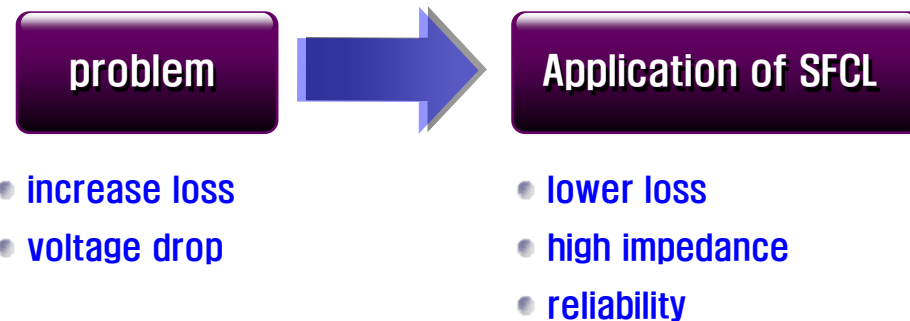
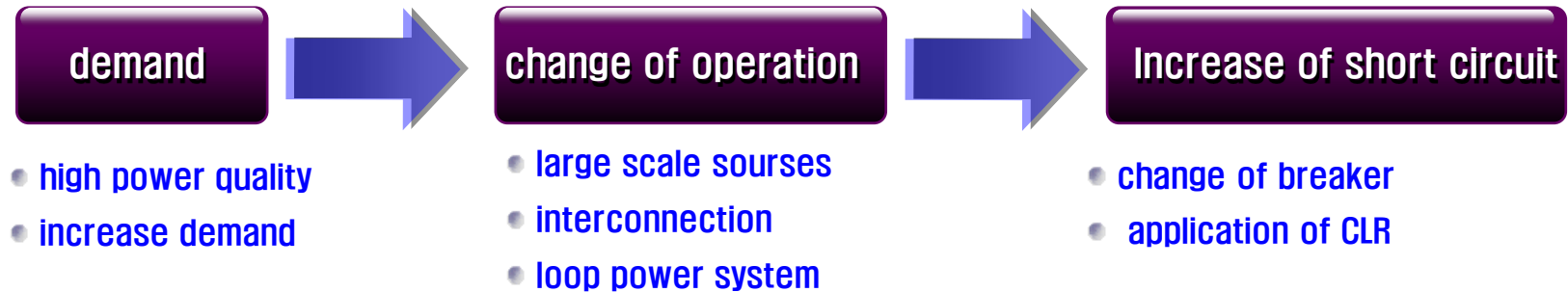


# **Analysis on the Protective Coordination Problem in Power System with Superconducting Fault Current Limiter**

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**SSU                Kim Jae-Cheol,**

# Introduction



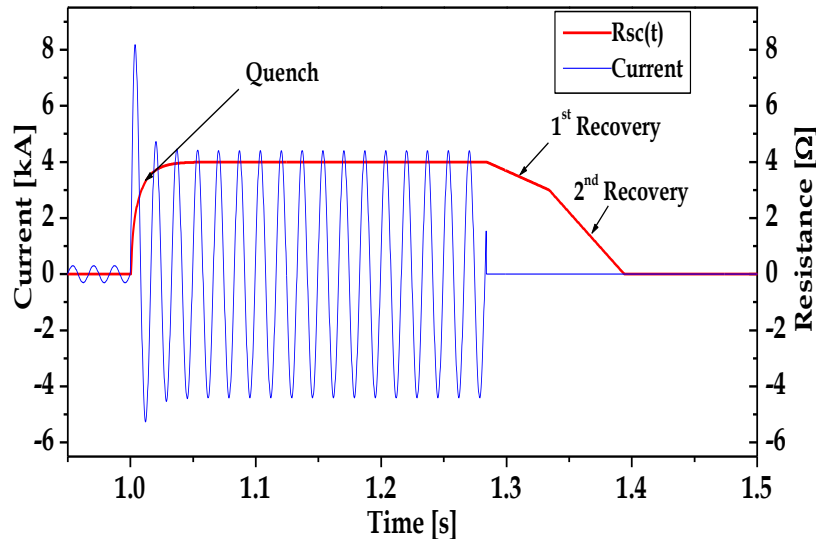
(example of CLR application  
: 40.3kA  $\Rightarrow$  37.5kA)



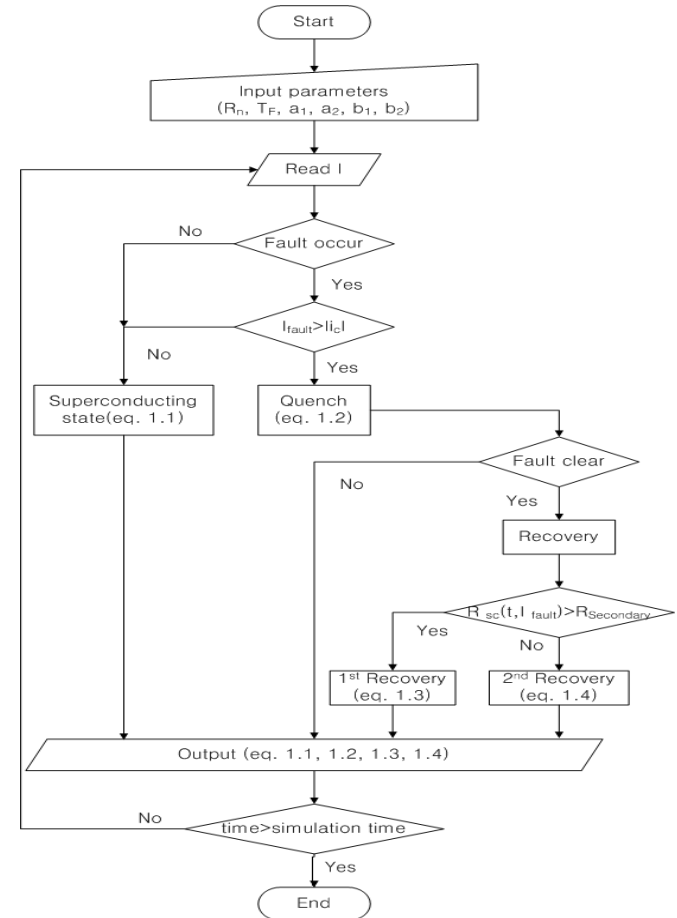
# Modeling of SFCL

## Characteristic equation

$$R_{sc}(t, I_{fault}) = \begin{cases} 0 & (t_{fault} > t) & (1.1) \\ R_{sc}(I_{fault}) \left[ 1 - \exp\left(-\frac{t-t_{fault}}{T_F(I_{fault})}\right) \right]^{\frac{1}{2}} & (t_{fault} \leq t < t_{clear}) & (1.2) \\ a_1(t-t_{clear}) + b_1 & (t_{clear} \leq t \leq t_{2ndrecovery}) & (1.3) \\ a_2(t-t_{2ndrecovery}) + b_2 & (t_{2ndrecovery} \leq t) & (1.4) \end{cases}$$



Result of Simulation using PSCA/EMTDC



Flow chart of SFCL