Explosives Ship on Fire in the English Channel!

by Martin Goose (Formerly Explosives Inspector and Chemical Inspector Fire and Explosion)

Career

I joined HSE on the first working day of 1977, reporting to what was then FI8 in the Chapel Street building in London. My early years were spent mainly at the FCGs in Hitchin/Luton and Birmingham. Then, in 1980, I moved to the Explosives Inspectorate for ten years, subsequently returning to what was then the Major Hazards Hazards Assessment Unit. After various HQ posts including head of the Process Safety Specialism in the Hazardous Installations Directorate, the opportunity arose to apply for early retirement in 2006/7.

My time with the Explosives Inspectorate included several memorable incidents/experiences as the Explosives Act that I enforced applied everywhere. The incident described below is described largely from memory (E&OE).

The Fire Starts

The first indication of the problem ahead was recorded on the other side of the Atlantic in the Los Angeles Times, although this did not come to our attention initially.

> *Dynamite-Filled Ship Adrift in English Channel*
> *March 4, 1987*
> *12 AM*
> *From Times Wire Services*
> *CHERBOURG, France —*
>
> *A Danish cargo ship loaded with 400 tons of dynamite and detonators and abandoned by its crew after a fire drifted in the English Channel on Tuesday.*
>
> *Coast guard officials warned vessels in the busy international waterway to steer clear of the ship for fear that the fire may be continuing and could trigger a huge explosion.*
>
> *The crew of two men and three women abandoned the 1,000-ton, 136-foot Hornestrand on Tuesday morning after Capt. Niels Bach Kristensen saw smoke coming from a hold. A Cypriot freighter picked them up, and a helicopter brought them ashore.*
>
> *Adm. Christian Jammayrac, the maritime governor of Cherbourg, ordered the ship's Danish manager, Bendt Andersen, to have the vessel towed away. Otherwise, he said, the French navy may open fire and sink it.*
>
> *Decision at Dawn*
>
> *Jammayrac's office issued a statement Tuesday night saying officials would decide what to do with the ship at daylight today if Andersen had not contracted with a civilian tug.*

The statement said aerial reconnaissance Tuesday afternoon showed no smoke coming from the vessel, drifting about 46 nautical miles northwest of Cap de la Hague on Normandy's Contentin Peninsula.

However, no one appeared ready to board the ship.

Had the threat to ask the French Navy to sink the vessel been realised, it would have saved me a lot of effort, but I would have missed the experience that I will now recount.

A Telephone Call from Falmouth

My recollection of how I became involved is not absolutely clear, but the message came in that an explosives vessel was on fire in the channel (on the English side!), the crew had abandoned the vessel and were safely ashore in Falmouth. The vessel was called the Hornestrand and was en-route from Hamburg to West Africa with a cargo of blasting explosives and accessories such as detonators.

On arrival in Falmouth I contacted the Harbourmaster and asked for a briefing on the current situation. Because winter in the English Channel can be very stormy, a Dutch salvage company had a salvage tug stationed in Falmouth all through the winter salvage season. The tug (Typhoon) had already been out to the Hornestrand and put a line aboard to claim salvage rights. The master of the

tug had reported back that the fire appeared to be out and intended to bring the vessel into Falmouth harbour where there was an explosives handling anchorage (Carrick Roads), to complete the salvage operation. The Harbourmaster was unhappy about this and so was I! The thought of hundreds of tonnes of possibly deteriorated explosives being unloaded near the town of Falmouth did not seem like a good idea. If the Hornestrand was allowed in, and an explosion was the result, it would have been the end of a promising Inspectorial career, although the glaziers and builders of Cornwall would be in work for many months!

The master of the tug continued to pressurise the Harbourmaster. We both objected on the basis that the fire might not be out and the explosives would probably have deteriorated in the fire. I held the 'whip hand' because the explosives could not come in without an Explosives Import Licence which I told them they would not get unless the explosives were proven to be safe to offload.

