CHIYODA LNG-Xm JAPAN™ is a modularized version of CHIYODA LNG-X®, designed to provide the fastest Project delivery with the lowest CAPEX. The concept, developed from Chiyoda’s unparalleled expertise and experience in global LNG Plant engineering and construction, to minimize site work and optimizes the “Plug & Play” model.

What is CHIYODA LNG-Xm JAPAN™?

CHIYODA LNG-Xm JAPAN™ combines optimized module design with a Standardized LNG Design Package to minimize site work volume. Typical concepts include integrating Pipe Rack Modules (PAR’s) with Pre-assembled Units (PAU’s) and mounting Local Electrical Rooms (LER’s) and Local Instrument Rooms (LIR’s) on the PAU. Typical site work volume reductions for one process train are shown below:

- Piping Work: -50% to -80%
- E&I Cable Laying: -50% to -80% (Compared to in-house data for one process train)

Minimum On-Site Work

CHIYODA LNG-Xm JAPAN™ offers the fastest Project delivery with the lowest CAPEX, allowing Clients to initially operate completed plants, if required. CHIYODA supports Clients in attracting and retaining the local subcontractor, supplier and workforce in a mutually beneficial and sustainable relationship by promoting the project is an ideal first choice.

Initial Plant Operation Services

Chiyoda supports Clients to initially operate completed plants, if required. Chiyoda’s superior project delivery proficiency maximizes Return on Investment by delivering safe and efficient startup and LNG production through seamless transition from EPC to operation.

National Content Contribution Program

Chiyoda understands that maintaining a positive relationship with local communities is key for a successful project and has developed a “National Content Contribution Program” to assist Clients in attracting and retaining the local subcontractor, supplier and workforce in a mutually beneficial and sustainable relationship by promoting the project is an ideal first choice. This is achieved by providing a framework for self-improvement through initiatives, such as mentoring and training programs, to foster a culture where local industry and workers can achieve their own objectives and attain higher performance benchmarks.

Chiyoda Corporation

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CHIYODA LNG-X®

**CHIYODA LNG-X®** has been developed using CHIYODA LNG specifications based on "fit for purpose" and "necessary and sufficient for safe and reliable continuous operation" philosophies which challenge conventional and conservative engineering standards.

**Unique Value Improvement Ideas for CHIYODA LNG-X®**

For economic and smooth LNG plant delivery, CHIYODA aims to optimize total plant design as a whole.

The engineers taking part in the downstream engineering such as Plot, Piping, Civil, Electrical and Instrument, which affect cost and schedule to relatively larger extent, put forward their ideas for cost/schedule improvements for the engineers of upstream engineering such as Process and Rotating Machinery.

After evaluating such ideas by upstream engineers from "fit for purpose" viewpoint, the selected ideas are applied to "Ready-designed Block Concept."

**Value Improvement Items embedded in CHIYODA LNG-X®**

- Optimization of air fin cooler design, equipment and piping layout to reduce the overall plant footprint and piping length
- Space for additional facilities to accommodate future changes of the composition of the feed gas
- Selection of the lowest price and fastest delivery gas turbine in the market

**How is CHIYODA LNG-X® delivering competitiveness?**

CHIYODA LNG-X® enhances the success of your LNG venture!

**Specifications for CHIYODA LNG-X®**

For economic and smooth LNG plant delivery, CHIYODA aims to optimize total plant design as a whole.

**Best Selection from “Ready-designed Block Concept” to satisfy Client’s Requirement.**

CHIYODA Corporation, which has abundant experience and expertise accumulated through its EPC execution of more than 40% (capacity-wise) of worldwide LNG plants during last 10 years, has developed a “standardized design LNG package” named CHIYODA LNG-X®.

CHIYODA LNG-X® achieves Fastest Project Delivery and Lowest CAPEX with Safe and Reliable Operation.

**What is CHIYODA LNG-X®?**

- **CHIYODA LNG-X®** provides a "Ready-designed Block Concept."
- The plant comprises units such as an Inlet facility, feed gas treatment unit, LNG recovery / fractionation, dehydration unit etc. Each unit includes options depending on feed gas composition.
- Plot layouts and 3D models are standardized as a "Ready-designed Block Concept," and the most effective combination is selected to achieve client goals.

**Fastest Project Delivery**

CHIYODA LNG-X® provides significant schedule improvement by minimizing early engineering work, including:

- Conceptual and Basic Studies
- Detailed Engineering
- Construction

**Lowest CAPEX**

Optimized design has been embedded into CHIYODA LNG-X® to realize the Lowest CAPEX considering the following:

- HSSE Requirements
- Value Improvement Items
- General Specifications / Procedures Preparation
- 3D Modeling Set-up

**BASIC ADVANTAGES OF CHIYODA LNG-X.**

**CHIYODA LNG-X®**

- **Lowest CAPEX**
- **Fastest Project Delivery**
- **Value Improvement Items**
- **Unique Value Improvement Ideas**
- **Optimum Control & Operation**
- **Optimized Start-up Period**
- **Full Scalability**
- **World-class Constructability, Operability & Maintainability**
- **Value Improvement Items**
- **Minimum Construction Work Volume**
- **Minimum Major Piping Length / Cable Length**
- **Minimum Plant Layout**
- **Value Improvement Items**
- **HSSE Requirements**
- **Constructability, Operability & Maintainability**
- **Chiyoda’s Design Standard / Specifications**
- **Chiyoda’s Involvement:**
- **Conceptual and Basic Studies >> General Specifications / Procedures Preparation >> 3D Modeling Set-up**

**WHAT IS CHIYODA LNG-X?**

Chiyoda’s Challenge

- Efficient gas liquefaction
- Dehydration
- Mindful environmental and safety issues
- Flexibility to satisfy Client’s Requirement.
- Best Selection from “Ready-designed Block Concept”

**Best Selection from “Ready-designed Block Concept” to satisfy Client’s Requirement.**

CHIYODA LNG-X®

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**Fastest Project Delivery**

CHIYODA LNG-X® provides significant schedule improvement by minimizing early engineering work, including:

- Conceptual and Basic Studies
- Initial Process Engineering

**Lowest CAPEX**

Optimized design has been embedded into CHIYODA LNG-X® to realize the Lowest CAPEX considering the following:

- HSSE Requirements
- Value Improvement Items
- Minimum Plant Layout
- Minimum Major Piping Length / Cable Length
- Minimum Construction Work Volumes
- Constructability, Operability & Maintainability
- Chiyoda’s Design Standard / Specifications

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