

Hawkins | Marine

Leaders in forensic investigation



MARINE INCIDENTS

Providing forensic engineering, investigation and expert witness services for incidents relating to all aspects of the shipping and marine industries.

Bulk Coal Cargoes | Cargo Contamination | Cargo & Machinery Fires
Cargo Spoilage | Corrosion | Crane & Gantry Collapse | Dangerous Goods
Engines & Generating Equipment Failure | Historical Ships
Mechanical & Materials Failures | Mis-declared Cargo | Yachts

ABOUT HAWKINS

Hawkins, established in 1980, provides specialist forensic root cause analysis and expert witness services to legal, insurance and risk management professions. We also investigate incidents for contractors and consultants.

The company has 8 offices in the United Kingdom and offices in Dubai, Hong Kong and Singapore. All offices are staffed by highly experienced forensic scientists and engineers from a wide range of disciplines, including mechanical, electrical, civil, structural and highway engineering.

“Clients come back to Hawkins because of our honesty and integrity. Our subject matter experts have sound technical knowledge and expertise, married with a real commercial awareness of what our clients need. Hawkins provides a rapid response, giving timely, accurate advice and communication of the evidence in a way our clients can act upon.”

Dr Andrew Prickett, Managing Director, Hawkins

Our experts can assist with incidents and problems relating to fires, explosions, cargo contamination or degradation, machinery or materials failure and liquefaction. The team includes biologists, chemists, materials scientists, mechanical engineers and fire experts.

As with all Hawkins investigations, we excel in providing a rapid response and high quality reports to assist our clients in understanding the technical issues of a case and the cause of the incident or defect. Our reporting is flexible, ranging from preliminary appraisals to full CPR35 compliant reports to suit the client's needs.



WE INVESTIGATE...

BULK COAL CARGOES

Common issues associated with transporting coal in bulk include self-heating and the liberation of flammable methane gas. Self-heating can lead to fire, while allowing methane to accumulate can lead to an explosive atmosphere in the hold and adjacent spaces. Early intervention from a Hawkins expert versed in the International Maritime Solid Bulk Cargoes (IMSBC) Code can prevent a minor incident from escalating.

CARGO CONTAMINATION

The cleanliness of holds or tanks is key to preventing valuable cargoes from being contaminated by residues from the previous cargo(es) carried by a ship. Hawkins can help to determine the root cause of cargo contamination by reviewing documentation from the ship and analytical laboratories. We can then advise our client on liability and risk mitigation issues based on their needs at the time.

CARGO & MACHINERY FIRES

Hawkins staff have many years' experience investigating the causes of fires and explosions in a variety of settings prior to working in the marine environment. That experience helps us to consider a wide variety of potential causes of fires in machinery or cargoes.

CARGO SPOILAGE

Many agricultural cargoes such as corn and soybeans are shipped in bulk. Such commodities have a limited safe storage period before quality deteriorates. Disputes over cargo quality at discharge are common and our experts can assist in determining whether damage was more probably sustained before loading or while the cargo was on-board. We also advise on perishable cargoes carried in regular and refrigerated containers.

CORROSION

Hawkins recognises the signs and causes of corrosion in various materials. Based on our chemical analysis of the corrosion products, and the nature and circumstances of the case, we can determine both how the damage happened and how to prevent it from happening in the future. We also collaborate with restoration companies, endeavouring to remediate corrosion damage, in the case of large casualties.

CRANE & GANTRY COLLAPSE

Our mechanical and structural engineers gather evidence at the scene, carry out structural analysis and design/loading reviews to investigate the cause of collapses. The team have experience investigating failures in a wide range of maritime and offshore structures.



DANGEROUS GOODS

Many fires and explosions are caused by the transport of dangerous goods. However, most dangerous goods cargoes are shipped safely. Our marine team can help advise our clients on steps to be taken prior to loading, during loading, and during the voyage to minimise the risk of problems associated with these cargoes.

ENGINES & GENERATING EQUIPMENT FAILURE

The marine team will often liaise with the power generation team to help determine the root cause of engine or generating equipment failures as the marine industry shares engine and generation technology with power stations around the world. We have mechanical engineers, electrical engineers, material scientists and chemists at hand to help find the right person to assist clients with their cases.

