



Operational Excellence Services

Operation

AIRLIZE LNG® *AIRLIZE LNG*



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Access to Our Homepage

 <https://www.jgc.com/en/business/epc/operation-maintenance/service/>

HAR^(*) causes loss of LNG production

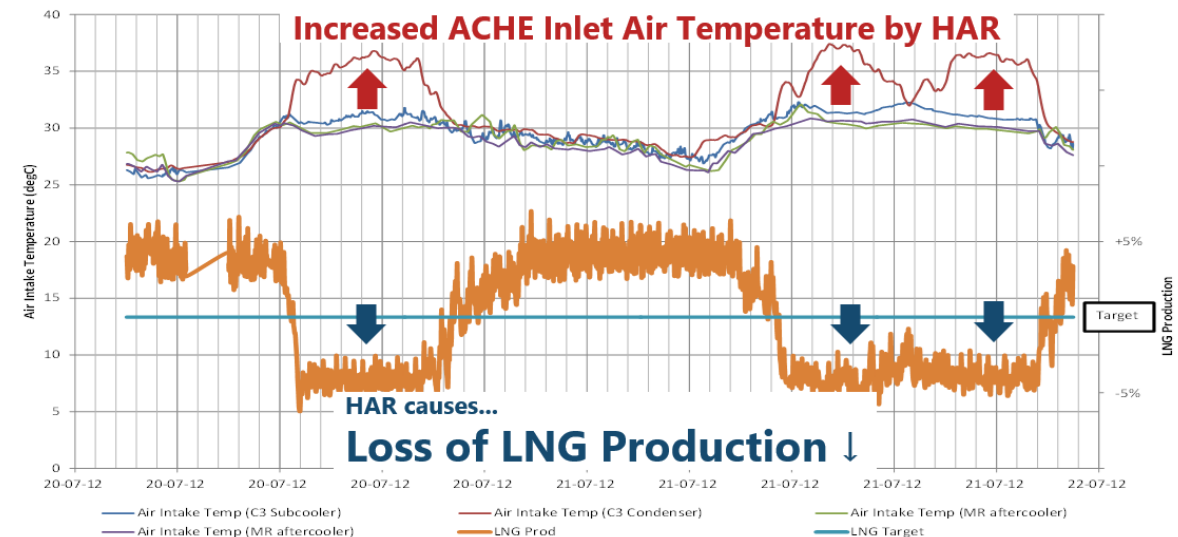
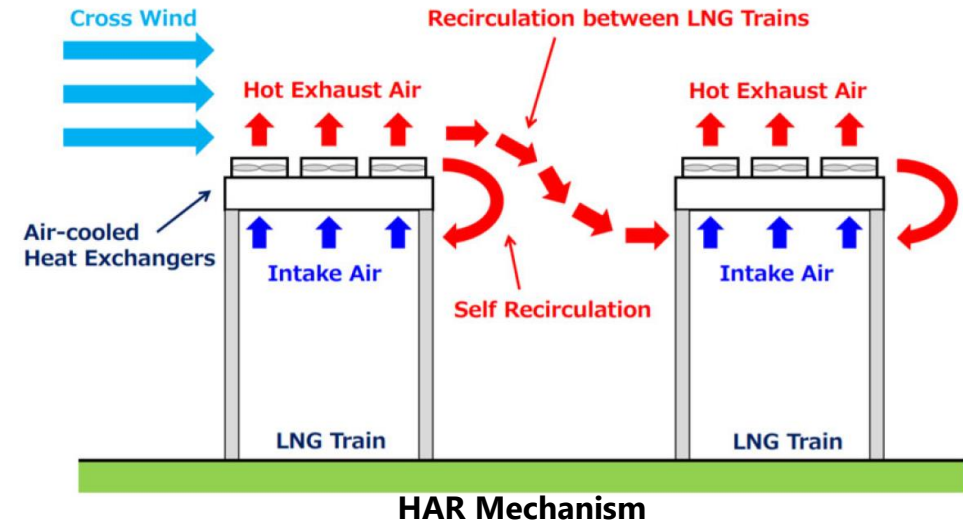
(*) Hot Air Recirculation

