

Standards and Application of Seismic Qualification

†
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1.

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

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

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

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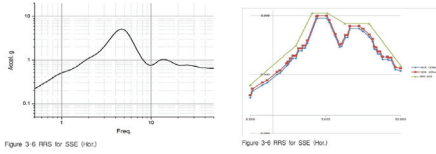


Fig. 1 Mistake and Correction of RRS Generation

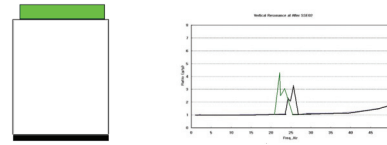


Fig. 3 Effects in dynamic characteristics due to the added items

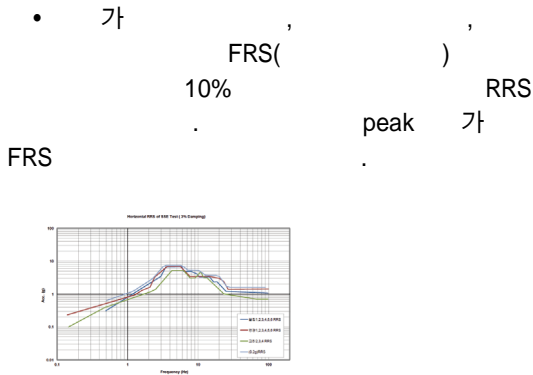


Fig. 2 Example of RRS Generation

(3)

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

3.

FRS()

RRS

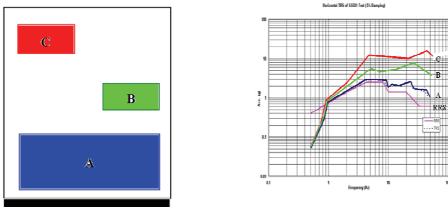


Fig. 3 RRS of devices at the mounting locations in equipment

(2)

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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".