

# Correction of pressure indicator of reactor containment vessel

May 12<sup>th</sup>, 2011

Tokyo Electric Power Company

- Correction of pressure indicator of reactor containment vessel ( PI-1601-68 )

Before correction

After correction

	Standard input value (MPa)	Input value (MPa)	Standard output value (MPa)	Output value (MPa)	Error (%)
20%	0	0	0	0.005	1.0
80%	0.300	0.300	0.300	0.305	1.0



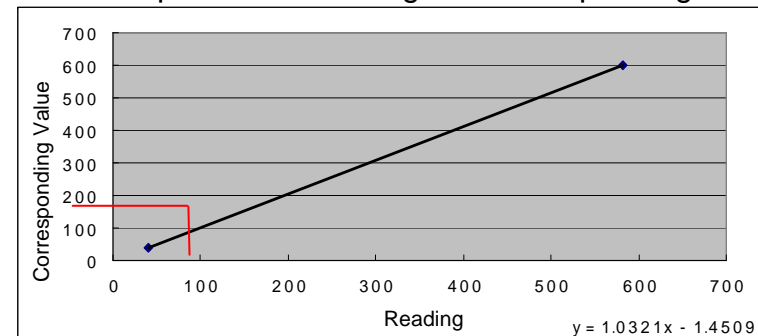
	Standard input value (MPa)	Input value (MPa)	Standard output value (MPa)	Output value (MPa)	Error (%)
	0	0	0	0.000	0
	0.300	0.300	0.300	0.300	0

- We corrected pressure indicator of reactor containment vessel
- Reading after correction was 0.020MPa ( gauge pressure ) , and 120.57KPa abs in absolute pressure. (as of 10:00am on May 12th)

- **Attrib. of pressure indicator of reactor containment vessel ( PI-1601-69 )**

	Input value (kPa abs)	Output value (kPa abs)	Error (%)	Acceptable error range
6.67%	40	40.16	+0.4	<b>± 0.2%</b>
100%	600	582.72	-2.88	

Relationship between reading and corresponding value



- As a result of confirmation of attrib. of input and output, we confirmed drift of indicators.
- Relationship between attributed reading and corresponding value of pressure containment vessel is shown below

$$\text{Corresponding value} = 1.0321 \times (\text{reading}) - 1.4509$$

- Current pressure of containment vessel is 118.4KPa abs in reading and 120.75KPa abs in corresponding value.
- Because the difference between reading of pressure indicator and corresponding value is almost the same (0.03% gap), we assume that we can get correct value by using corresponding formula.

## 20110510 ~ 20110511 Correction of water level indicator (Fuel area)

The result of correction of the indicator

### Indicator correction data

	Standard value of water level (cm)	Input value (kPa)	Corresponding output value in power voltage (mV)	Corresponding value in water level in reactor (cm)	Error (%)	Acceptable error range (%)
0 %	-300	-78.53	40.7	-296.8	+0.4	± 0.5
100 %	500	-1.06	199.9	499.5	-0.1	

\* We did not correct the indicator because the data gathered were within acceptable error range.

### Data before and after water injection

Type of indicator	Controlled from Central control room (LI-263-122A)	Remote control (LT-263-121A)	Temporarily differential pressure sensor
Before	-170cm	-1.67m	
After	Downscale 1	Downscale 1	Over scale 2

1 : Under -300cm

2 : Temporarily differential pressure sensor indicates over scale (over 100kPa), and if it is converted into water level value, it becomes about under -500cm (reference value).



### **Result of work:**

- We did not observe significant drift phenomenon regarding water level indicator of nuclear reactor.
- Because reading of central control room indicator was downscale and temporarily differential pressure sensor became over scale, we assume that water level in nuclear reactor is under -500cm from TAF.