

Nuclear sub was hours from meltdown

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HMS Tireless How a 'minor defect' could have caused disaster

Richard Norton-Taylor

Only now, more than five months after the Ministry of Defence assured Gibraltarians that it was only a "minor defect", are the full extent and dramatic consequences coming to light. HMS Tireless, which has been moored off the Rock since May, was close to a disaster, its nuclear reactor "at the very point of failure", sources have told the Guardian.

The crack, far more serious than first thought, is understood to be at a critical junction of pipes in the pressurised water reactor's cooling system which cannot be isolated. The navy now recognises it is not simply a question of wear and tear: it is a potentially catastrophic design fault. Asked whether it could have foreseen what it is now suspected is a "generic" problem, navy sources sidestep the question. They respond by repeating the mantra that safety is of "first importance".

There is no doubt the navy treats the safety issue extremely seriously. What worries defence and nuclear sources is not what action was taken after the leak on the Tireless was eventually diagnosed — the recall of Britain's entire fleet of strike submarines — but why the initial leak, a symptom of what has turned out to be a much more devastating problem, was not discovered earlier.

"The cracks could not be in a worse position. It is critical to safety," the Guardian has been told. Sources say the Tireless reactor was "at the very point of failure" — in other words a meltdown.

The critical junction of pipes where the welding fault was finally discovered had not been inspected since the first Swiftsure class submarines with this reactor design were built in the early 1970s, sources have revealed. They added: "It is a very serious failure of the navy's inspection monitoring system. It's quite remarkable".

The problem is compounded because the Ministry of Defence, not the manu-

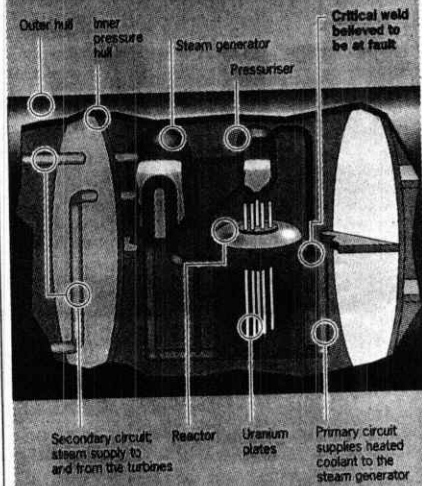
facturers, Rolls-Royce, is the submarines' "design authority". That is to say, the MoD monitors the submarines; the makers are not liable for any faults.

Naval engineers are said to have been astonished to discover the problem on the Tireless turned out to be so serious. Equally alarmingly, navy sources say the splits in the pipes of the reactor's cooling system were discovered only because of new technology of which they had no previous experience.

Yet the navy is not short of experience of problems with its submarines' nuclear reactors. Polaris nuclear missile submarines were afflicted by reactor problems which turned out to be the same that crippled the navy's older fleet of hunter-killer submarines: cracked pipework in the primary cooling system.

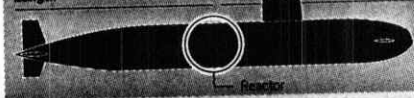
As far back as 1991, Reg Farmer, a member of the MoD's nuclear-powered warships safety committee, revealed

