# Permanent installation of a power panel (P/C 1C-2) in Unit 1 Seawater Heat Exchanger Building (January 28, 2013)

The power panel (P/C 1C-2) damaged by the Tsunami in Unit 1 Seawater Heat Exchanger Building was replaced with a newly manufactured power panel and has been permanently installed on January 28 after function check was completed.





Function check [Permanent installation completed on January 28, 2013] (Photo taken on January 28, 2013)

Permanent installation of auxiliary facilities of the emergency diesel generator (A system) in Unit 1 Reactor Building Annex (January 31)

The auxiliary facilities of the emergency diesel generator (A system) damaged by the Tsunami in Unit 1 Reactor Building Annex have been permanently installed on January 31 after function check was completed.





Trial operation of the electric motor (Fresh water heater pump<sup>\*1</sup>) (Photo taken on January 24, 2013)



Trial operation of the electric motor (Lubricating oil priming pump\*<sup>2</sup>) [Permanent installation completed on January 31, 2013] (Photo taken on January 24, 2013)

\*1 Fresh water heater pump: Used for cooling the high temperature parts of the diesel engine such as the cylinder.
\*2 Lubricating oil priming pump: Used for feeding lubricating oil to the piston, main bearing, generator bearing, etc. while the diesel engine is suspended (in stand-by state)

Completion of function check of the electric motor of the residual heat removal system cooling seawater system (C system) in Unit 1 Seawater Heat Exchanger Building (January 18)

Trial operation of the electric motor of the residual heat removal system cooling seawater system (C system) damaged by the Tsunami in Unit 1 Seawater Heat Exchanger Building was performed on January 18 using temporary power supply and cable, and the electric motor was confirmed to operate properly as a result.





After trial operation [Function check completed on January 18, 2013] (Photo taken on January 31, 2013)

## Permanent installation of the electric motors of the residual heat removal system cooling systems (B & D) in Unit 2 Seawater Heat Exchanger Building (January 28)

Since Unit 2 power panel (P/C 2D-2) was permanently installed, the power supply to the electric motors of the residual heat removal system cooling systems (B & D) was switched from temporary power supply to the permanent power panel on January 28. As a result of trial operation performed after switching the power supply, the electric motors were confirmed to operate properly. The permanent installation of the electric motors of Unit 2 residual heat removal system cooling systems (B & D) has thus been completed.





Electric motor of the residual heat removal system cooling system pump (B) before switching to the permanent cable (Photo taken on January 9, 2013)



Permanent cable installed for the electric motor of the residual heat removal system cooling system pump (B) (Photo taken on January 21, 2013)



Trial operation of the electric motor of the residual heat removal system cooling system pump (B) [Permanent installation completed on January 28, 2013] (Photo taken on January 28, 2013)



Permanent cable installed for the electric motor of the residual heat removal system cooling system pump (D) (Photo taken on January 21, 2013)



Trial operation of the electric motor of the residual heat removal system cooling system pump (D) [Permanent installation completed on January 28, 2013] (Photo taken on January 28, 2013)

## Permanent installation of the electric motors of the residual heat removal system cooling seawater systems (B & D) in Unit 2 Seawater Heat Exchanger Building (January 30)

Since Unit 2 power panel (P/C 2D-2) was permanently installed, the electric motor of the residual heat removal system cooling seawater system (B) was connected with the permanent cable on January 30. As a result of trial operation, the electric motor was confirmed to operate properly. As for the electric motor of the residual heat removal system cooling seawater system (D), the power supply was switched from temporary power supply to the permanent power panel. After switching the power supply, trial operation was performed and the electric motor was confirmed to operate properly. The permanent installation of the electric motors of Unit 2 residual heat removal system cooling seawater systems (B & D) has thus been completed.







Taking cable core out of the permanent cable for the electric motor of the residual heat removal system cooling seawater system pump (D) (Photo taken on January 22, 2013)

Electric motor of the residual heat removal system cooling seawater system pump (D) before permanent cable installation (Photo taken on January 9, 2013)



Permanent cable installed for the electric motor of the residual heat removal system cooling seawater system pump (D) (Photo taken on January 22, 2013)



Trial operation of the electric motor of the residual heat removal system cooling seawater system pump (D) [Permanent installation completed on January 30, 2013] (Photo taken on January 30, 2013)

## Permanent installation of the electric motor of the emergency diesel generator cooling system (B) in Unit 2 Seawater Heat Exchanger Building (January 29)

Since Unit 2 power panel (P/C 2D-2) was permanently installed, the power supply to the electric motor of the emergency diesel generator cooling system (B) was switched from temporary power supply to the permanent power panel on January 29. As a result of trial operation performed after the power supply was switched, the electric motor was confirmed to operate properly. The permanent installation of the electric motor of Unit 2 emergency diesel generator cooling system (B) has thus been completed.





Before permanent cable installation (Photo taken on January 21, 2013)



Terminal installation for the permanent cable (Photo taken on January 21, 2013)



After permanent cable installation (Photo taken on January 21, 2013)



Trial operation [Permanent installation completed on January 29, 2013] (Photo taken on January 29, 2013)

#### Permanent installation of the electric motor of the reactor component cooling system (B) in Unit 2 Seawater Heat Exchanger Building (January 29)

Since Unit 2 power panel (P/C 2D-2) was permanently installed, the power supply to the electric motor of Unit 2 reactor component cooling system (B) was switched from temporary power supply to the permanent power panel on January 29. As a result of trial operation performed after the power supply was switched, the electric motor was confirmed to operate properly. The permanent installation of the electric motor of Unit 2 reactor component cooling system (B) has thus been completed.





Before permanent cable installation (Photo taken on January 25, 2013)



After permanent cable installation (Photo taken on January 25, 2013)



Trial operation [Permanent installation completed on January 29, 2013] (Photo taken on January 29, 2013)

Permanent installation of the purge line of the reactor coolant purification systems (A & B) in Unit 2 Reactor Building (January 22)

As for the purge line<sup>\*1</sup> of Unit 2 reactor coolant purification systems<sup>\*2</sup> (A & B), the temporary hose was replaced with the permanent pipe. Since no problem was found with its operation as a result of water passing test, the permanent installation of the purge line has been completed on January 22.

<sup>\*1</sup> Seal water line of the reactor coolant purification system circulation pump.

\*<sup>2</sup> System which maintains the quality of reactor water by removing impurities. It is also used for controlling the reactor water level by discharging excessive water from the reactor.





The entire purge line of the reactor coolant purification system connected using temporary hose (December 14, 2012)



Temporary hose connection for system B (Enlarged image) (December 14, 2012)



The entire purge line of the reactor coolant purification system connected using the permanent pipe (valves) [Permanent installation completed on January 22, 2013] (Photo taken on January 24, 2013)



Permanent pipe (valve) connection for system B (Enlarged image) (Photo taken on January 24, 2013)