LESSONS LEARNT AFTER OFFSHORE CLAIMS AND ACCIDENT INVESTIGATIONS

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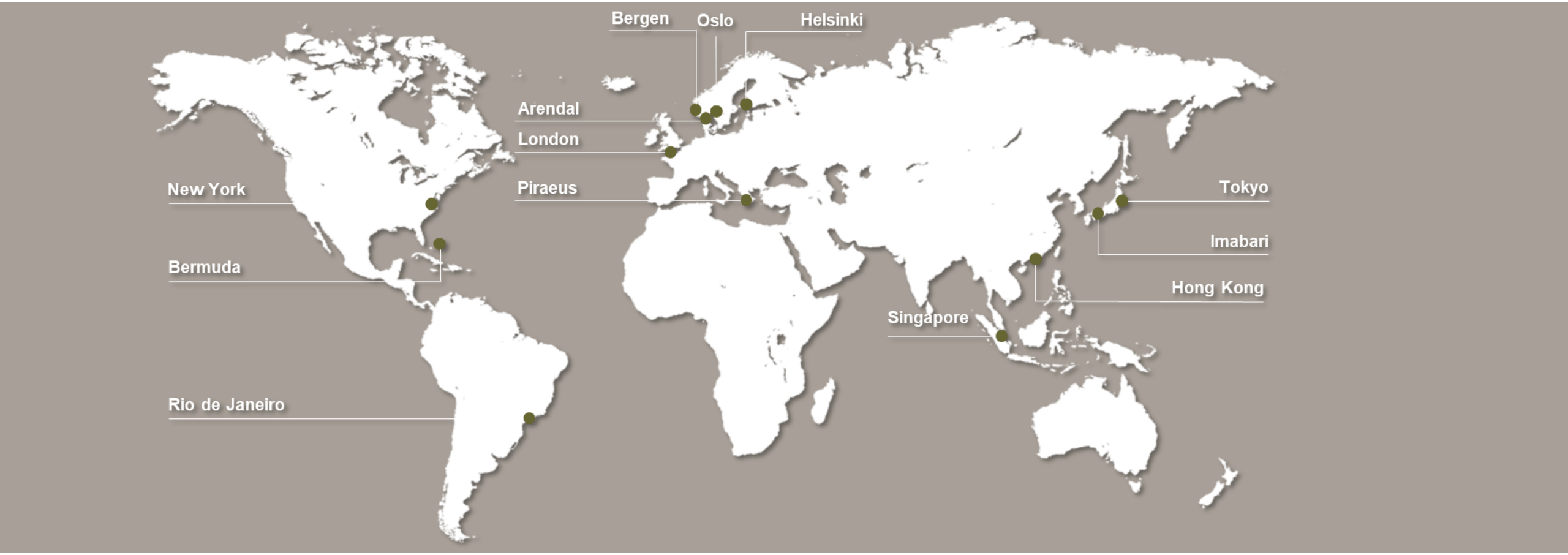
HFC Webinar 21 October 2020

AGENDA

- Brief about Gard
- Why do insurers need to know the cause of the loss?
- Are the findings from public inquiries fulfilling insurers' needs?
- Case studies:
  - Alexander L. Kielland
  - Piper Alpha
  - P-36
  - SIRI Platform
- General observations

A GLOBAL ORGANISATION



A GLOBAL ORGANISATION

HEADQUARTERED IN ARENDAL, NORWAY

MANAGING RISK AND ITS CONSEQUENCES

FOR THE MARITIME INDUSTRIES

P&I

Third party liability (P&I) and FD&D insurance to owners, operators and charterers of ships and mobile offshore units.

Marine

Hull and machinery insurance, loss of hire, disbursements, marine war and other specialist covers for owners and operators of ships.