- ☹️ **Process performance degradation due to HAR**
- ☹️ **Increased ACHE^(**) inlet air temperature due to HAR**
- ☹️ **It is difficult to identify HAR mitigation plan or adaptation plan**

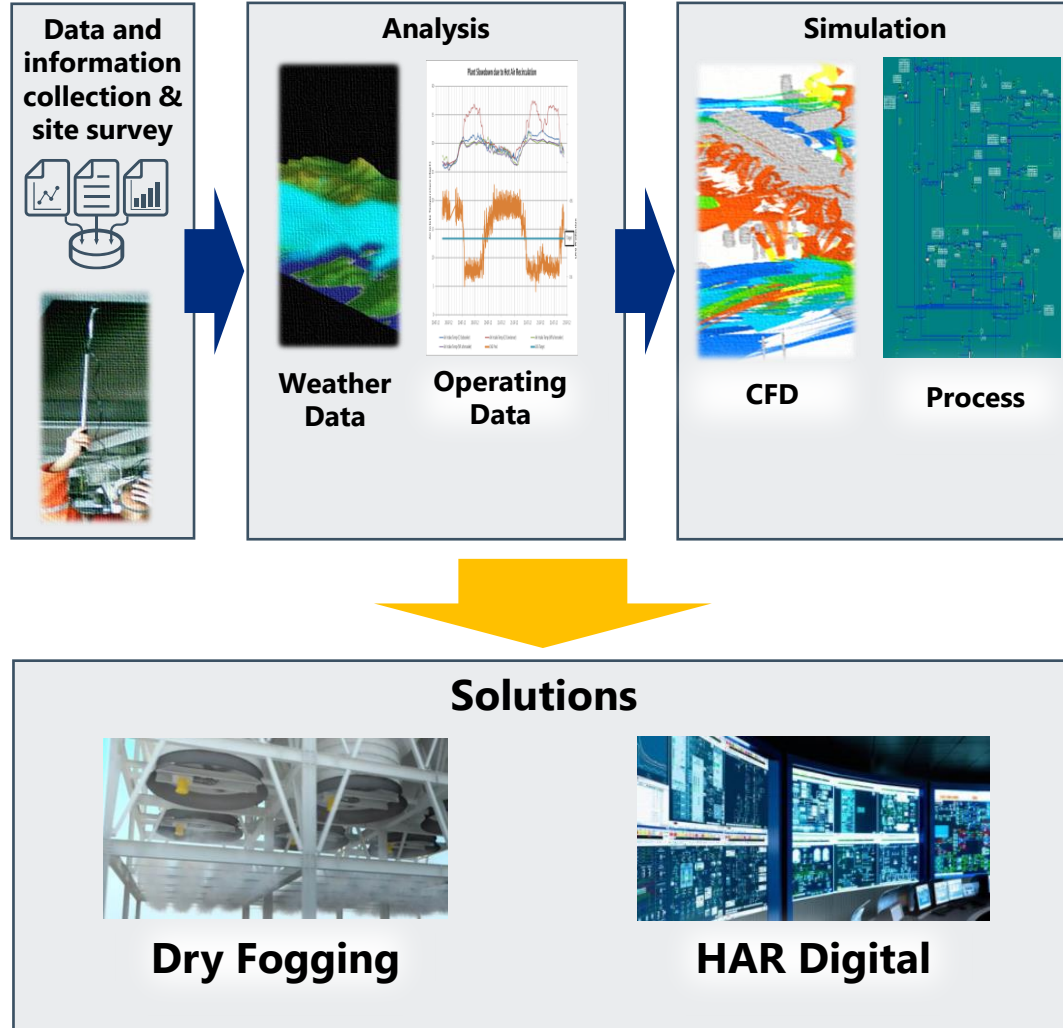
(**) Air Cooled Heat Exchanger

What is AIRLIZE[®] ?

