



## **HIMA delivers safety systems and fire&gas system for Ichthys gas field project (INPEX)**

The Ichthys field was the largest discovery of hydrocarbon liquids in Australia in more than 40 years, and the Ichthys LNG project ranks among the largest and most significant energy projects in the world.

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**Operated by INPEX, the Ichthys LNG project includes some of the world's biggest and most advanced offshore facilities, massive onshore processing facilities near Darwin in the Northern Territory and an 890-kilometer pipeline to unite them.**

HIMA was selected by the Ichthys joint venture to be the supplier for the safety instrumented systems (SIS) and the fire and gas system (F&G). The Ichthys LNG project consists of an LNG plant (onshore), a central processing facility (CPF) and a floating production storage and offloading (FPSO) vessel. The total order value is the largest HIMA has ever received for a single project.

When operational, the Ichthys LNG project is expected to produce 8.9 million tons of LNG and 1.6 million tons of LPG per annum, along with approximately 100,000 barrels of condensate per day at peak.

The SIS and F&G system are supplied using HIMax<sup>®</sup>, the first safety system designed to provide uninterrupted system operation throughout the entire life of the plant, while maximizing plant availability, productivity and safety. SIS/F&G systems using the HIMax<sup>®</sup> safety system hardware meet the requirements in accordance with AS/IEC 62061 and IEC 61326-3-1 (DIS).

The high-integrity pressure protection systems (HIPPS) rely on a Planar4 system which meets highest safety standards and can be used up to SIL 4 in accordance with IEC 61508. Onshore and offshore facilities and the pipeline are connected to around 25,000 safety I/O points, allocated in approximately 430 cabinets distributed via safe**ethernet**, where applicable.

Besides the SIS/FGS/HIPPS, the HIMA scope of supply includes delivery of the pre-FID system development and standard application design and testing. The cybersecurity and network management with related hardware installation, the addressable fire system for the living quarters with the related detectors and the network management system for the SIS/F&G network complete the deliverables.

The HIMA hardware and firmware provided are certified up to SIL 3 according to AS/IEC 61508. HIMA will use the principles of AS/IEC 61511 in designing and testing the SIS and F&G system. The functional safety management (FSM) plan will be used to manage all stages of the design, implementation and manufacturing process.

### **About HIMA**

The HIMA group is the world's leading independent provider of solutions for safety-critical applications. With more than 35,000 installed systems and TÜV-certified hardware and software, HIMA qualifies as the safety automation industry's technology leader. For over 45 years the world's largest oil, gas, chemical, pharmaceutical and energy-producing companies have relied on HIMA products, services and consulting to provide uninterrupted plant operations and protection for people and the environment. HIMA solutions are also leading the way to increased safety and profitability in the rail industry, logistics and machine operations. A family-owned safety specialist, HIMA operates from over 50 locations worldwide, has a workforce of approximately 850 employees and in fiscal year 2014 generated sales of €121 million. Discover more at [www.hima.com](http://www.hima.com)



**Caption 1:** Ichthys LNG Project onshore facilities.



**Caption 2:** The mono-ethylene glycol injection module successfully lifted and installed onto the hull of the Ichthys LNG Project FPSO in South Korea.

*Pictures © INPEX*

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