



Industrial Oil Cooker Protection An Insurance Point of View

Stuart Lloyd
Principal Fire Protection Engineer
Zurich Risk Engineering UK

Agenda



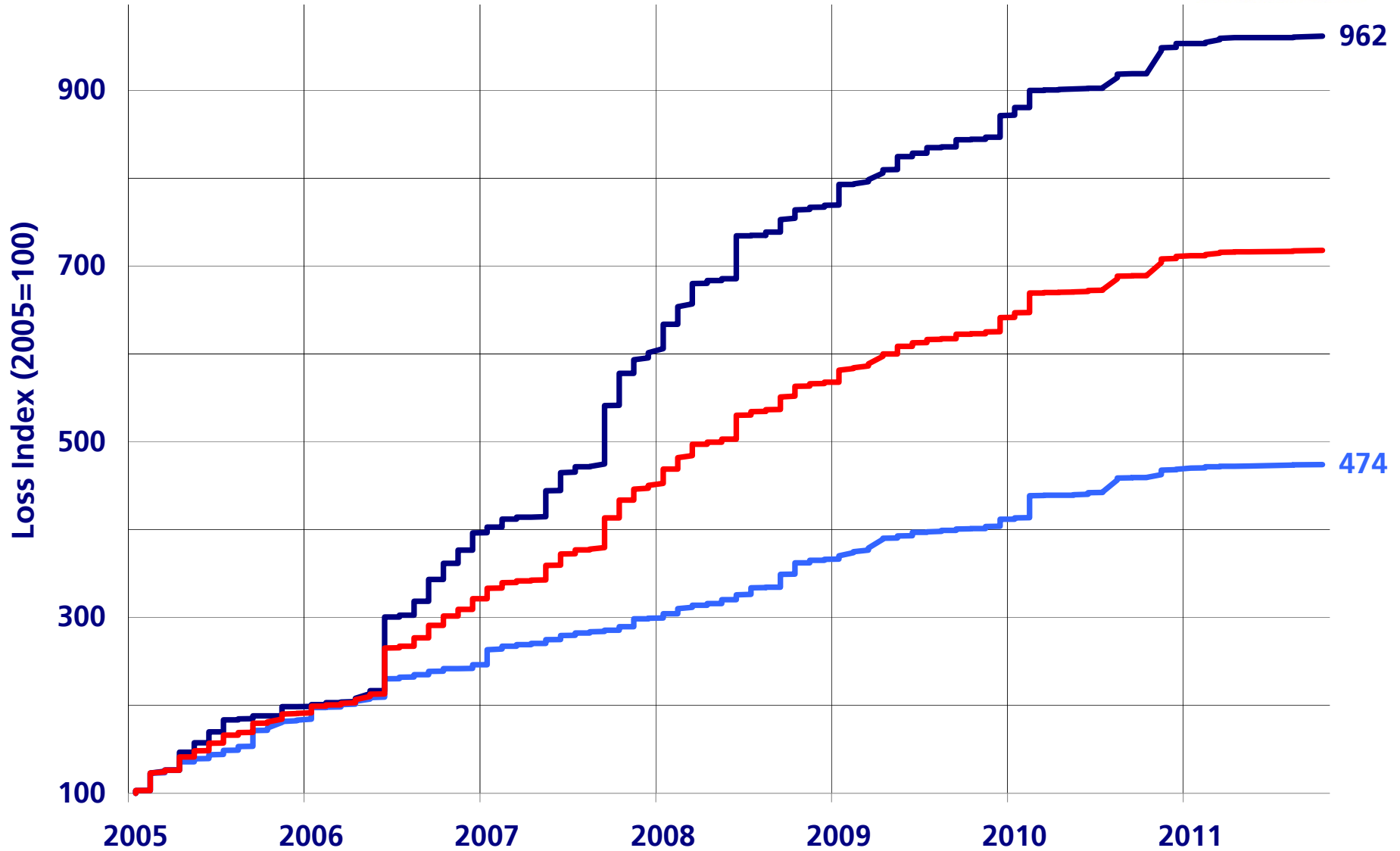
- Zurich Claims Experience
 - Impact of Business Interruption and associated costs
 - Reaction of Insurers
- Suitable Protection Accepted by Leading Insurers
 - Acceptance Criteria
 - Information required for evaluation/acceptability
- Zurich's Recent Experience
 - Systems Proposed to Zurich Customers
 - Customer in dispute with installer
 - Beware !

