

Accident and Incident Data Collected by the BSS for 2006

1. Essential background

The BSS, works on behalf of the UK's navigation and harbour authorities to help sustain safety and promote pollution avoidance on the inland waterways in respect of boats, their installations and components.

The BSS does this through advice promoting techniques to avoid risks and by using the BSS examination to verify that systems and appliances on any given boat at least meet the navigation authorities' minimum safety requirements.

The aim is to help ensure the efficient and effective management of those risks introduced by vessels that have been inadequately equipped or maintained and to guide vessel owners on matters of risk avoidance.

Based on their 2003 Statement of Objectives, the navigation authorities' use of BSS requirements are be kept to the means to prevent explosions, fires, the spread of fires and pollution.

With the introduction of 'risk-based' general requirements for privately owned/managed vessels in 2005 came with it added onus to take account of information, including accident and incident data, to help inform future BSS activity. Other information is used to help react in a timely way to new or potential risks including, monitoring new equipment to the market and reacting to boating fora/newsgroups. The Scheme's own quality assurance information from BSS examinations is also used, including 'dangerous boat notifications' and trend data extracted from examination reports issued by BSS examiners.

The overall approach taken is to seek to respond to the risks in a proportionate way, reflecting a balance of the risk and practical benefits. The range of options open to the BSS include promoting safety advice, media releases and recommending to the navigation authorities the introduction of new construction and equipment requirements. The appropriate approach must have broad stakeholder support and must come through a fully accountable and transparent assessment process.

By a way of an annual accident and incident report we publish the breakdown of the data collected and indicate current and future BSS activity associated with the key risk areas. In an annex to this paper we set out our role and responsibilities in respect of collecting accident/incident data.

2. 2006 Accident and Incident Reports and Some Inferences Drawn

<ul style="list-style-type: none">▶ There were 42 fires/explosions reported on AINA waters in 2006.▶ <i>[the total number of fires/explosions reported from all UK locations was 74].</i>
<ul style="list-style-type: none">▶ There were 4 very serious CO incidents reported on AINA waters.▶ <i>[the total number of CO incidents reported from all UK locations sources was 5].</i>
<ul style="list-style-type: none">▶ There were 8 other accidents and incidents reported on AINA waters including 2 pollution events and 3 persons falling from narrowboats.▶ <i>[the total number of other incidents reported from all UK locations was 2].</i>
<ul style="list-style-type: none">▶ The total number of accidents/incidents of all types recorded by the BSS from all locations for 2006 is 89.
<ul style="list-style-type: none">▶ 6 people died on AINA waters from boating related activity and reportedly 6 people suffered major injuries.

▸ BSS Examiners reported **174** 'dangerous boats', considered potentially immediately hazardous .

As with previous years the key feature is the fact that the cause is unknown in **36** of the total of 74 fires and explosions, a significant 49% of them.

The breakdown of the reported suspected causes concerning **38** out of the 74 fires is as follows:

Electrical –	9
Arson	8
LPG -	6
Solid Fuel Stoves	5
Petrol	3
Hot work (welding)	2
Steam boiler explosion	2
Bullseye prismatic decklight	1
Exhaust hose overheating	1
Fire from another boat	1
Total	38

The proportion of unknown causes coupled with statements by some FRS suggesting 300+ incidents annually indicate significant under-reporting and a significant gap in the information due to a lack of accident/incident investigations.

At BSSAC, all member organisations were requested to place greater emphasis on the reporting of accidents/incidents to their constituents in order that the aim of a complete set of data is achieved.

BSS Commentary and Inferences Drawn

There have been four very serious carbon monoxide incidents on AINA waters in 2006. In August there was a fatal event at Blisworth, but its true cause was not recognised until post mortem. In September, two people were flown from their boat moored in Chelmsford to a hyperbaric oxygen chamber in a London hospital after being found unconscious.

A further CO death of a young inland boater was reported just before Christmas on a residential narrowboat at Heyford, again in Northamptonshire. This is in a context of domestic CO fatalities related to natural gas appliances falling to mid-teen levels.

Solid fuel stoves are ever popular, fire continues to be a risk associated mostly with their use and maintenance. Reports of steam pressure incidents from back boilers are also now becoming a feature.

Many of the most serious fires and CO incidents, whether inland or coastal, involve people intensively using vessels for extended periods.

The three CO fatalities, one definitely and two possibly linked to portable generators, indicate that those that use a boat for extended periods have greater demands for electricity for usual lifestyle 'creature comforts', such as televisions, microwaves, computers, mobile phones and games machines. This is reinforced by the suspected causes of CO incidents in immediate preceding years.

In general electrical sources of fire continue to be a strong feature of the statistics although the precise causes are not identified. The use of more alternating current devices suggests that complexity is increasing and vigilance is required in regards to risk trends.

