of operational capacity and a further 4.5GW under construction, the UK generates more electricity from offshore wind than any other country in the world. Damage to high voltage subsea cables continues to be a major source of losses, both during the construction and the operational stages.

It has been widely reported that 70-80% of the total cost of offshore wind farm insurance claims relate to damage to high voltage subsea cables both array and export. Damage can delay construction projects or cause a reduction in capacity. According to Mike Ritson, who has extensive industry experience and is currently working with CWind "most claims I have been involved with occurred during the installation phase. The danger is that sometimes there is no physical outward appearance of damage when the cable quickly goes beyond the minimum bend radius. Many don't fail immediately, but operate for two, three or even five years before failures manifest themselves.

Dominik Adamus, Commercial Director at Transmission Capital Partners agrees "I think some of the findings we have seen recently are associated with manufacturing, but there is the theory that over bending and not handling the cable properly during installation may have contributed towards the faults that have occurred during operations."

Mike suggests that "if you start with a manufacturing fault and then you install the cable poorly you can exacerbate the problem, with the manufacturing fault alone not being responsible for the cable failure."

In years gone by, the subsea cables were on the critical path and any loss or damage had the potential to delay the start-up of the windfarm. Nowadays, windfarms are more complex and transmission towers and platforms tend to be more critical. With subsea cables being bespoke for each project and their cost far outweighed by installation, possibly by as much as three or four to one, and taking account of potential delay in start up, firms are now taking risk mitigation measures.

Mike explains "developers tend to purchase additional spares and extra cable to cater for potential loss. This enables them to react quickly if a cable fails, being able to mobilise a vessel quickly to repair the cable is the key to

minimising down time of the turbines and the exorbitant loss of earnings that directly impacts the developer."

With shortages in the availability of vessels and skilled labour, many companies are now entering into framework agreements, similar to the Atlantic Cable Maintenance Agreement (ACMA). This maintenance model has been used in the telecoms industry for decades, vessels are stood with repair spreads on them ready to repair faults. Mike explains "essentially, it's an insurance club that pays for these vessels to standby and all the member companies contribute to the running costs. These vessels are able to leave port within 24 hours of a fault being reported, which gives peace of mind to infrastructure owners. The offshore renewable industry is starting to look at this model as a potential solution to address the length of time currently taken to undertake power cable repairs within the sector, the rapid response mechanism of these consortia would have both a positive and significant impact on the developers.

This is all a sign that the sector is becoming more mature in its thinking and this is something Dominik would like to see more of. "I would prefer to see firms invest a little more at the beginning by getting a good installer, good cable etc. and just thinking more about the whole lifecycle cost, including the potential when it goes wrong and causes loss of power generation, when costs can quickly escalate into hundreds of thousands or even into the millions of pounds.

When insurance claims do arise during installation, quite often they can involve the Original Equipment Manufacturer, who has typically provided warranties. According to James Pummell, Loss Adjuster, Integra Technical Services "once manufacturers are informed of a possible issue during installation, they may withdraw the warranty from that part of the cable. Manufacturers will likely reinstate warranties once repairs have been completed, but clearly offshore repairs are costly and time consuming. If installation were to continue without repairs, and warranties are not in place, this can affect the Projects ability to divest the asset on completion."

Whilst most subsea cable losses relate to installation, there are incidents during the operational phase. In Dominik's experience these "tend not to be human error, but it can often be difficult to determine the cause."

James agrees "It is understood that the fibre optic cores in high voltage subsea cables are of particular interest in recent losses, in some cases they are believed to have been the cause of damage to power cores, but the mechanisms of these failures are not widely understood as you can end up with a short circuit between the cores which destroys that section of cable, and it is then impossible to dissect and do a root cause analysis."

**Key Impacts from cabling problems**

- Significant remedial work requiring replacement cables, storage sites, additional vessel costs and increased project management costs;
- Delay to start-up of the wind farm;
- Lost wind farm generation revenue;
- The transfer value determined by Ofgem being less than the actual costs of developing the transmission infrastructure (paid for by the developer under the Generator Build model);
- Delay in transferring assets to the offshore transmission owner
- Regular ongoing remedial work.

# AERODERIVATIVE OR INDUSTRIAL GAS TURBINES?

Gas turbines are at the heart of many modern power stations and often at the centre of large and complex claims. Alistair Lamb, Managing Director - Singapore, Integra Technical Services considers the two main types of gas turbine and some key claims considerations.

