

Case Study

Offshore Drilling Company Reaps Big Savings With FlexIR Windows



Offshore Drilling Company Reaps Big Savings With FlexIR Windows

By Jason Bricker, Level 1 Thermographer, IRISS Inc.

Overview:

Recently, the chief electrician of a large offshore drilling company realized the problems his staff were having performing safe and efficient infrared inspections on their electrical equipment. In order to comply with the corporate safety policy for the mandatory inspection requirements on the drill ship, he decided to contract several consultants to see if there was a faster and safer way to do this work. Ty Keeth, Level III Thermographer, IRISS Certified Installer, representing Offshore Inspection Group, was from one of the many service companies who was approached to solve the problem.



iriss.com

Case Study

Offshore Drilling Company Reaps Big Savings With FlexIR Windows

After Ty analyzed the electrical equipment on the drill ship, he quickly realized that there were only visual viewing windows and no sign of any infrared inspection windows. According to Ty, "There are a unique set of problems on a drill ship with the main concerns being the safe and reliable operation of power distribution assets on the ship. It is a major undertaking to turn off equipment." As a result, any inspections take a considerable amount of manpower and time.

At the time Ty was contacted, the process for one inspection involved:

- Preplanning stage to identify the equipment and obtain approval to shut down.
- De-energizing the equipment required two electricians to make sure it was safely isolated, locked out and tagged out.
- Once de-energized, the two electricians removed all covers for inspection on the equipment in question.
- Once the covers were removed, approval to re-energize and operate the equipment was obtained and locks and tags were removed
- Appropriate PPE was put on by the electricians and the equipment was re-energized.
- Together with operations, the electricians confirmed the equipment was operating at normal load levels and allowed sufficient time for the equipment to become thermally stable. They then performed the infrared inspection on the equipment.
- Personnel then completed the inspection taking any notes of problems discovered.
- Electricians de-energized the equipment again following lock-out, tag-out procedures and, when safe, put the equipment panels back in place.
- Finally, electricians re-energized the equipment



With this complex process, the time involved to perform inspection on just one electrical asset was between 4 to 6 hours.



iriss.com

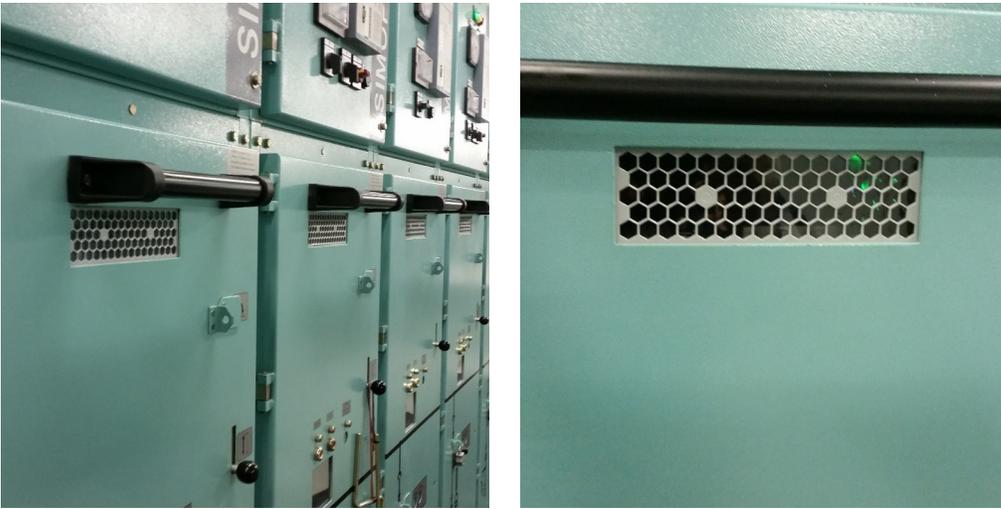
Case Study

Offshore Drilling Company Reaps Big Savings With FlexIR Windows

The drill ship had 6 thruster transformers, 6 mud transformers, 6 drilling transformers and 66 high voltage switchgear cabinets. There were approximately 30 different types of equipment needing to be inspected. Due to the volume, the existing inspection process took 3-5 people between 2 to 3 weeks to perform.

Another consulting firm suggested that standard 6 inch IR windows be installed in front and in back of the heavy switchgear equipment but this would require multiple significant modifications to the existing panels that would be both time consuming and could jeopardize the enclosure integrity.

The better solution was proposed by Ty Keeth. He took the time to analyze how the IRISS FlexIR Custom Windows could be bespoke designed to require negligible enclosure modifications and save the company both on installation labor and IR window procurement cost. He was able to accomplish this by replacing the existing visual viewing windows in the switchgear with the IRISS FlexIR Custom Windows that allow both infrared inspection but also visual inspection through the clear reinforced polymer optic.



The cost benefit in performing the infrared inspections was phenomenal. The total inspection time went from using 3 to 5 people over a 2 to 3 week period to one person inspecting all equipment over a 3 to 5 day period. Over 90% of the inspection labor hours were eliminated by implementing the IRISS FlexIR Custom Windows. It's estimated that the IR window investment was paid for within 2 inspection cycles after installation.



iriss.com