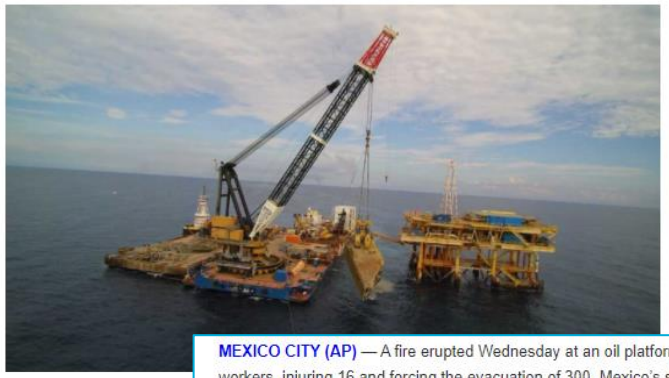
Energy

Cover for the oil and gas and offshore windfarm industry's insurable interests

ACCIDENTS HAPPEN

PHOTOS: Largest Wreck Removal of 2016 Completed in Gulf of Mexico

December 7, 2016 by Mike Schuler



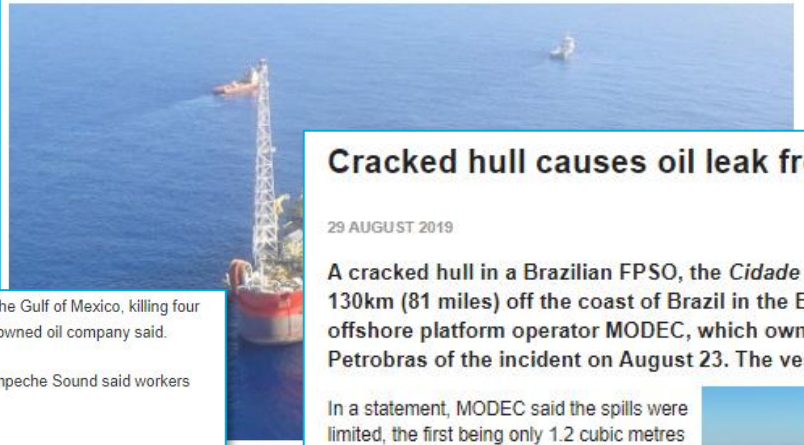
The Conquest MB-1 crane hoists a
completed removing the Troll Solu

A little more than a year afte
company Ardent says it has
the southern Bay of Campe

It was just days after the tw
officially joined forces when
drilling rig *Troll Solution*, we
approximately 7,000 tons, c
while carrying out maintena
a Pemex wellhead platform
May 5, 2015, killing two wor
injuring dozens aboard the
rig came to a rest on the se
approximately 30 meters of
within just two meters from
platform.

BW Offshore settles with insurers for FPSO Cidade de São Mateus incident

Jason Jiang · January 4, 2017 · 8 · Less than a minute



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MEXICO CITY (AP) — A fire erupted Wednesday at an oil platform in the Gulf of Mexico, killing four workers, injuring 16 and forcing the evacuation of 300, Mexico's state-owned oil company said.

A survivor of the blaze on the Abkatun Permanente platform in the Campeche Sound said workers "jumped into the sea out of desperation and panic."

"There was nothing you could do but run," said Roger Arias Sanchez, an employee of Petroleos Mexicanos' contractor Cotemar who escaped the burning platform in an evacuation boat. He spoke in Ciudad del Carmen in Campeche state, where most of the injured and evacuated workers were taken.

Cracked hull causes oil leak from Brazilian FPSO

29 AUGUST 2019

A cracked hull in a Brazilian FPSO, the *Cidade do Rio de Janeiro*, has caused an oil spill around 130km (81 miles) off the coast of Brazil in the Espadarte oil field in the Campos Basin. Japanese offshore platform operator MODEC, which owns the vessel, informed Brazilian state-led oil company Petrobras of the incident on August 23. The vessel has been evacuated as a precautionary measure.

In a statement, MODEC said the spills were limited, the first being only 1.2 cubic metres of residual oil and a further leak discovered on August 26 was estimated as being 6.6 cubic metres. The FPSO has been out of operation since July 2018 and is currently undergoing the process of decommissioning.

FPSO Cidade do Rio de Janeiro - Image: MODEC

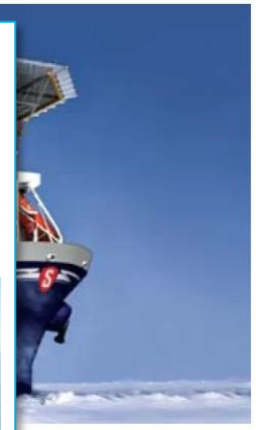
A crew of 54 personnel was evacuated from the vessel after the cracks and subsequent leaks were discovered.

The platform has around 450,000 litres of diesel oil and 169,000 litres of oily sludge still onboard. However, both are stored in tanks unaffected by the cracked hull. A company has been hired to offload the remaining crude and stabilise the platform which is listing 12 degrees, the National Petroleum Agency (ANP) said in a statement. Production riser systems were being disconnected from wells on the seabed when "structural failures, or cracks," were found in the hull of the vessel, the agency added.

Shell Canada offshore drill incident drops equipment to sea floor

Blowout preventer is 'intact and in good condition,' says Shell Canada spokesperson

Brett Ruskin · CBC News · Posted: Mar 07, 2016 1:21 PM AT | Last Updated: March 7, 2016



piece of equipment on board
(Kongsberg Maritime AS)

WHY DO INSURERS NEED TO KNOW THE CAUSE OF THE INCIDENT (LOSS)?

