



**Contributed
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(Contributed but not presented at
Workshop)

Navy Traditional Requirements for Megawatt Converters

3 R:

- Reliability
- Reparability
- Redundancy

3 S:

- Survivability
- Shock & Vibration
- Size & Weight

Numerical:

- 300% Overload
- <3% THD as a Load
- <1% THD as a Source

General:

- Noise Immunity
- Low EMI
- Parallelability

Fault Management Issues in Megawatt Converters

Fault Management Goals:

- Protection from Failed Components
- Elimination of Nuisance Trips
- Do not start the fire

Fault Management Strategy:

- Continuous Fault Monitoring
- Faults Detection with minimum delays
- Redundancy of Faults Detection
- Fault Isolation

Standardization objects

- **Power sizes (dimensions)**
- **Power Interfaces (connections)**
- **Signal Interfaces**
- **Communications protocols**
- **Protection and Fault management**
- **Safety requirements**

5 Rules of useful Standard

1. It does not regulate
2. It describes what need to be done and considered, not how it should be done
3. It establishes multiple sizes & interfaces levels (one size fits all does not work)
4. It formulates requirements based on collective experience and consensus
5. It leaves room for future enhancements