

PROACTIVE FATIGUE COUNTERMEASURES SOLUTION

Allseas implements Night Fit



Fatigue increases the risk of human error, which is why managing it should be a top priority in high-hazard industries. In order to assess the risk of shift work fatigue and pro-actively strengthen its defences against it, Allseas successfully implemented a light-based innovation called 'Night Fit' on board their pipe laying vessel 'Solitaire'.

The 'Solitaire' of Allseas. Foto Nord Stream AG.



The Night Fit strategies are taught to the participants in two interactive offshore-workshops.

Results were positive: participating shift workers described an improved quality of sleep, reported less fatigue during the following shift and experienced more alertness. Light treatment can be applied as an effective tool in enhancing sleep efficiency and reducing workforce fatigue. This proactive fatigue countermeasures approach can raise offshore oil and gas HS&E to a new level.

Problem

In high-hazard, high performance environments, poor sleep and fatigue act as a bottleneck in reaching optimal performance and safety. Up to 80% of

accidents taking place during marine and offshore activities are caused by human factors, with fatigue being one of the most contributing factors. Excessively sleepy or fatigued workers are 70% more likely to be involved in accidents than well-rested and alert individuals. This is why managing poor sleep and fatigue should be a top priority in high-hazard industries.

Poactive solution

In order to reduce fatigue in shift work environments, NASA successfully provides a special form of light treatment to their shift work crew for over 20 years.

Leiderdorp-based KM Human Factors Engineering has used this knowledge in order to create the Night Fit method; a comprehensive offshore solution. By focusing on the exposure to light - using special glasses and blue lights - Night Fit enhances the quality of sleep without the help of medication. Light treatment and other sleep enhancing strategies are taught to the participants in two interactive offshore-workshops.

Solitaire

Allseas takes health and safety very seriously. In order to assess the risk of shift work fatigue and pro-actively

bolster its defences against it, Allseas offered to trial Night Fit on their pipe laying vessel 'Solitaire'. During the project 69 shift workers were taught to make use of Night Fit. The project involved two phases during which Koos Meijer (owner of KM Human Factors Engineering) went on board the vessel to give offshore assistance and training.

Results

The effects were assessed using questionnaires and interviews. Responses from the crew were positive: participating shift workers described an

improved quality of sleep, reported less fatigue during the following shift and experienced more alertness.

Six months later a follow-up study produced the following results:

- 79% were still using Night Fit during offshore operations;
- Self-reported 'very good sleepers' increased from 15% to 41%;
- The average sleep quality grade improved from a 6.2 to a 7.5 (10-point scale);
- 88% reported Night Fit to be a positive addition to Allseas' Health and Safety policy.

Benefits

Improving sleep quality with Night Fit will provide offshore oil and gas organizations with decreased workforce fatigue levels which will result in reduced human error risks and increased employee wellbeing.

It will further improve safety levels and enables shift workers to create a more productive and healthy work environment.

This proactive fatigue countermeasures approach can help to raise offshore HS&E to a new level.