Ensuring that the Cargo was No Longer on Fire

By this time the case was attracting UK media attention and the Chief Fire Officer of Cornwall Fire and Rescue Service was taking a strong interest. He agreed to be taken out to the Hornestrand aboard Typhoon to give his opinion. This he did after the salvage company (Wijsmuller) had arranged for supplies of Nitrogen to be taken to the Hornestrand and used to flood all the cargo spaces. The Chief Fire Officer duly reported his opinion that the fire had been extinguished.

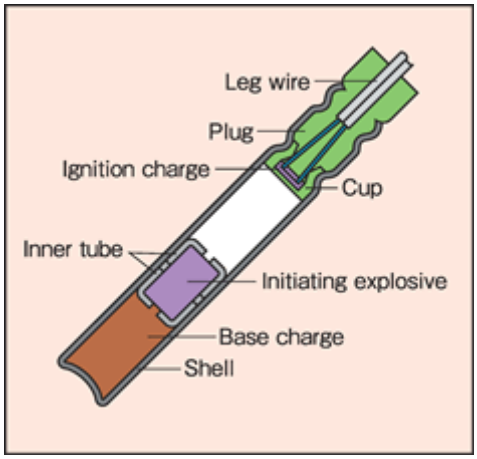
Had the Explosives Deteriorated Badly?

By this stage the incident had entered its second week and I had called on the help of the HSL Explosives Laboratory staff from Buxton. They set up a temporary explosives laboratory in a

building within Falmouth Harbour where they could test samples of the bulk explosive and examine sample detonators for damage.

Although the initial reports had referred to ‘dynamite’ this was not actually correct. In the media, dynamite is often a convenient term for any explosive. I do not recall precisely the type of bulk explosive but it may have been a blasting gelatine containing nitroglycerine or a more modern slurry explosive based on sensitised ammonium nitrate. In the event the bulk explosive HSL tested was largely unaffected by the fire.

Unfortunately, the same could not be said for the blasting accessories, in particular the electric detonators. The construction of a typical electric detonator is shown in this diagram.



The leg wires on electric detonators can be quite long and those on the Hornstrand had PVC insulation. When examined by HSL it was found that the metal shell of the sample detonators was badly corroded exposing the sensitive explosives inside. During the fire the PVC insulation had degraded and produced acidic hydrogen chloride gas which caused the damage.

The examination of the explosives cargo demonstrated that any salvage of the cargo would need to be carried out with great care!

The Voyage Back to Hamburg

By this stage the master of Typhoon was no doubt beginning to get the message that we were growing more and more reluctant to agree to allow the Hornestrand into Falmouth. If it was safe to bring it in to Falmouth, it was safe to take it back to Hamburg and deal with it there. It was finally agreed that Hornestrand should be towed back to Hamburg. HM Coastguard were already involved and agreed a plan for Typhoon to tow Hornstrand the wrong way along the Channel one way system and across to the river Elbe and its explosives anchorage near Hamburg. Once the Hornestrand was well on its way back to Hamburg, and no longer my responsibility, I breathed a sigh of relief and headed back to Bootle!

One of the companies involved during the salvage operation was a UK specialist explosives transport company (one of two, I forget which). Once Hornstrand was towed away they set off for Hamburg to await the vessels arrival. I had little trouble in turning down their offer to take me along and show me the night life in Hamburg!

A Final Surprise

After returning to Bootle I resumed my planned program of inspecting Explosives Magazines and Factories and preparing Licences for the importation of explosives (of the non-deteriorated kind). A couple of days later I had a phone call from Hamburg. Hornestrand had arrived in Hamburg and when the hatch covers were opened the cargo had again burst into flames!

What Happened to the Hornestrand?

Hornestrand was built in 1981 and had a carrying capacity of 960 t. She clearly survived the fire in Hamburg and was subsequently renamed Vulcao and then Orango. According to the web site MarineTraffic.com she has been laid up in the port of Dakar, Senegal for at least the last decade.