

Summary of Lawsuit Seeking Compensation for Damage to Hamaoka Nuclear Power Station No. 5 Reactor Low-Pressure Turbine Moving Vanes

1. Summary of the Case

(1) Summary of the facts

The Hamaoka Nuclear Power Station No. 5 reactor (the “No. 5 Reactor”) automatically shut down on June 15, 2006 because of excessive turbine vibration.

Investigations indicated that all three of the low-pressure turbines (the “Turbines”) suffered fractures and cracks in the 12th-stage moving vane bases and some of the shaft moving vane attachment units. There were no irregularities in the moving vanes other than those in the 12th- stage.

(2) Cause

It was inferred that when the No. 5 Reactor operates under no load or low load, stress is caused by random vibration generated by turbulence in steam flows within the turbine and vibration stress caused by a flashback phenomenon resulting from steam in the feed water heater that rapidly flows in the reverse direction into the turbine during load shot off tests coincided, and repetition of these events caused fatigue fractures to the 12th-stage moving vane bases.

(3) Restoration

The 12th-stage moving vanes and stationary vanes were removed and pressure plates installed at the stationary vane sites. Calibration operation began on February 8, 2007, and power generation resumed on February 11, 2007.

Subsequently, during the fourth inspection conducted for the period between March 2010 and January 2011, the turbines were replaced with models that use new vanes, and power generation resumed on January 28, 2011.

2. Background to the litigation

- December 26, 2006
Chubu Electric Power demanded that Hitachi, Ltd. (“Hitachi”), the supplier of the Turbines, pay all expenses necessary for restoration of the turbines (direct damages) and expenses necessary for Chubu Electric Power to make up for the electricity that could not be generated as a result of suspension of operation of the No. 5 Reactor (indirect damages).
- April 4, 2007
Chubu Electric Power demanded 41.8 billion yen in indirect damages from Hitachi.
- April 12, 2007
Hitachi responded that it would not pay compensation for indirect damages.
Chubu Electric Power and Hitachi later held talks, but they did not reach a resolution.
- September 12, 2008
Chubu Electric Power filed suit against Hitachi.

3. Summary of the litigation

Date filed	September 12, 2008
Court	Tokyo District Court
Demand	Payment of 41.8 billion yen* and interest at the rate of 6% per annum from April 5, 2007 until payment in full.
Date	November 4, 2008: Date of the first oral argument Thereafter, the Court heard oral argument a total of 11 times.

* Expenses for supplementation with power from thermal plants, start up of the Taketoyo No. 4 Thermal Plant, and other expenses to make up for the electricity that could not be generated as a result of suspension of operation of the No. 5 Reactor.

4. Summary of the Parties’ Claims

(1) Chubu Electric Power’s Claims

The Turbines contained defects in the low-pressure turbine moving vanes (cracks and fractures that occur during test operation) at the time of delivery from Hitachi to Chubu Electric Power on January 18, 2005, resulting in a suspension of operation from June 15, 2006 to February 11, 2007.

In addition, under the No. 5 Reactor facility purchase agreement that included the Turbines between Chubu Electric Power and Hitachi, liability for defects continued until two years after the completion of testing (i.e., January 18, 2007), and that this incident occurred during that period. Accordingly, Hitachi is under a duty to pay compensation for defects to Chubu Electric Power.

(2) Hitachi’s claims

Under the Turbine purchase agreement, a defect means a failure, breakdown, or malfunction for which Hitachi is clearly responsible, and the cracks and fractures that occurred in the turbines do not correspond to such defects, and therefore, the Turbines were not defective. Accordingly, Hitachi is not under a duty to pay compensation for defects.