Zurich Claims Experience



- Food manufacturing premises are considered high risk premises by all insurers for several reasons
 - Construction materials
 - Hazardous processes
 - Business Interruption cost potential
- Fires in industrial oil cookers have a history of generating large claims
- Claims are split into Material Damage(MD) and Business Interruption(BI)
- Material Damage includes
 - Buildings
 - Plant
 - Stock
- Business Interruption has huge potential in food manufacturing

Rate of Increase of Zurich Claims Business Interruption vs. Property Damage



Zurich Claims Experience

A selection of claims made in Europe since 2006



- England – fryer (unprotected)
 - MD £922,000
 - BI £153,000
- Scotland – fryer (unprotected)
 - MD £7,500,000
 - BI £4,200,000

How have insurers reacted?



- Large losses in Food Industry premises have led insurers to
 - Avoid these types of risks
 - Increase premiums to offset losses
 - Share the risk with other insurers
 - Insist on sprinkler systems to protect building
 - Insist on local application systems on the inception hazard

- What options exist for Industrial Oil Cooker protection ?

Agent	Standards	Advantages	Disadvantages
CO ₂	NFPA12	Economic	H&S Issues Reduced Cooling Effect
Spray	FM	Prescriptive Economic	H&S Issues Thermal Shock Flood Risk
Water Mist	ANSI FM 5560	High Cooling Effect Low Water Consumption	Installation cost

Suitable Protection Systems



- Zurich's preference is for water mist on Industrial Oil Cookers
- Primarily due to cooling effect and reduced risk of re-ignition



- These water mist systems must meet insurers expectations/criteria
- It is critical for such specific application systems

FPA RISCAuthority Questionnaire



- An 18 page detailed questionnaire to enable full assessment of the proposed installation
- Developed and used by major insurers to evaluate proposals
- Zurich, Allianz, AXA, RSA, Tokio Marine, HDI Gerling, QBE, Liberty Mutual, Travellers, ACE & Aviva
- ANSI FM 5560 is the recognised benchmark for Industrial Oil Cookers

Water Mist is a form of active fire protection that, like all extinguishing technologies, can be effective in the protection of certain, but not all, risks.

In the absence of a published British Standard or European Standard with scope relevant to the protection of buildings or contents with this type of system¹, the questions herein are intended to elicit information that could be useful in providing evidence of the "equivalence" of such systems to alternatives where published and recognised national standards do exist.

If requested to do so, please complete one of these forms for each risk to be protected by water mist system(s). This form is to be used to capture and record some of the data required to support a claim of "equivalence" and to provide evidence of sound engineering practice. Do not use this form for building protection systems (a separate form is available for these systems).

¹ DD (Draft for Development) documents issued by BSI (British Standards Institution) are not to be regarded as British Standards. TS (Technical Specifications) issued by CEN (European Committee for Standardisation) are not to be regarded as European Standards.

Form: IQ2
Version 1.0 October 2011



Water Mist Questionnaire: Local Application Protection

To be completed at the design and proposal stage of suppression system planning

Issued by: Zurich Risk Engineering

NOTE:

Completion of this form neither guarantees system performance nor system acceptance by the Issuer.

