Large Power Transformer Case Study: ShockLog 298

Industry: Power Generation

Application: Large Power Transformer

Challenge: Power transformers are heavy (as much as 410 tons 372,000 kilograms), yet extremely sensitive. Impacts of relatively low G-Force value can cause enough internal damage that a transformer should not be installed even if there are no physical signs. To prevent the costs associated with installation of a damaged transformer, a company needed to understand what type of events were causing damage to their product and then monitor for those events.

Solution: Using ShockLog 298 recorders, the company recorded direction, amplitude, and duration of impact forces to their transformers to determine that low frequency impacts (duration > 50 milliseconds) during transport were causing failure. Capturing the acceleration (waveform) and impact duration helped the company to both make product design improvements and set alarm threshold levels to monitor the product while in transport and avoid the costly installation of damaged product.

ShockLog® 298 Overview

Real-Time Impact Data

The ShockLog 298 is a highly durable impact recorder that can be configured to monitor critical parameters, providing an unmistakable alert that an impact to a shipment or equipment may have compromised its integrity, performance, or safe operation. The ShockLog 298 monitors impact, events, vibration, and internal temperature and provides peak value (time slot) and summary period journey profile data. Combined with either a cellular communication module (ShockLog Cellular) or Satellite communication (ShockLog Satellite), the ShockLog 298 can deliver information in real-time.

Protect Your High Value Assets

Customers use the ShockLog 298 impact recorder to:

- Alert recipients and operators to inspect goods and equipment for potential damage
- Determine baseline damage boundaries
- Detect mishandling during shipping, operation, and storage, enabling you to identify and assign accountability and take corrective action
- Make adjustments to product packaging, loading process, carriers, or mode of transport
- Help identify opportunities for improvement through journey profiling

SpotSee Cloud

The SpotSee Cloud is where trip data is aggregated in real-time. The graphs are easy to read and include data impact with locations, impacts over time, histogram, temperature, and location of events.

SpotSee Cloud Features

- Access to your data from anywhere with a secure web portal
- Real-time reporting and tracking of incidents
- Alarms with location, time, impact g-level, and direction of impact
- Impacts-over-time visualization of each asset
- Histogram of the total impacts to an asset