- AIRLIZE LNG[®] is JGC's Comprehensive Life Cycle Support Services for Air-Cooled LNG Plants
- Diagnoses and Analysis services for HAR optimization



Workflow & Result



Our Strengths

- **Real-time Weather Monitoring System:** Introduction of advanced systems for real-time weather monitoring.
- **Advanced Analytical Capabilities:** Expertise in process big data analysis, CFD (Computational Fluid Dynamics) simulation, and rigorous process simulation.
- **Extensive Experience:** JGC's extensive experience in LNG processes and Hot Air Recirculation (HAR) analysis.
- **Comprehensive HAR Management Solutions:** JGC offers two types of solutions for HAR management:
 - Dry Fogging
 - HAR Digital

Our Experiences

20+ Projects

Contributed to over 20 projects in various phases of Project/Plant Life Cycle (FS, Pre-FEED, FEED, EPC, Revamps)



What is Dry Fogging?

Dry Fogging enhance the performance of ACHE by implementing simple water mist system.



The water mist helps lower the air inlet temperature of the ACHE.



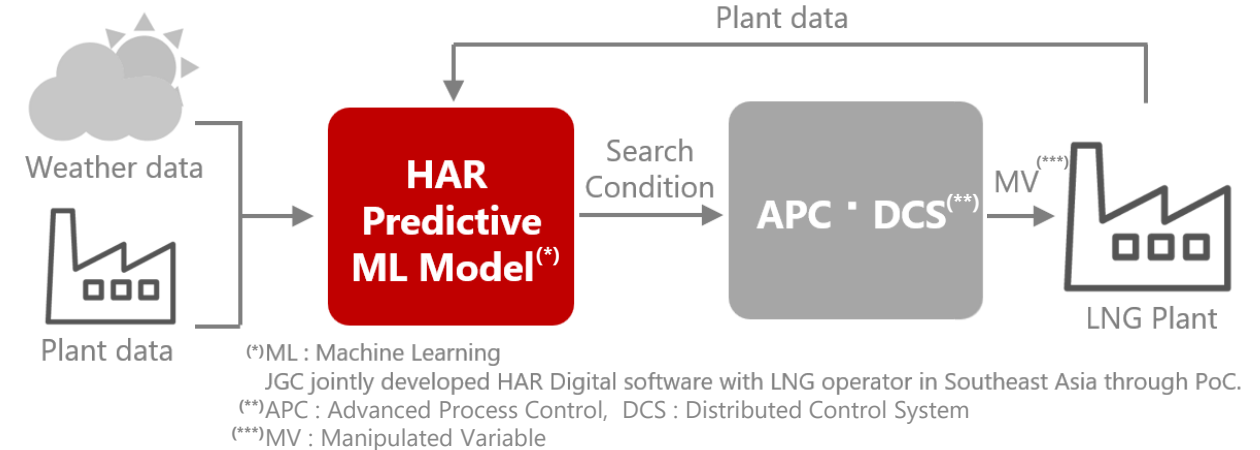
Improves the overall performance of the ACHE.

Advantage of Dry Fogging

- **Increased LNG Production:** By enhancing cooling performance with minimal capital investment, LNG production can be increased by up to 2%.
- **Quick Delivery Time:** From design to installation, the system can be delivered within a year.
- **No Equipment Damage:** The fine water mist ensures no damage or scale formation on the equipment.
- **Simple System and Easy Operation:** The system consists of only pumps, piping, and fogging nozzles, making it easy to operate.

What is HAR Digital?

HAR Digital is an automated control system powered by Artificial Intelligence (AI).



Advantage of HAR digital

- **Increased LNG Throughput:** The feed-forward process control system, powered by a HAR predictive machine learning (ML) model, can increase LNG throughput by up to 2% without any major modifications.
- **Stable Operation:** Achieves stable operation by adjusting in advance.
- **High Performance:** High performance operation can be achieved by maintaining proximity to the operating limit while HAR does not occur