

## Oil Immersed & Dry Type Transformers



## ● Service Description

### – Definition

Following **analysis can be done** for all kinds of **oil immersed and dry type transformers**

- Vibration
- Shock
- Earthquake simulation

Following tests and can be done for oil immersed and dry type transformers with **total weight below 10,000 kg.**

- Vibration
- Shock
- Earthquake simulation

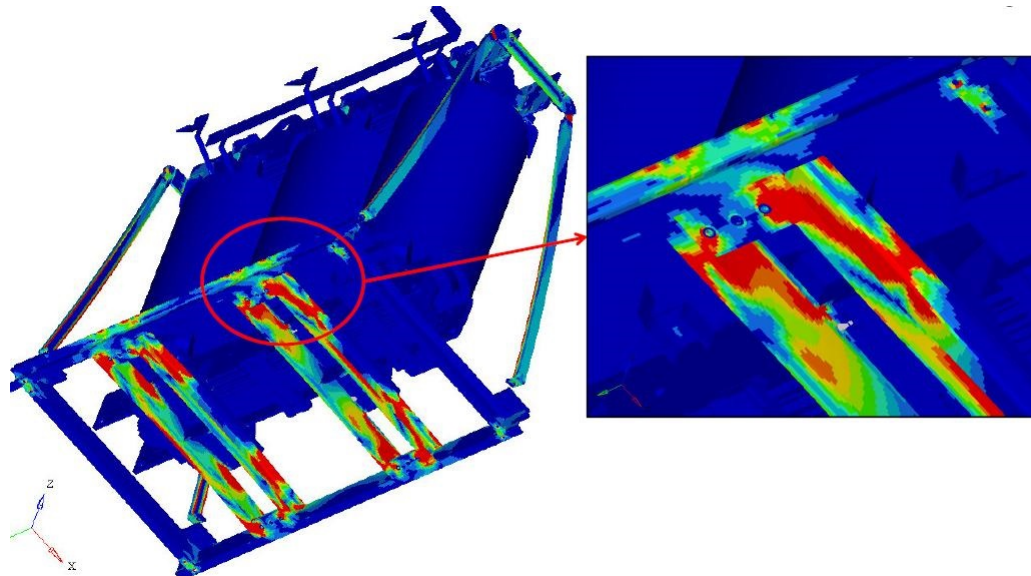
### – Standards

- EN 60068-3-3
- EN 60068-2-6
- EN 60068-2-47
- IEEE 693

## ● Simulations

### – Vibration, Shock and Earthquake Simulations by FEA

**FEA** (finite element analysis) consists of a computer model of a material or design that is stressed and analyzed for **specific results**. It is used in new product design and existing product refinement. It is possible to verify a proposed design will be able to perform to the client's specifications prior to manufacturing or construction. Modifying an existing product or structure is utilized to qualify the product or structure for a new service condition. In case of structural failure, **FEA may be used to help determine the design modifications** to meet the new condition.



## ● Tests

### – Vibration, Shock and Earthquake Tests at Accredited Laboratories

Servo-hydraulic "shake table" is used to test the ability of transformers to survive under realistic conditions of induced shock, vibration and earthquake ground motion. It is possible to test heavy transformers up to 10 tons at low and moderate frequencies. Sine sweeps, provide a single sine tone varying frequency, phase and amplitude. Swept sine vibration tests can test all frequencies, measured or not, by using a continuously varied sine oscillation of controlled amplitude.