HMS Tireless



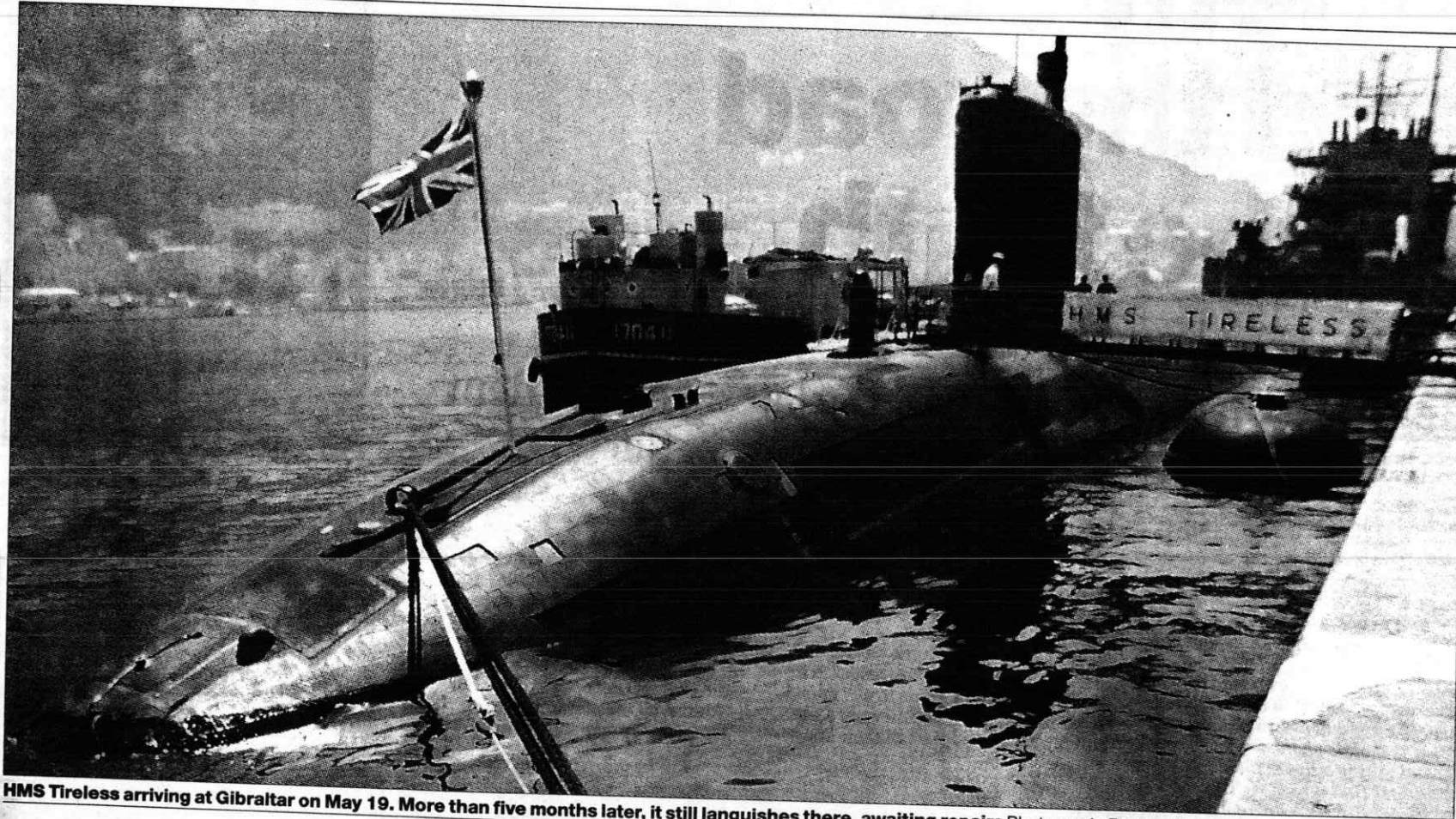
"Trafalgar" class submarine

Crew	130	Armament	Hughes Tomahawk Block II
Max speed	32 knots (dived)		Sub-Harpoons fired from tubes
Length	85.4m		Torpedoes



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HMS Tireless arriving at Gibraltar on May 19. More than five months later, it still languishes there, awaiting repairs Photograph: Reuters

that cracks had been found at the base of steam generators in the nuclear reactors. He spoke to Thames Television after the MoD had persistently refused to answer questions from MPs on the grounds that they covered "sensitive military areas".

This week, the MoD said it could not disclose what is wrong with the Tireless reactor "without consulting the Ameri-

cans first" — the reactor is based on an American design. In July, John Spellar, armed forces minister, told MPs: "The repair work on HMS Tireless is a standard repair following a contained leak of coolant water in her reactor compartment." The work, he added, would be completed "in the autumn."

Given the sensitivity of Gibraltar opinion, it is likely that repairs on Tire-

less will not begin until work is completed on one of its sister boats in Britain. Gibraltarians face the prospect of an immobile Tireless sitting off the Rock for a year.

"The mood in Spain, in the towns near Gibraltar, is that it should be towed back to Britain," Michael Castiel, the lawyer representing opposition groups in Gibraltar, said yesterday.

For the MoD that may be a little local problem compared with the navy being deprived of its entire submarine strike force for at least five months. It would be crass not to admit the "pain and grief" involved, a navy source said.

The recall coincides with the sale of Britain's remaining conventionally powered submarines to Canada, a decision taken by the Tory government.