

# Minami-Fukumitsu Back-to-Back Converter Station



## TMT&D HVDC Projects in Japan

Kii Channel HVDC Link  
1400 MW-2000,  
2800 MW-future

Hokkaido-Honshu HVDC  
Link 150 MW-1979,  
300 MW-1980  
600 MW-1993

**Minami-Fukumitsu BTB**  
**300 MW-1999**

Shin-Shinano FC  
300 MW-1977  
600 MW-1992

Sakuma FC  
300 MW-1993 (Replace)

## Minami-Fukumitsu Back-to-Back Converter Station

### ■ Ratings

300 MW, 125 kV-dc, 2400 A-dc

### ■ Commissioned

March 1999

# Minami-Fukumitsu Back-to-Back Converter Station

The Minami-Fukumitsu Back-to-Back converter station is the first asynchronous DC link facility in Japan designed to interconnect the Chubu Electric Power Co. and the Hokuriku Electric Power Co. The system went into service in March 1999.

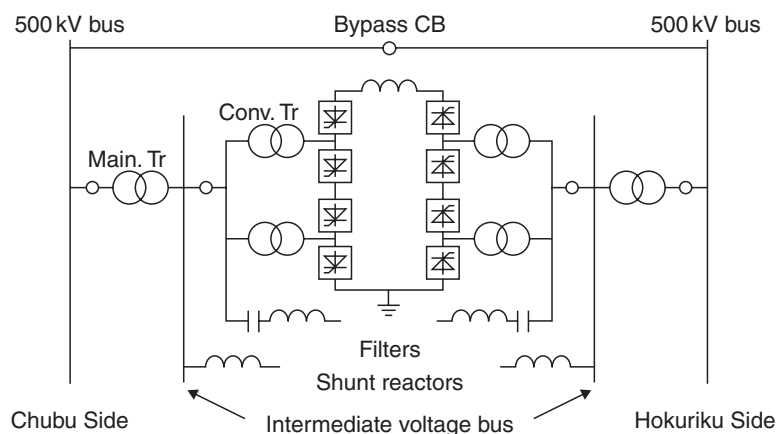
A multi-variable controlled AFC (Automatic Frequency Controller) is installed to stabilize the frequency after a large disturbance, and to enhance the suppression of frequency fluctuations.



## Photos:

Above; 300 MW, 125 kV-dc - 2400 A-dc LTT thyristor valves for Chubu side.

Front page; Minami-Fukumitsu Converter Station. The valve hall building is shown on the right side.



Project Name	Minami-Fukumitsu Back-to-Back Converter Station
Commissioned	March 1999
Location	Minami-Fukumitsu Back-to-Back Converter Substation Chubu Electric Power Co., Inc. Toyama, Japan
Rating	300 MW, 125 kV-dc, 2400 A-dc
AC System Voltage	500 kV/77 kV(Chubu side), 500 kV/66 kV(Hokuriku side)
Converter Valve	Water Cooled, air insulated quadruple valve
Valve Configuration	28 s/arm 4 modules/arm 12 arms s: series
Triggering	Direct light triggering
Ratings of Thyristor	6 kV-2500 A LTT (4 inches)
Number of Thyristors	336
Controller	Direct digital controller Automatic frequency control

## TMT&D

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