

The Spanish government appointed a group of experts from their nuclear safety organisation (CSN) to meet with officials from the MoD for an exchange of information on HMS Tireless. The CSN report was made public in Spain on 30 October. It says that the accepted hypothesis is that the problem is a generic design defect -

“Los trabajos analizados para clarificar las causas de la avería han permitido establecer la hipótesis de que la grieta se ha producido como consecuencia de un proceso de fatiga térmica, debido a la comunicación de dos factores: *un defecto de diseño* en las características de la mecanización y las tensiones térmicas que se producen en esa zona durante la operación normal del reactor.

“La armada británica realizó una inspección en todos los submarinos nucleares de características similares, comprobando la existencia del mismo tipo de grietas en otras unidades en servicio. Dichas grietas que no habían llegado a producir fugas, determinaron la instrucción de retirada de servicio por parte de las autoridades británicas.

“La existencia del mismo tipo de problema en otras unidades confirma la hipótesis de que se trata de *un problema genérico* de esta clase de reactores que se localiza y restringe a este punto concreto del circuito. ”

“Analysis work to clarify the causes of the failure have allowed the hypothesis to be established that the crack has taken place as a result of a process of thermal fatigue, due to the combination of two factors: a design defect in the characteristics of mechanisation and the temperature stress that take place in that zone during normal operation of the reactor.

“The British Navy made an inspection of all the nuclear submarines of similar characteristics, verifying the existence of the same type of cracks in other units in service. These cracks which had not resulted in leaks, resulted in an instruction from the British authorities to retire them from service.

“The existence of the same kind of problem in other units confirms the hypothesis of a generic problem of this class of reactor that is located and restricted to this particular point of the circuit.”

The exact nature and cause of the problem on HMS Tireless are not yet fully understood. As a result the Navy do not know exactly what they are looking for on other submarines.

On 21 October when the government announced that submarines were being recalled they stated that HMS Triumph was in Toulon, France. The vessel sailed into Devonport on 27 October. Since the seriousness of the problem on Tireless was appreciated they will have had no opportunity to inspect Triumph. A full inspection could only be carried out several weeks after the reactor had shut down, by which time radiation levels would be lower.

It is likely that the reactor on HMS Triumph has been shut down on arrival in Devonport. There will be a risk of a nuclear accident when it is started up again to sail. It is possible that it may have been kept running at low power, in which case there is an ongoing hazard. As Geoff Hoon refers to the vessel being deployed in support of Trident submarines it is likely that it will be deployed in the near future to Scottish waters.

It is interesting that on 23 October I spoke to BBC Plymouth who had been told, possibly off the record, by a senior officer at Devonport that there were signs of the defect on four submarines at Devonport, in addition to Tireless. I think the initial decision 21 October to withdraw submarines to port was based on the list of affected submarines which was disclosed on 1 November. This list would have been drawn up, not on the basis of detailed new inspections, but on the analysis of data from inspections carried out in the past, in some cases years ago. In other words I don't think there has been any change in the assessment since Navy experts met with their Spanish counterparts. Geoff Hoon's statement about a generic defect that - "That appears not to be the case" is highly misleading.

John Ainslie
Scottish CND
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