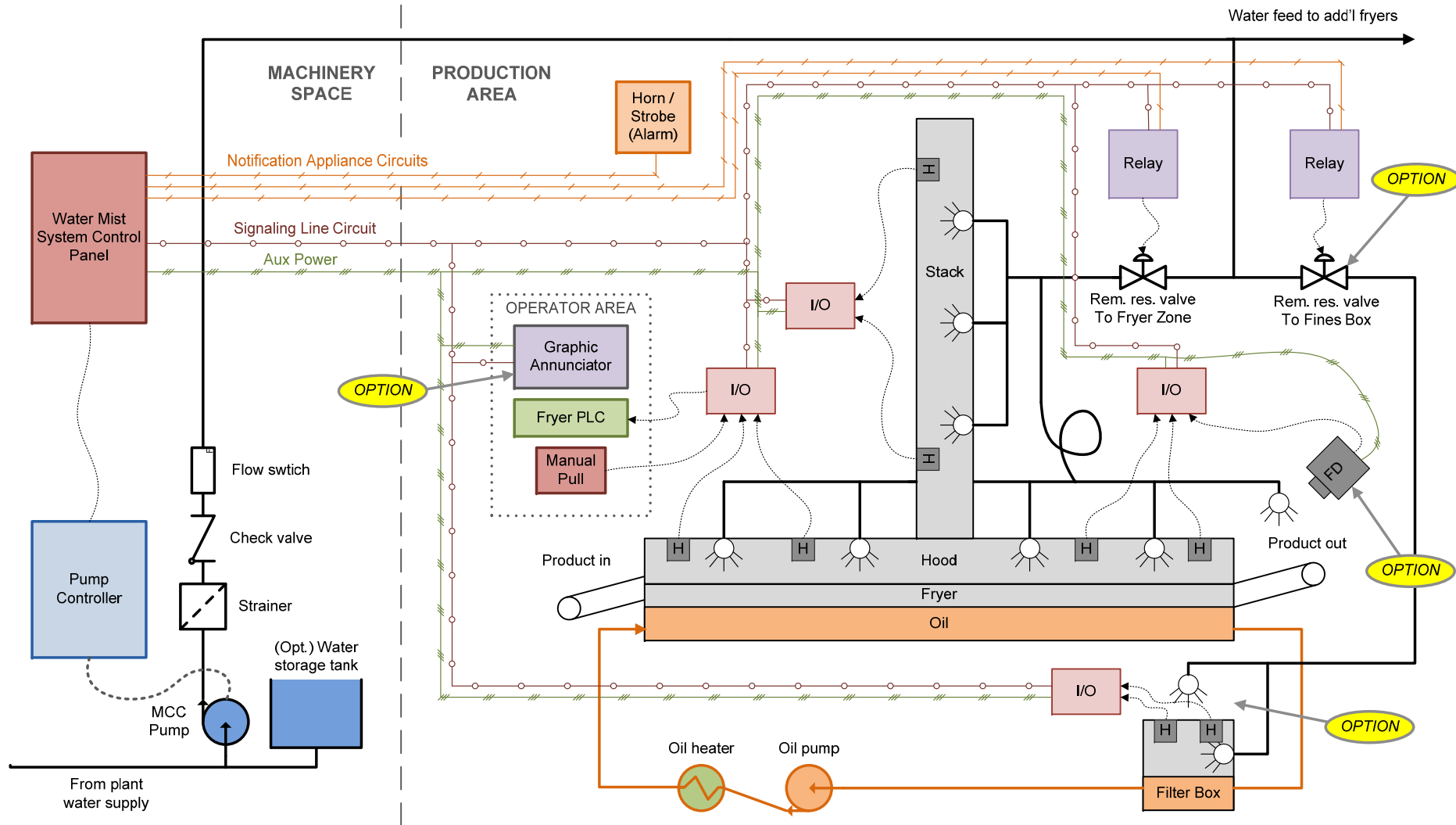
NFPA 750 and ANSI FM 5560 requirements



- Listed Components – Nozzles, Valves, Pumps, etc.
 - Corrosion tests
 - High & low temperature exposure
 - Strength & functional operation
- Fire Tests - Representative of actual kit to be protected
 - Hood Up/Down
 - 1xL, 2xL, 3xL
 - Scalability
- Water Supply
 - Duration
 - Integrity of power supplies
- Insurers also require extract ducts and filter boxes to be protected



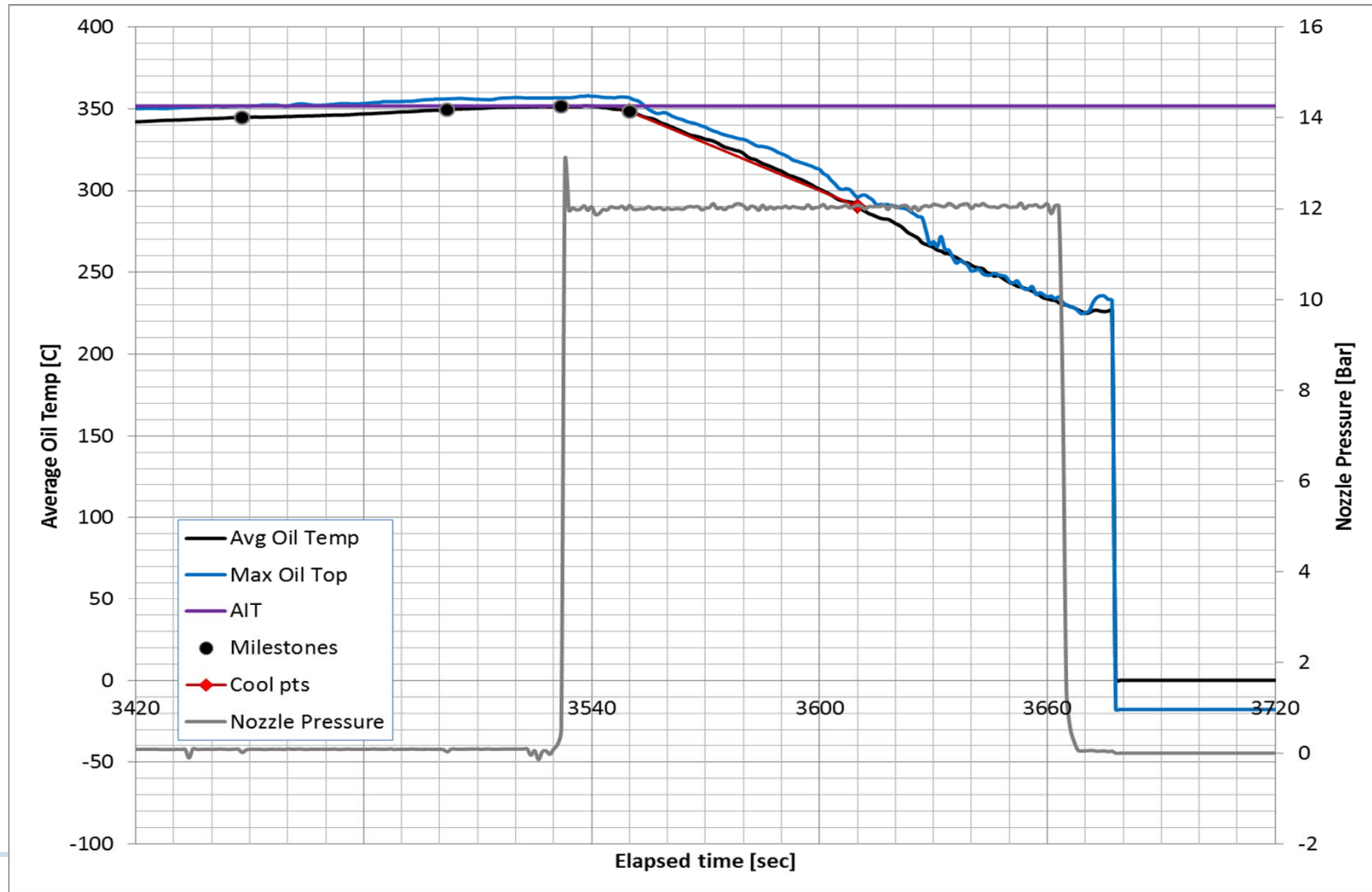
Fully Compliant Solution Required - Not just nozzles



