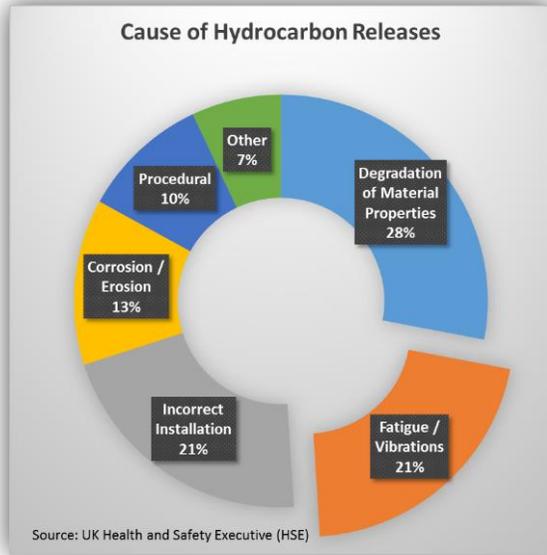


Why Include Vibration Integrity in Your Integrity Management Program?



The purpose of an integrity management program (IMP) is to mitigate risk. The Health & Safety Executive (HSE) completed a study of all offshore hydrocarbon releases and identified that vibration induced fatigue accounted for 21% of the releases. In an attempt to reduce the risk of vibration induced fatigue, the Energy Institute (EI) developed guidelines for the avoidance of vibration induced fatigue failure (AVIFF) in process pipework. These guidelines have been adopted in the North Sea and other areas around the world.

The primary role of the AVIFF guidelines is to identify and mitigate risk due to fatigue failure on process pipework. This is accomplished by evaluating the entire asset to identify high risk areas through desktop and field assessments.

Additionally, the American Petroleum Institute (API) published API RP 571 – Damage Mechanisms Affecting Fixed Equipment in the Refining Industry, which identifies vibration induced fatigue as a damage mechanism required to be addressed on an asset.

Benefits of including vibration integrity in an IMP for both greenfield and brownfield projects greatly outweigh the capital costs and provide a proactive, rather than reactive, approach to vibration related failures.

In greenfield projects, vibration assessment and mitigation of risk is completed throughout the FEED, detailed design, commissioning, and operation stages of the project. This is done to avoid costly modifications downtime and to increase the life span of the asset.

BETA is a globally recognized leader in vibration engineering and dynamics with nearly 50 years' experience solving thousands of successful projects, building long term relationships with major companies, and developing the best-in-class capabilities to address vibration risk.

BETA utilizes its extensive experience to evaluate vibration in rotating and reciprocating equipment, static equipment, and piping in accordance with EI AVIFF and other standards (API RP 571, 618, 674, RP 688). Working closely with the project team and the integrity management team allows BETA to:

- Help reduce high vibration risk areas prior to construction
- Integrate vibration integrity in the IMP to allow for a proactive approach that reduces risks and costs
- Prevent hydrocarbon releases and downtime while simultaneously increasing an asset's safety, integrity, reliability, and value

For more information [contact Jordan Grose](#) – Manager, Vibration Integrity Group (+1 403-245-5666).

Visit our website for [technical articles](#) and [application guides](#).

