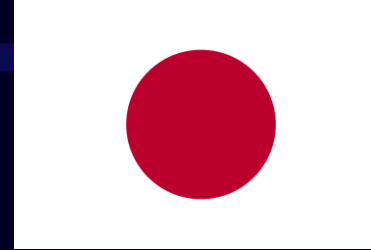


# Paris Session 2022



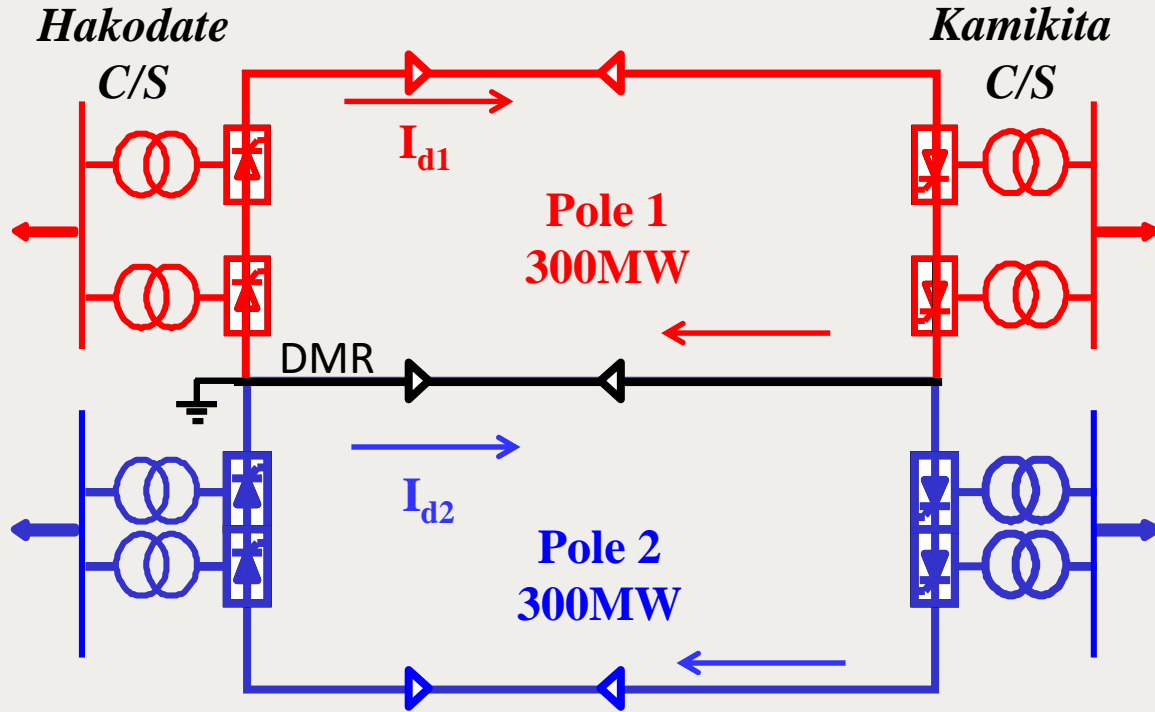
## Contre mesures for AC filters due to increased harmonics

B4\_PS1\_Q.1-7

Kenji Takine (Japan)



