

日本の取り組み

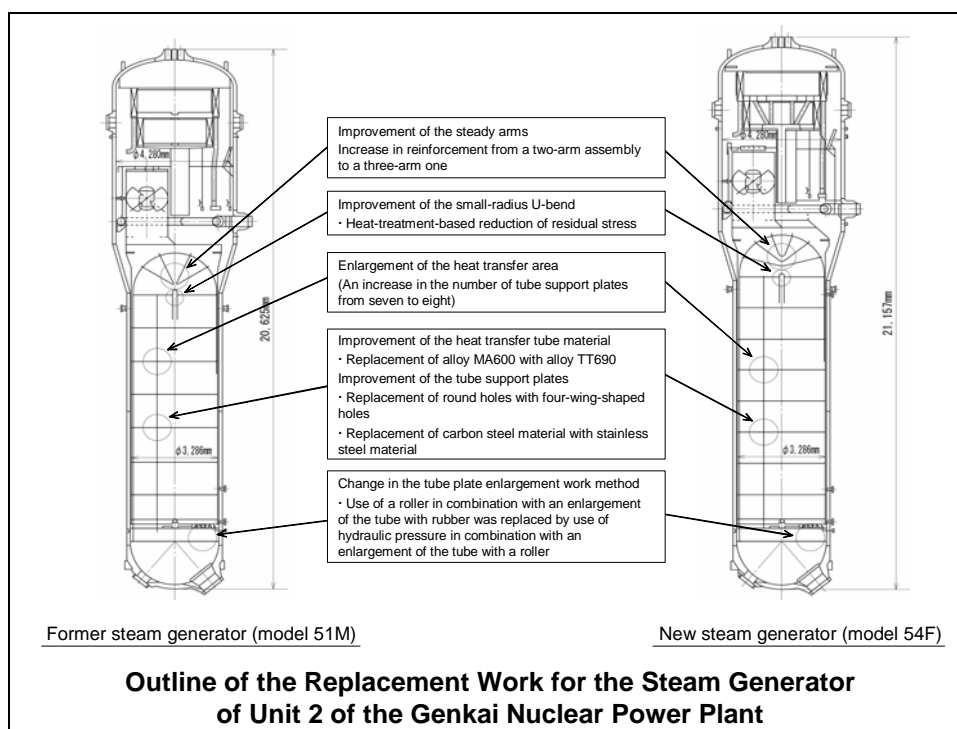
「玄海原子力発電所 2 号機、蒸気発生器取替工事及び原子炉容器上部蓋取替工事について」
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玄海 2 号機の標記取替工事で施された様々な線量低減対策とその効果について発表した。蒸気発生器、RPV 上蓋の両取替工事ともに、

- ・ 種々の自動遠隔作業装置の使用、
- ・ 配管内面等の除染、
- ・ 仮設遮へい、
- ・ 作業時間の短縮

などの効果により、取替線量率は大幅（1/2～1/10）に低減されたと見積られる。また、取替工事後の定検線量も、蒸気発生器、RPV 上蓋の取替効果により大幅に低減している。



Measures Taken to Reduce the Dose in Unit 2 of the Genkai Nuclear Power Plant and the Effects Achieved by the Measures Taken

Unit: (man·mSv)

Description	Effect		
	Before the measure was taken*2	After the measure was taken	
Replacement work for the steam generator Track record value 0.88 man·Sv	Decontamination of the inner surface of the reactor coolant main pipe and application of a shielding plug to it	651.15	49.98
	Application of lead shielding on the outer surface of the reactor coolant main pipe	869.98	403.83
	Use of remote-operated automatic machines (automatic cutting machines, automatic edge preparation machines, and automatic welding machines for piping use)*1	128.59	47.58
Replacement work for the reactor pressure vessel upper head Track record value 0.10 man·Sv	Reduction in working hours through the use of the automatic reactor vessel stud hole brushing machine	2.49	0.87
	Reduction in working hours through the use of the fully-automatic reactor vessel stud bolt handling machine	16.50	9.22
	Reduction in working hours through the integration of reactor vessel upper internals	17.55	7.62

*1: This includes the effect of operability improvement resulting from training on mockups.

*2: Values calculated on the basis of exposure track records (dose values) under the assumption that the dose reduction measures are not taken