A gas turbine is the engine that provides the energy to generate electricity. They are constructed from compressor, combustion and turbine sections. Air entering the compressor is increased in pressure (and reduced in volume) through multiple stages of rotating compressor blades and static vanes. Compressed air is then mixed with fuel (gas or liquid) and ignited. The combusted fuel and air mixture is finally directed through the turbine where it expands through a series of rotating blades and static vanes and induces turbine shaft rotation.

Some gas turbines have a secondary turbine (known as the Power Turbine or PT) which is not directly connected to the gas turbine shaft but is, also, induced to rotate by the expanding exhaust gases. The electrical generator is directly coupled to the gas turbine shaft or to the PT shaft depending on the configuration.

Gas turbines developed from illustrious beginnings in the aviation sector to their more common contemporary use in power generation. Frank Whittle is considered as the father of modern turbines, with his 1930 patent. Whittle tried to stress the great simplicity of his design to Rolls-Royce, to which their reply was "…we'll soon design the bloody simplicity out of it". And so, the turbine age began.

The aviation industry has relied on gas turbines since the 1930s but industrial gas

turbines did not lag much, with the first gas turbine power plant at Brown Boveri, Switzerland, starting in 1939.

Aeroderivative gas turbines, as the name suggests, are derived from aircraft engines. If you look at a modern jet engine you will see the front fan blades, should you look behind these you would see the turbine engine core (the part used for power generation).

Military and aerospace investment gave aeroderivative gas turbines an early advantage, but industrial units have narrowed the gap. Whilst aeroderivative offer many advantages, power limitations and emissions issues make them less popular for large power generation. Coupled with this, they are more complicated (multiple independent shafts, higher pressure ratios, cutting edge technology/materials etc.), sensitive to upsets (e.g. poor fuel) and require operators to work at higher standards.

# AERODERIVATIVE AND INDUSTRIAL GAS TURBINE COMPARISONS

| | AERODERIVATIVE | INDUSTRIAL/HEAVY/FRAME |
|---|---|---|
| TYPICAL POWER | <60MW | Up to 400MW |
| MANUFACTURER | Rolls-Royce, GE, Pratt & Whitney | Siemens, Solar, Alstom |
| EXAMPLE MODELS | Rolls-Royce RB211 Trent | GE Frame 5/7/9 |
| EFFICIENCY | 37-42% | 28-34% |
| CAPEX (USD PER MW) | 1.1million - 1.5million | 0.4million - 1.3million |
| CHARACTERISTICS | Lightweight, efficient, small footprint, exotic materials, high pressure ratio, poor emissions | Heavy/bulky but more powerful and simpler engineering, low pressure ratio, good emissions |
| INTERNAL DESIGN | Multiple independent shafts to run at optimal speed with PT matched to generator speed | Single shaft fixed to generator speed, multiple variable compressor vanes to control airflow |
| TYPICAL USE | Offshore platforms, processing facilities, and LNG plants as simple cycle peaking plants | Baseload applications or as part of Combined Cycle GT (CCGT) or Cogen plants |
| OPERATIONS COMMENTS | Quick to ramp up and react to load changes, expensive OPEX | Slower ramp due to temperature growth, rapid starts affect Equivalent Operating Hours (EOH) |
| MAINTENANCE COMMENTS | Modular design, easy inspection, fast cooldown, 24-48 hour change-out, easier transport, overhaul off-site at dedicated facility, sensitive to issues such as poor fuel | 20-28 day change-out, overhaul at site with large team, long cooldown periods |

# CLAIMS CONSIDERATIONS

Whether you are dealing with an aeroderivative or industrial gas turbine claim, there are many common issues which should be addressed. Care should be taken to understand the equipment as there may be additional considerations which must be taken into account.

Here is a sample list of questions you could ask:

- What is the operating profile compared to design i.e. peak gas turbine running as base load?
- How does the operating hours or equivalent operating hours (EOH) stack up against the Original Equipment Manufacturers' (OEM) maintenance schedule?
- Are there any Long Term Service Agreements (LTSA) in place and how would such a contract impact the claim decisions?
- Is the gas turbine repairable or is replacement necessary? Cost must be a consideration; however, lead times are also key.
- Where would repairs be undertaken? Where is the best off-site aeroderivative overhaul facility (if any) and are there any logistical concerns?
- For industrial on-site repair, what is the availability of manpower, parts, tooling etc.?
- Does the OEM offer a lease engine option?
- Are there any special considerations, such as availability of long-lead items, or exotic components?
- Are there any alternative remedial solutions e.g. temporary repair, alternate sourcing of parts and/or equipment, expedited repair, fabrication and/or delivery?

