James Fisher
Asset Information Services

R2S® support for decommission project

Industry: Oil and Gas
Client: Heerema Marine Contractors
Service: Decommissioning
Technologies: Self Capture, Hardware, Digital Twin

Client:

The client is a well-known contractor headquartered in the Netherlands most notable for operation of three of the largest crane vessels in the offshore industry.

Challenge:

Our client plans and executes decommissioning projects on large, complex oil and gas facilities. The quality of available information for older assets is often poor and difficult to access. Furthermore, due to their remote location, travel to the asset is complex, costly and bed space is always at a premium. This results in the contractor only being given a short time in the field to collect information to aid in the planning of the decommissioning project. In this case study, our customer was only given 2 days offshore to collect information on a large deep-water asset in the Gulf of Mexico (~10,000sqm – 10,000 metric tonnes). Traditionally the survey team would only manage to collect photos and take paper-based notes.

The resultant information they work with during planning can be inadequate leading to uncertainty and often incorrect assumptions are made about the facility. Repeat trips offshore are inevitably required, taking up valuable resources and lengthening the duration of the project.

The aim of the project was to support our customers in this data gathering phase of a decommissioning project.

Solution:

Utilising the AIS self-capture technology, our customer was able to survey the full facility in the 2 available days offshore. The team collected information even in hard to access areas such as the flare tip. A mixture of data collection techniques was used to capture high definition 360° images using both tripod and hardhat mounted cameras. In areas of specific interest, data was captured enabling dimensional information to be available. Training on the use of the equipment was completed in a short online session prior to mobilisation.

All the captured data was transferred to AIS while the contractor was still in the country, enabling the data processing to begin immediately. Within 2 weeks the complete digital twin was uploaded to a cloud-based server and access provided using the R2S application.

Our customer now has a permanent record of the facility, accessible from the desktop. The digital twin aids in a variety of tasks including:

- Preparation of work orders
- Developing lifting plans
- Verifying Material inventories
- Hazard identification
- Collaboration with other parties and stakeholders
- Familiarization, induction, and operations training

Work orders are tagged into their locations on the virtual facility using the hotspot feature of R2S, improving communication and work preparation for those executing the decommissioning project.

Results:

- Improved asset understanding
- Better planning and work preparation
- Reduction in travel requirements
- Enhanced communication and collaboration with stakeholders
- Adoption of new technology to support future projects

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