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Leaking nuclear sub sailed for 36 hours

By Stephen Naysmith

BRITAIN'S naval chiefs have been accused of a "bewildering misunderstanding" of basic engineering, after it was revealed last week that the crippled nuclear submarine HMS Tireless sailed on for 36 hours even though crew knew she was losing gallons of dangerous irradiated coolant.

This week, the chair of the Navy's Nuclear Regulatory Panel, Captain Frank Hurford admitted crew on the submarine had restarted her nuclear reactor after noticing the fault on May 18th this year.

It wasn't until 36 hours later when the leak - caused by a crack in a coolant pipe - had worsened considerably, that the reactor was shut down and Tireless proceeded using its fallback diesel drive to Gibraltar. It has remained in port there ever since, at the centre of a diplomatic row with the governments of Gibraltar and Spain over safety.

However one insider told the Sunday Herald that at the time of the initial leak, coolant was already leaking "by the bathtub" of water escaping into the bilges. When she was restarted and had continued for more than 24 hours with the fault unaddressed, there was a sudden

Revealed: diplomatic fallout over leaking nuclear sub



Safety fears over nuclear sub's return to service



The Sunday Herald has been charting the story of the leaking nuclear submarines since back in July

increase in the leak as the crack apparently worsened.

In a remarkable interview for BBC Radio this week, Captain Hurford revealed the course of action taken by the crew.

He described the crack on the coolant pipe as "very minor" initially, "in physical terms most people would accept [it was] a very small crack," he said. "We were able to come out and ... restart the reactor and carry on propelling the submarine."

He confirmed that Tireless had sailed on for 36 hours and added: "The materials of construction are designed to operate so that they don't fail in a brittle manner. So although there is a very slight chance, the

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Nuclear sub defect could put Britain's safety at risk



engineering," says that this will not happen.

However the condition of Tireless has become a major defence issue since the MOD admitted that only five of the Navy's 12 hunter-killer submarines are free of what appears to be a generic design fault in the coolant system.

Capt Hurford's comments were greeted with alarm, despite attempts by the Navy to play them down.

MOD navy spokesman Lieu-tenant Commander Jim Jenkins told the Sunday Herald: "This is being blown out of all proportion. Taking the reactor critical again makes no difference to the operating pressure. It

wouldn't have any effect on the crack at all. The Royal Navy has always operated in accordance with extreme safety criteria. "It wasn't unwise. If it was, we wouldn't have done it."

However he admitted the Navy themselves had been unaware until recently of the scale of the damage Tireless had suffered. "I don't think we knew how bad it was," he said in response to criticism of the Navy for a lack of openness.

"Until we'd had the opportunity to cut into the weld, in many respects we were judging from an external inspection. But this had no effect on safety."

Independent nuclear safety consultant John Large, who has been contracted by the government of Gibraltar to advise on the Tireless issue, described the revelation from Hurford as "astounding" and indicative of a "somewhat cavalier attitude".

He ridiculed the Navy's claim that restarting the reactor had made no difference to the fault, adding: "It defies logic to say that if you pressurise something with a crack in it that the crack isn't going to grow. It shows a bewildering misunderstanding of some very basic engineering and matters of fact."

"Civil nuclear regulators would never have allowed this to happen with a crack of unknown origin and nature. The

assumptions the navy made about the crack's position, location and propagation rate were grossly erroneous."

Large added that the incident raised questions about the Navy's ability to regulate the operation of its nuclear reactors. "Restarting the reactor carried with it a risk of catastrophic failure."

Plans have now been drawn up for repair of the faulty coolant circuit on Tireless and six other Swiftsure and Trafalgar class submarines. An announcement about the recovery programme is expected at Westminster this week.

from 5th Aunt

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