# DEFINING MINING CLAIMS PRINCIPLES

**The inaugural Mining Insurance Group (MIG) Conference was held in London on 20 and 21 November 2017. Over 120 delegates from around the world attended and this was the next step in a collaborative approach that started in 2011, aimed at developing standards and best practice for mining insurance and risk management. One of the key sessions was a review of the MIG Claims Protocol.**

Mining operations are typically complex and, given the scale of most mining operations, any loss normally results in significant risk exposures for insurers. With larger mining companies operating their own Captive this, also, brings an additional level of complexity.

To help raise standards and deliver better insurance outcomes, in 2011 Insurers, Reinsurers, Insurance Brokers, Loss Adjusters, Insurance Buyers, Risk Managers and other key stakeholders came together to work on two specific initiatives. To develop a clear and coherent mining specific policy wording and agree a claims protocol.

Working collaboratively this group of key stakeholders were able to realise a number of benefits and could see how insurance and risk management standards would be further improved by working together. The Mining Insurance Group was formed, a cooperative forum to enable ongoing improvements in underwriting, risk management and claims and to facilitate an exchange of ideas and knowledge (www.mininginsurancegroup.com).

Stephen Thorpe, Managing Director Asia Pacific, Integra Technical Services explains "Integra Technical Services were at the centre of this group from the beginning. As proud members of the organising team for this successful inaugural conference, we facilitated a panel discussion for one of the key sessions that considered the success and next developments of the MIG Claims Protocol that was put in place back in 2012."

Having handled mining claims involving the protocol, joining Integra for the panel discussion were Kevin Miller, Major Loss Claims Adjuster at AIG and Jonathan Haysom, Senior Partner at JLT Specialty.

Prior to the conference, stakeholders that had been involved in mining before and after the MIG Claims Protocol came into effect were asked whether it had led to a better claims outcome.

The overwhelming response was that it had and the discussion raised some interesting points:

- How the MIG Claims Protocol reinforced the principles underlying global best practice for claims handling.
- The sharing of reports was to ensure factual integrity, not to provide editorial rights.
- The role of the claims preparer vs claims advocate – and how those roles were managed successfully.

To deliver a better claims outcome particularly for large and complex losses, the MIG Claims Protocol has a number of features:

- Open and transparent loss adjusting process.
- One Loss Adjuster pre-agreed by all stakeholders.
- The Loss Adjuster's reports shared with all stakeholders concurrently.
- An agreed loss management plan.
- Setting realistic time frames.
- An agreed dispute resolution process.
- The intention to endorse the MIG Claims Protocol onto the policy.

The one feature that exercised the minds of the audience and led to much debate was the independence of the Loss Adjuster. Whilst the MIG Claims Protocol requires openness and transparency, the fact remains that the Loss Adjuster is paid by the (Re)Insurers.

Stephen suggested "this should not be such a concern as all parties have to agree the Loss Adjuster appointment, which helps to ensure that they would not be too partisan one way or another."

While some remain secptical, another potential mechanism would be to appoint a Chartered Loss Adjuster. As members of the Chartered Institute of Loss Adjusters they have additional obligations of independence codified within their Royal Charter.

MIG CLAIMS PROTOCOL BENEFITS


FIVE KEY CONFERENCE TAKEAWAYS

1. The MIG Claims Protocol defines 'best practice' claims handling and has been proven to deliver better claims outcomes.
2. Insurance Brokers have an important part to play to help define the role of a claims preparer, to ensure expectations are managed and that there is transparency.
3. The MIG Claims Protocol seeks to minimise legal intervention in Property and Business Interruption clams. The intent is not to exclude lawyers but to focus their role on providing advice on key points, rather take over the conduct of a claim.
4. Variations of the MIG Claims Protocol have begun to emerge. As this was originally developed with input from all stakeholders, it was agreed that we should be promoting the Protocol without alteration.
5. There needs to be continuous review and development of the MIG Claims Protocol to ensure it remains up to date and relevant.

integra
TECHNICAL SERVICES

Specialising in the settlement of complex insurance claims in defined industry sectors and involving Property Damage, Machinery Breakdown, Business Interruption, Delay in Start Up and Specialist Liabilities.

- **LOSS ADJUSTING MAJOR AND COMPLEX LOSS**
- **CLAIMS CONSULTANCY AND RESOLUTION**
- **EXPERT WITNESS AND ALTERNATIVE DISPUTE RESOLUTION**


Integra Technical Services . Providing impartial, technically based claims solutions since 1998.
Find out more at www.integratechnical.com or contact Leo Dixon - leo.dixon@integratechnical.com