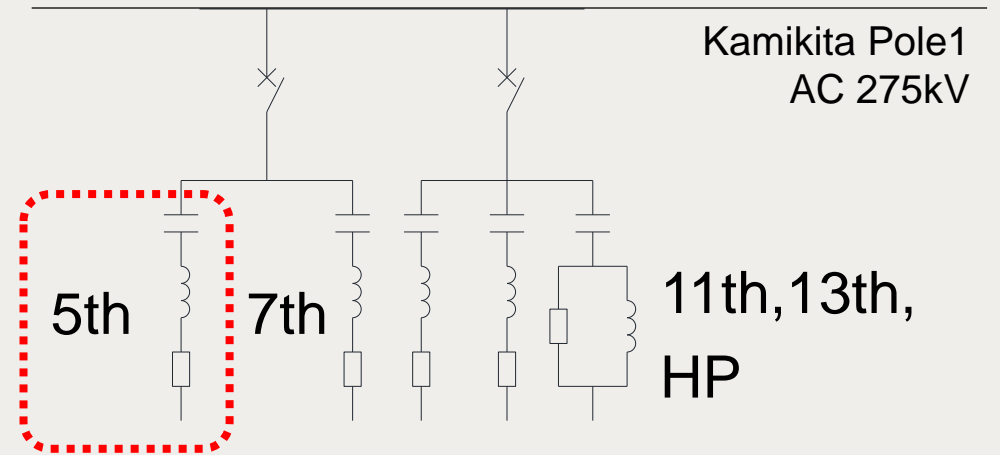
# About Hokkaido-Honshu HVDC Link



Bi-pole Circuit, LCC,  
300MW x2, +/- 250kV

Group Discussion Meeting

# Overview of AC filter

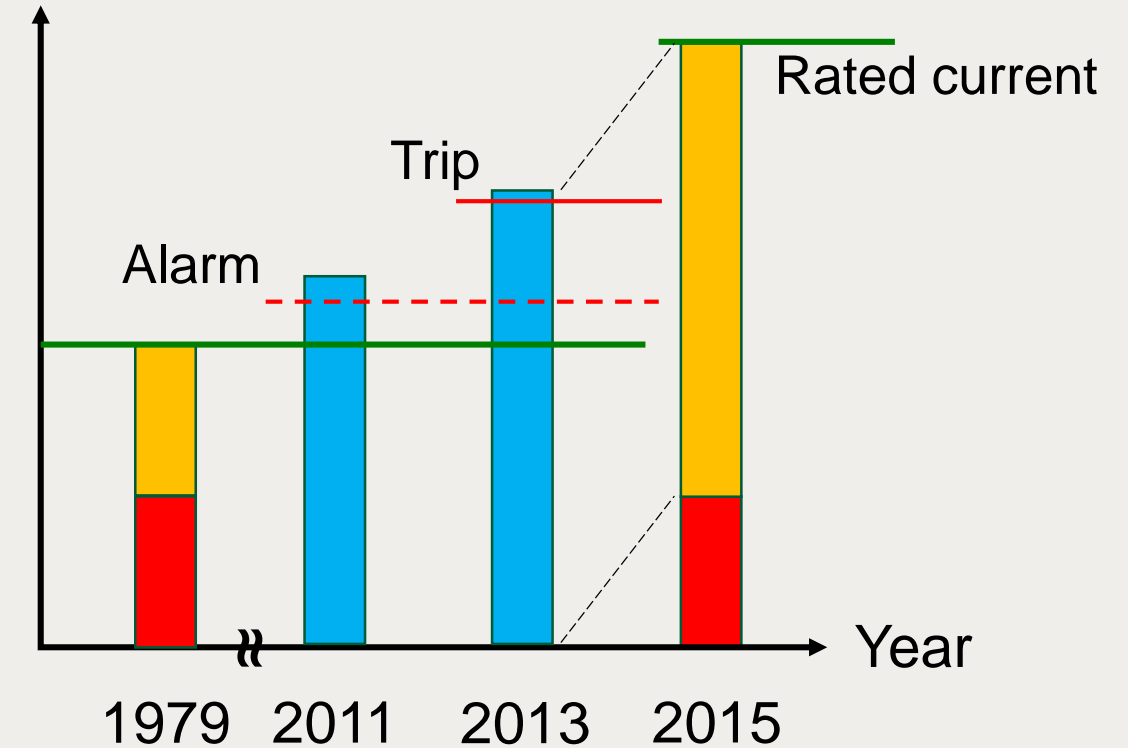


## History up to replacement

Year	Events
1979	Install
2011	First Alarm(Overload Ry) during 12 pulse operation
2012	Add cooling fans to the heatsink
2013	First Trip(Overload Ry) during 12 pulse operation
2015	Replacement

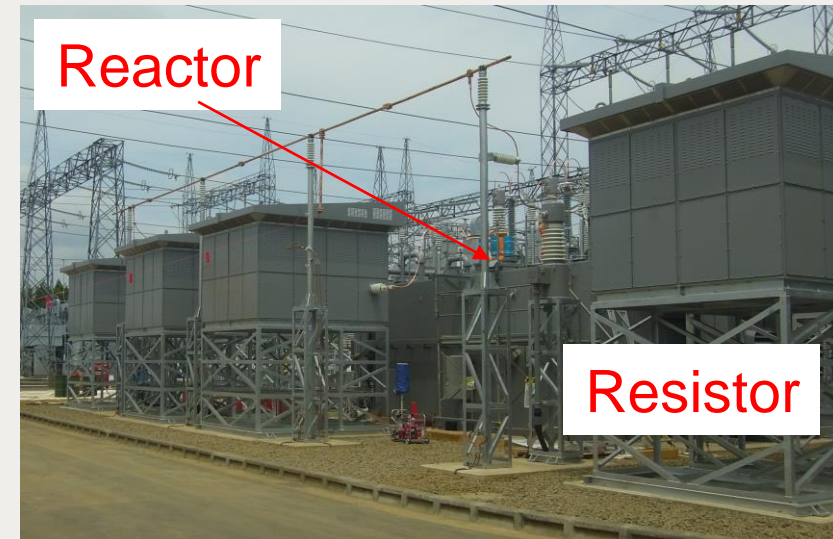
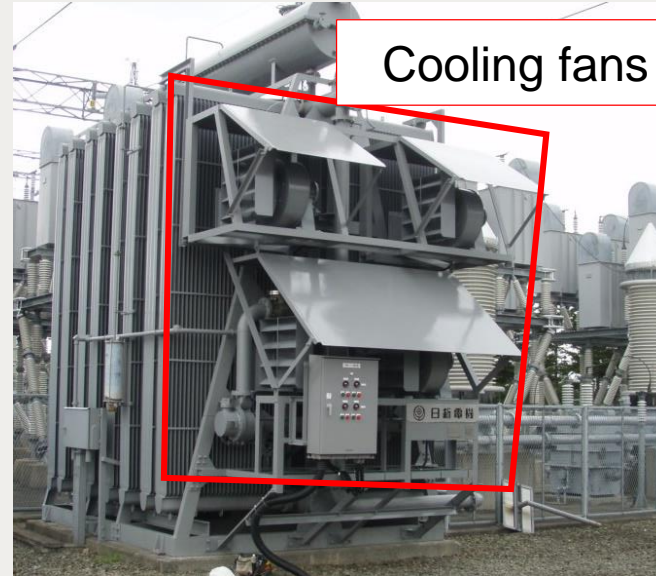
Group Discussion Meeting

## 5th Harmonic Current



- Converter generation at 6 pulses(Designed)
- Inflow from the AC system(measured)
- Inflow from the AC system(Designed)

# Measures for AC filter equipment



2012

Add cooling fans to the heatsink

Group Discussion Meeting

2015 Replace(C,L and R)