In May, an inland waterway boat hirer was knocked off the boat by the tiller and drowned. This was replicated in August, but injury from the propeller was the cause of death. Reports of two further propeller incidents within the same few weeks in coastal marinas resulting in amputation also came to our attention.

In total the BSS has recorded six boating related fatalities and six people suffering major injuries on AINA member waterways in 2006.

Of some of the more detailed reports we get concerning fires on narrowboats, the rapid spread and intensity of heat are a common feature. Such matters indicate that early detection, early suppression, effective flame retardant and ease of escape may help improve the statistics. This realisation has raised the profile of smoke detector alarms.

For context we must note here, that in the first few weeks of 2007 there have already been 11 narrowboat fires on inland waterways, which have involved the death of a 66 year-old man and a 22 year-old woman.

3. Key Areas and BSS Activity

The following table identifies the key areas and the thread of associated BSS activity during 2006.

<p>Gap in Knowledge The need to improve information and research about incidents, casualties and fatalities and to improve the quality of information and data available is recognised aim of the National Water Safety Forum's (NWSF) Information Group.</p>	<p>2006 BSS Activity The reporting of incidents has been widely encouraged by the BSS and it is recognised that full data will drive the BSS to be more effective. Linked to the aim of the NWSF Information Group, the BSS, through the partnership with Warwickshire FRS and with the knowledge and support of the NWSF, have been working towards the FRS classification of boat-related accidents and incidents and the reporting of such by all FRS. In addition we have recommended that all, or a significant proportion of boat fires be investigated by FRS inspectors to achieve authoritative information about causes and circumstances.</p>
<p>Carbon Monoxide Carbon monoxide continues to be prevalent amongst the suspected causes of accidents/incidents and BSS activity in this area has been significant in 2006.</p>	<p>2006 BSS Activity BSS examiners were alerted to the incidents in two examiner newsletters aimed at enhanced dealings with customers. A boating press media release followed the second death stressing the need for owners to remain vigilant to the CO risk. A BSS communication to all navigation authorities was sent intended to guide bank side staff to the obvious signs of a vessel presenting and obvious CO risk. The BSS leaflet 'Avoiding the Silent Threat - CO' was provided for distribution to the Chelmer and Blackwater and EA Anglian Region navigations. The front page of the BSS website was changed to focus of the risk of CO and how to avoid it. The BSS is facilitating a project intended to provide significant research into CO dispersion in boats and surveying inherent levels of CO in boats. This will inform the safety awareness information of all interested safety bodies as well as the development of European manufacturing standards concerning CO detector alarms suitable for marine use.</p>

<p>Solid Fuel Stoves</p> <p>There were five accidents involving the use of solid fuel stoves.</p>	<p>2006 BSS Activity</p> <p>BSS undertook a further desk-top review of the suppliers of SFS to the marine market and tested their level of support for the introduction of a code of practice covering installation, maintenance and use.</p> <p>BSS have presented an 'acceptance proposal' at BSI and the development of a BS standard during 2007 looks likely.</p> <p>BSS planted a detailed media article in one of the main boating magazines.</p>
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Drafted by Graham Watts for BSS Management Committee 5 March 2007

Annex

The Role of the BSS Concerning Accident and Incident Data Collection

The BSS Office collects reports of UK recreational boat-related accidents and incidents from any source.

We are interested to establish causes and circumstances to help establish trends and inform BSS Office activity aimed at helping prevent re-occurrences. Our job is to react to trends, or new or potential risks, in an appropriate way involving stakeholder groups through the BSS Advisory and Technical Committees. The data collected feeds into current and future BSS activities associated with the key risk areas. The data is also used to support navigation authority input concerning their other activities such as the development of the MCA hire boat code.

We are not responsible for, and do not conduct investigations into accidents/incidents, but we may view fire reports or coroner's verdicts in order to inform our assessment. We may help the investigation of incidents by facilitating the return for testing of suspected faulty equipment to the manufacturer/ supplier. We may also test the experience of the 200 independent BSS examiners by way of targeted surveys. Through our partnership with Warwickshire Fire and Rescue Service (WFRS) we may identify research needs and seek sponsorship for such research and through our representation at British Standards Institution (BSI) we may seek to influence relevant standards-making activity.

In the event any accident or incident casts doubts about the issue of a BSS Certificate, the BSS Office will seek to view the vessel in order to investigate any potential for an inconsistent examination.

The reports have been generated by the interrogation of 'official sites such as Fire and Rescue Services, Maritime and Coastguard Agency and the Marine Accident Investigation Branch. We also review key stakeholder statistics such as the Royal National Lifeboat Institute and CO-Gas Safety. We will also extract evidence from 'official' news sites and boating newsgroups. Discussions with BW and EA navigation staff have generated further accidents/incidents for the records and a number of BSS examiners and others people from the marine trade are very helpful in reporting incidents or supplying greater detail. Liason with Coroners Officers is usual concerning death where the use of the boat or boat's systems is implicated in a death.