- Insured Perils/Risks
  - Named Perils or “All Risks” with specific exclusions
  - Fortuitous vs Non-fortuitous risks
- Which policy should respond to the insured loss?
  - Loss occurring or when the insured peril struck the insured interest
- Consequential losses coverage
  - Liabilities
  - Business Interruption
- Subrogation action
  - Contract provisions
  - Venue for filing claims
  - Single or Concurrent/Contributing causes
- Coverage dispute with Assureds
- Co-insurance and Reinsurance
- Learnings from accidents are crucial for:
  - Risk Assessment and Pricing
  - Product Development
  - Loss Prevention
  - Knowledge sharing with the industry
  - Sustainability

ARE THE FINDINGS FROM PUBLIC INQUIRIES FULFILLING INSURERS' NEEDS?

- Depends on the case!
  - Who are the parties involved?
  - What happened?
  - When did it happen?
  - Which operations and assets/interests are involved?
  - Where?

- Scope and composition of the inquiry/investigation panel.
  - Does the scope include analysis of all issues relevant for insurers' needs?
  - Do the findings of a public inquiry stand up as evidence in court proceedings?

- Insurers often obliged to conduct own investigation.

S.S. ALEXANDER L. KIELLAND (ALK)

27 MARCH 1980 – CAPSIZED AT EDDA 2/7 PLATFORM

ROOT CAUSE INVESTIGATION

- Inquiry commission led by Circuit Judge (Magistrate) Thor Næsheim, Sandnes

- Conclusions:
  - Inadequate fatigue calculations during project design
  - Improper welding practices and lacking quality controls
  - Crack in the weld between hydrophone and brace existed since delivery in 1976 and increased through fatigue until full breach of brace, collapse of leg and capsize

- Insurers' reactions:

  - Could the builder/fitter of the hydrophone be held liable for the losses incurred?

  - Simple to Prove? – YES, BUT!

RECOURSE ACTION AGAINST DESIGNERS AND BUILDERS

- Edda Field licence holders and ALK Hull insurers issued law suits in Paris, France

- Builders claimed that ALK was not faulty built – but incorrectly used
  - Designed to be moored with 10 mooring lines – only 8 were used

- French expert group Report June 1985
  - Potential vessel contact suggested (no indication of such incident)
  - Correct ballasting post the loss of leg ‘D’ could have slowed the developments
  - Water tight doors in deck section not closed

- No admission to hold French industry liable for 10 – 15 years old technology
  - Contributory faults by other parties, Classification Society, operator

PIPER ALPHA

6 JULY 1988 – EXPLOSION AND FIRE

CAUSE OF INCIDENT

- The Cullen Inquiry Report November 1990
  - Condensate leak from a pipe end flange where the pressure safety valve was removed for maintenance
  - Permit To Work (PTW) for the removal of the valve had disappeared, whereas PTW for the scheduled overhaul of the downstream condensate pump not yet started was in place.
  - The operational pump tripped and could not be restarted, and operator switched to the other pump which he believed could be run.
  - The platform operator was found guilty of having inadequate safety procedures
    - No criminal charges were filed

