

## Standards and Application of Seismic Qualification

†  
Young Ok Lee

### 1.

(Safety-Related Equipment)가 1  
(SSE, Safe Shutdown Earthquake)  
가

(Seismic Load) (Structure  
Integrity) (Operability)  
(SSE) 가  
5 (OBE, Operating Basis  
Earthquake)

Reg. Guide 1.100,  
Rev.2(1)

IEEE 344-1987(3)

(Seismic Load)

(Analysis), (Testing),  
(Combined Analysis and Testing)  
가

### 2.

#### 2.1

(1) Reg. Guide 1.100, Rev.2

, IEEE 344

(2) Reg. Guide 1.61, Rev.1

RRS

(3) Reg. Guide 1.92, Rev.2

#### 2.2

(1) IEEE 344

Reg. Guide 1.100

(2) IEEE 382

. IEEE 344

### 3.

#### 2.1

(1) RRS( )

• 가

FRS( ) 10%

RRS

FRS+10%

RRS

† ;  
E-mail : yolee@kepco-enc.com  
Tel : 031-289-3233, Fax : 031-289-4520

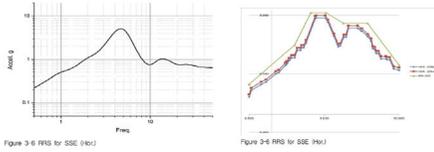


Fig. 1 Mistake and Correction of RRS Generation

- 가
- FRS( )
- 10%
- peak
- RRS

FRS

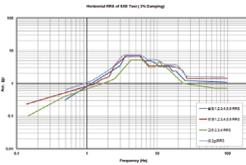


Fig. 2 Example of RRS Generation

- FRS( )

RRS

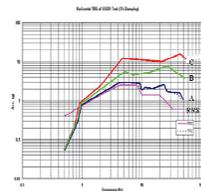
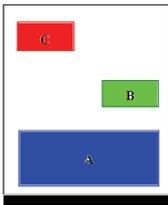


Fig. 3 RRS of devices at the mounting locations in equipment

- (2)
- 가

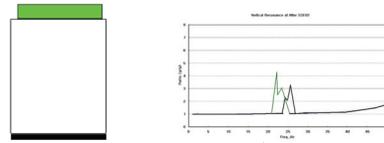


Fig. 3 Effects in dynamic characteristics due to the added items

- (3)
- RRS Reg. Guide
- 1.61(Rev.1)
- TRS( )
- RRS Reg. Guide
- RRS Reg. Guide
- 5%
- RRS
- 가

3.

REFERENCES

1. U.S NRC, 1988, Regulatory Guide 1.100, Rev. 2, "Seismic Qualification of Electric and Mechanical Equipment for Nuclear Power Plants".
2. U.S NRC, 2007, Regulatory Guide 1.61, Rev. 1, "Damping Values for Seismic Design of Nuclear Power Plants".
3. U.S NRC, 2006, Regulatory Guide 1.92, Rev. 2, "Combining Modal Responses and Spatial Components in Seismic Response Analysis".
4. IEEE, 1987, IEEE 344, "IEEE Recommended Practice for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Stations".