HISTORICAL SHIPS

Fires affecting historical ships are fortunately rare events. Any investigation should aim to preserve as much of the original structure as possible. Establishing the cause of fires within historical vessels often involves considering modern equipment that has been installed. Such vessels may still be seaworthy or permanently dry-docked (i.e. tourist attractions).

MECHANICAL & MATERIALS FAILURES

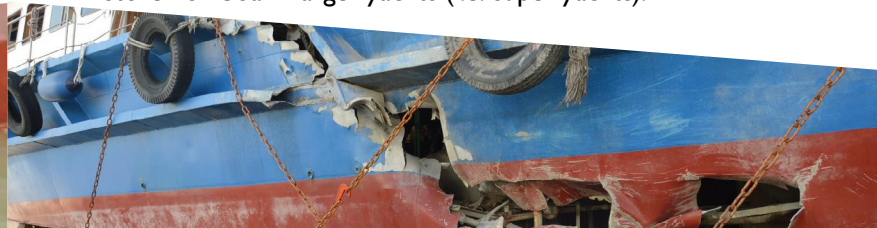
Failure analysis is an interdisciplinary field of materials science and mechanics which attempts to predict the conditions under which materials fail under the action of loads. We investigate materials failure onboard ships which include: incidents associated with the anchor chain, rudder assembly, and wire ropes, as well as the nature and circumstances of coating damage.

MIS-DECLARED CARGO

Mis-declared cargoes pose a threat to life in addition to the vessel as without the correct information a mis-declared cargo can be stowed incorrectly and over-heat, react with the surroundings, or self-heat. We have considerable experience investigating incidents involving cargoes and interpreting the relevant code to determine whether or not the cargo was shipped correctly and/or mis-declared.

YACHTS

Hawkins has extensive experience investigating the cause of fires on various sizes of yachts, which can have life threatening consequences. Yachts have a number of electrical systems onboard, as well as lithium batteries. Lithium batteries may either power electrical systems onboard a sailing yacht, power a hybrid motor yacht, or power sports equipment stored on board larger yachts (i.e. super yachts).



OUR EXPERTS

Hawkins' team of experts has the ability to respond rapidly to various types of shipping forensic investigations including fires (vessel and/or cargo), mechanical engineering, structural and material failures, cargo issues etc. worldwide. Hawkins have the equipment to assist with gas monitoring of cargo holds and can provide in-person or remote advice for live fires on board vessels.

If you wish to make an enquiry or instruct us, please contact the office closest to the incident location and you will be put in touch with the relevant expert (see contact details on back cover). Alternatively, you can contact any of our experts directly – their details are on the following pages, arranged by location.

BIRMINGHAM



Jake Irwin
jake.irwin@hawkins.biz

A Regional Manager based in our Birmingham Office, Dr Jake Irwin completed a PhD in chemistry at the University of Sydney. Since joining Hawkins in 2012, Jake has investigated number of bunker claims, hold cleaning issues and bulk cargo contamination. Jake is also a fire investigator and has applied his chemical expertise to incidents of fire, self-heating and other 'runaway' chemical processes.



BRISTOL



Luke Collins
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A Regional Manager based in our Bristol office, Mr Luke Collins is a fire investigator with a specialism in engine room and vehicle fires (pertinent for Ro-Ro incidents). He has also undertaken fire investigations on-board bulk carriers, chemical tankers as well as container vessels.



Paul Willis
paul.willis@hawkins.biz

Mr Paul Willis has a degree in Chemistry, and is a Member of both the Royal Society of Chemistry, and the Institute of Fire Engineers. Paul joined Hawkins in 2012 and has travelled worldwide to investigate a broad range of incidents, including: ship fires bulk cargoes, containerised cargo, hazardous materials, and engine room machinery and equipment. Paul also regularly provides remote assistance with live incidents, and is expert in the use of gas detection equipment.

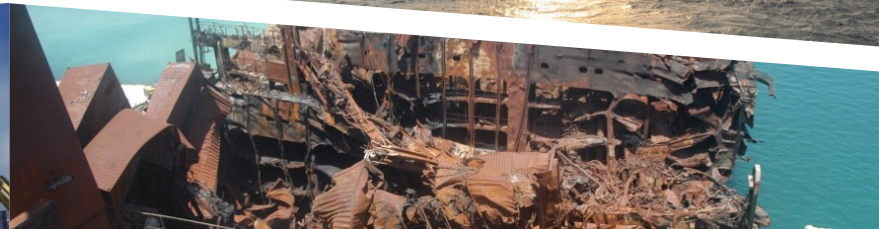


DUBAI



Chris Wareham
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A Regional Director based in our Dubai office, Dr Chris Wareham has investigated cargo, machine space and accommodation fires, including those on container ships and tankers and in ports. He has also provided advice involving bulk cargoes.