INSURERS RESPONSE AND ACTION

- Platform totally destroyed – first party claims paid promptly

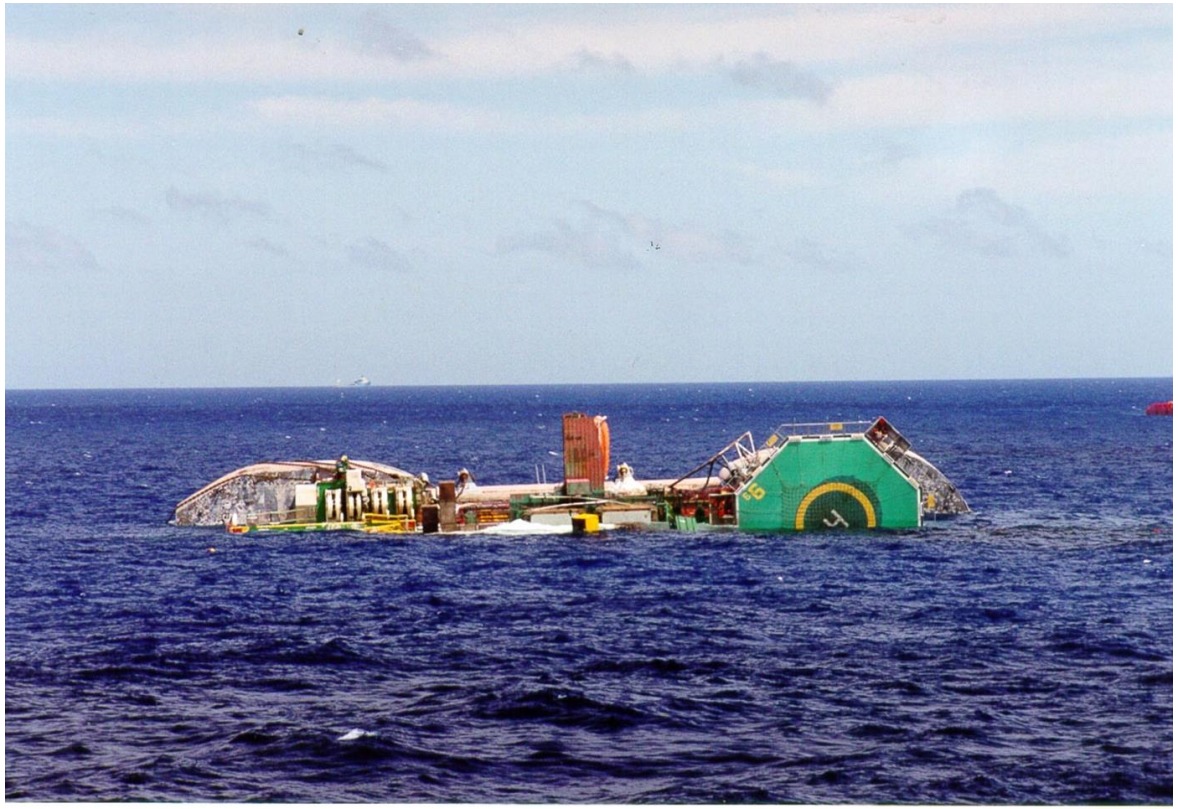
- Personal Injury and death claims
  - Knock-for-knock, except when casualty solely to blame on operator
  - Contractors declined to engage is settling claims for their employees
  - Piper partners and their insurers negotiated structured settlement packages and settled all personnel related claims.

- Initiated subrogation claims against 24 contractors
  - Cullen report not conclusive on all relevant issues to determine if other parties than operator could be held contributory negligent for the incident

- Piper partners and insurers built mock copy of the compression module for testing theory of loose fitted flange on PSV pipe.
  - Proved that contractor employee had not tightened the bolts to seal the open condensate pipe.
  - i.e. third party contributory negligence affirmed by judge Caplan.

FLOATING PRODUCTION UNIT P-36

15 MARCH 2001 – EXPLOSION IN STARBOARD AFT COLUMN LEG, CAPSIZE AND SINKING



PETROBRAS AND ANP INVESTIGATIONS

- *"The accident was caused by a series of factors which, taken separately into account, would not have been a sufficient cause. Examination of these factors led to the classification of some of them as critical and determining factors. The criterion for this classification lies on the fact that the absence of any of them would have interrupted the sequence of events that resulted in the actual outcome."* (ANP July 2001 Exec. Summary)

- Shift of oily water from port drains tank to production header
  - Drainage pump failed to start and backflow of hydrocarbons through the discharge line and into starboard emergency drains tank (EDT) through a damaged or partially open valve.
  - Starboard (EDT) had experienced influx of water through its atmospheric vent. To prevent this a spade had been installed in the vent pipe.
  - The EDT exploded due to over pressurisation and ruptured the water mains pipe – sea chest valve set to fail open.
  - Repairs to leaks in additional buoyance voids with epoxy and manholes left open for venting the fumes allowed water to fill these voids.
  - Attempts to compensate the list of the platform by filling port bow tanks caused deeper draft.

INSURERS EXTENDED INVESTIGATION

- The incident did occur whilst the insurance for the conversion project was still in force to pick up losses arising from design errors and provided double insurance with the operational insurance, under which the insured claimed for the total loss of the unit.

- The “public inquiry” did not provide sufficient clarity on the importance of the various factors’ contribution to the accident – Insurers continued on our own.
  - Main conversion at Davie Shipyard, Quebec, Canada
  - Two classification societies involved: ABS – Topsides, RINA – Main hull and Marine Systems
  - No meaningful safety studies done for EDT design
  - Atmospheric MDO tank selected for use as EDT at late stage of the works
  - Incorrect classification of the area outside the EDT – no gas detectors, only smoke detectors
  - Firefighters entered spaces without expecting to meet gas
  - Second explosion ruptured pontoon ballast tanks’ vent lines and heeling caused vent outlets to get under water, with consequent downflow of water through venting system.