Test Data Submitted for Review



- Example – 3 x Length Hood Down test result



Acceptance Criteria



- Acceptance of fixed fire protection systems is based upon selecting a system (or equipment) that is:
Listed, approved, or certified by a recognised testing laboratory (e.g. UL/FM/BRE) for its intended purpose
- Designed, installed, and maintained in accordance with acceptable published codes or standards (e.g. BS/NFPA/EN/FM) addressing the intended purpose
- Designed, installed, and maintained in accordance with manufacturer's literature
- Where a system does not have an appropriate listing or is not covered by an applicable code or standard we have no basis upon which to accept the system.

Zurich's Recent Experience

Potato crisp manufacturer



- Multiple Industrial Oil Cookers between 6m and 14m long
- 5 Quotations received - all claiming to be in accordance with NFPA 750
- None had suitable test data but claimed system would extinguish
- 2 were based on Kitchen Galley ISO 15371
- 3 were based on IMO cabin tests



Zurich's Recent Experience Doughnut Fryer Claim - update



- England – fryer (unprotected)
 - MD £922,000
 - BI £153,000
- Customer placed insurance elsewhere for several years
- 2013 Approached Zurich for cover again
 - Water mist system now installed
- Doughnut Fryer Details
 - Moline 26-10 fryer
 - 7.97m x 1.168m
 - 2360L of oil



Moline gas fryers are fully automated, BISSC certified and designed to suit a wide range of continuous production requirements. Production capacities are the highest in the industry, ranging from 400 to 4500 dozen per hour.

The industrial design of these fryers is renowned for durability, reliability and efficiency. Controls are centrally located and easy to use for efficient and consistent production.

Moline also provides dependable service "after the sale". Qualified factory-trained technicians provide on-site supervision as the equipment is uncrated, positioned and assembled. The modular design assures fast and precise installation. Mechanical settings are adjusted, product testing is conducted along with operator training to fine tune production methods. Our commitment to safety, reliability and value has made us a leader in baking equipment for well over half a century. Call our Customer Service Department for more information.



Moline Machinery LLC
114 South Central Avenue • Duluth, Minnesota, USA 55807
218-624-6734 (For after hours service, call 218-590-1987)
www.moline.com • sales@moline.com

Zurich's Recent Experience Doughnut Fryer Claim - update



- Fire test data provided by installer for 2008 installation
- IMO/MSC/Circ 913 (fixed water-based local application fire-fighting systems on board ships).
- 25.9L of oil
- Zurich would not insure business due to the inadequate water mist system



Beware !

- Remember the claims with figures in RED ?
 - Costs recovered
 - Cost recovery in progress





Thank you

www.zurich.com/riskengineering/uk