HONG KONG



Chun Chan
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Dr Chun Chan is a Chartered Engineer of the Institute of Material, Minerals and Mining (IOM3) and has a PhD in Material Science and Engineering from The University of Manchester. He has investigated corrosion and welding issues on ships, and failure of metal wire ropes and cranes. Chun is fluent in Cantonese and Mandarin.



Nico Zurcher
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A Regional Director based in our Hong Kong office, Mr Nico Zurcher takes on cases in Asia and further afield. He investigates fires on container and general cargo vessels as well as the spoilage of bulk agricultural commodities such as corn, wheat, soybeans and seedcakes. He regularly advises clients on the carriage of IMDG and IMSBC cargoes. Nico is fluent in German.



Jessica Ng
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Ms Jessica Ng has investigated fires on container and bulk cargo vessels and provided advice on live ship fires. She has investigated the causes of cargo contamination on tankers and been involved in cases involving liquefaction of Group A cargoes. Jessica is also heavily involved with agricultural bulk cargo claims pertaining to soybeans. Jessica is fluent in Cantonese and Mandarin.



LONDON



Sophie Parsons

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Dr Sophie Parsons is a Chartered Engineer and a Fellow of the Institute of Materials, Minerals and Mining (IOM3) and has been working in forensics for over 20 years, conducting failure investigations in criminal and civil cases in the UK and Hong Kong, which included providing expert testimony in legal proceedings.



David Reid Rowland

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Mr David Reid Rowland is a Chartered Engineer and Member of the Institution of Mechanical Engineers and Institute of Fire Engineers. He has many years of experience in investigating fires and engineering incidents and failures including engine room and cargo fires, since joining Hawkins in 2004.

MANCHESTER



Robert Edwards

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Dr Robert Edwards has a PhD in Chemistry from the University of Wales. He has lectured extensively on analytical, environmental and corrosion chemistry. Since joining Hawkins in 2001, Robert has specialised in post-fire, post-flood and post-chemical spill contamination investigations throughout the world.



REIGATE



Nick Carey
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Dr Nick Carey is a fire investigator who also investigates electrical failures. Following a 27 year career in the fire service he joined Hawkins in 2012. He has investigated fires on board container ships, bulk carriers, research vessels and yachts. He has also provided firefighting advice for various types of vessels at sea and in ports. Nick has provided expert testimony in a number of legal proceedings.



James Morris
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Dr James Morris is an experienced chemist who has worked with the regulations concerning Dangerous Goods transport by all modes, including IMDG, for many years. He has been involved in investigating cargo vessel fires involving bulk chemicals and lithium batteries.



Ed Hammersley
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Mr Ed Hammersley has investigated marine fires involving cargo and engine room fires on container ships, yachts and cargo vessels, both at home and overseas. He has given evidence for a case in Court overseas. Ed is an experienced analytical chemist.



James Townsend
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Mr James Townsend has over 20 years' experience in horticultural and agricultural plant pathology, plant disease diagnostics and crop disease resistance breeding. For ten years James has been a diagnostic plant pathologist, identifying causes of crop problems, rots and moulds in horticultural crops: specialising in soft fruit. Clients included growers, propagators, importers and exporters of fresh produce in the UK and abroad.



SINGAPORE



Stewart Horan

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Captain Stewart Horan is a Master Mariner, who has travelled extensively. He has investigated a wide range of marine claims and incidents, including: ship operations; cargo contamination and damage (both liquid and dry bulk cargoes); liquefaction; self-heating; and fires involving cargo and machinery. Stewart has given live advice, assistance, and risk management recommendations on all manner of ship and cargo operations, including self-heating/methane emission, liquefaction and loss control.



David Rose

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Dr David Rose is Hawkins' Singapore Office Regional Director, and was previously the lead of Hawkins' shipping team. He has travelled world-wide investigating fires and explosions involving cargoes and machinery spaces. He regularly provides clients with advice relating to the carriage of DG Cargoes and assistance with live ship cases such as the those involving self-heating of coal cargoes or direct reduced iron.



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