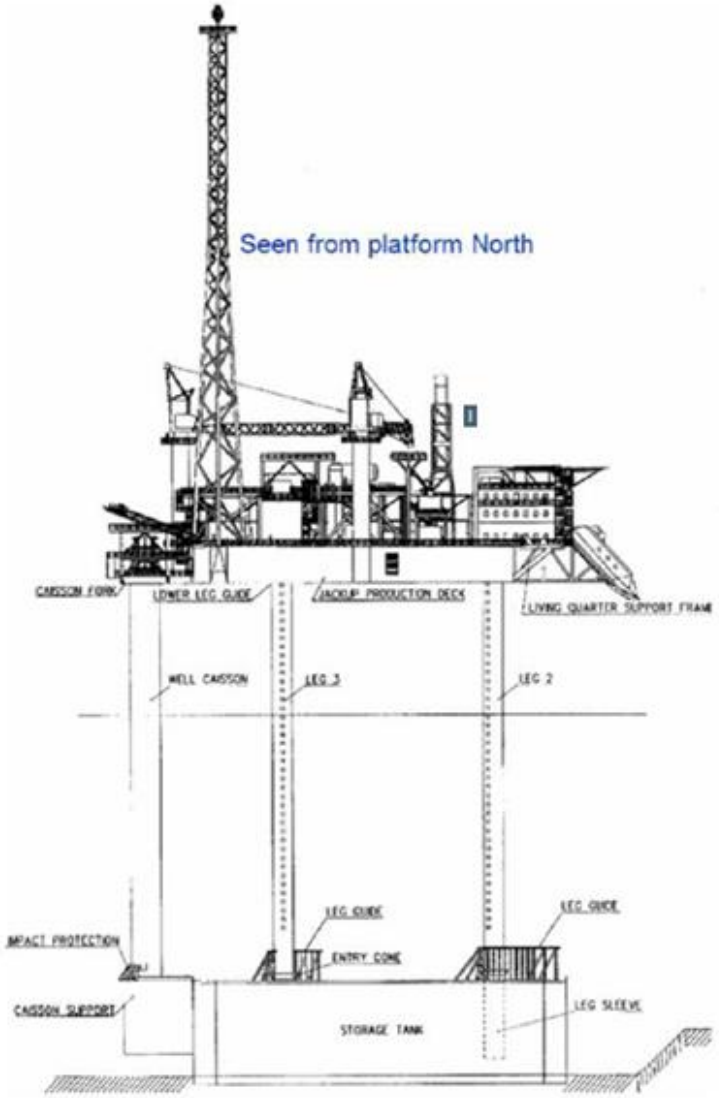
- Multiple design flaws/shortcomings identified

SIRI PLATFORM

31 AUGUST 2009 – CRACKS DISCOVERED IN SUBSEA CAISSON SUPPORT SPONSON

THE SIRI MOPU PLATFORM

ORIGINAL DESIGN – INSTALLED 1998



Platform structure

THE INSURANCE DISPUTE

WHEN DID THE (INSURED) LOSS OCCUR?

- Assured claimed loss covered under the policy in force when the crack was discovered
- Licence holders initiated 3 investigations, LIC Engineering (LIC), Siri Caisson Incident Investigation Group (SCIG) and Group for Investigation of Siri Structures (GISS)
- Insurers appointed Professor Nigel Barltrop, University of Strathclyde

DANISH LAW

CAUSE OF LOSS PRINCIPLE AND FIGHT OF EXPERTS

- Danish insurance law default position is when the cause of the loss occurred unless policy provides differently.

- Lawyers fight on whether the policy deviated from the default position
  - Assured succeeded at first court instance – awarded USD 383 million
  - Insurers prevailed in court of appeals – admission to supreme court declined

- In coverage disputes the assured will be in control of all evidence relative to the casualty

- Assureds burden to prove that an insured occurrence occurred during the policy period

- Insurers burden to prove policy exclusions operative to cause the loss

- Key to have lawyers appreciate insurance fundamentals and couple with available technical evidence

GENERAL OBSERVATIONS

- All cases had in common modifications and changes in use
- Late project changes not included in original project – Quality Control/Safety studies omitted/cut short when in time/cost squeeze
- Life extensions beyond designed lifetime and change of ownership/operatorship
- Classification of offshore units are not part of IACS' Quality System Certification Scheme
- «Blame» vs. «Safety» culture
- Offshore workers are not seamen!
- Design must take account of the human factor
- Accident investigations too! – ref. Captain Sully (Sully: Miracle on the Hudson – Movie 2016)


THANK YOU FOR YOUR TIME!
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