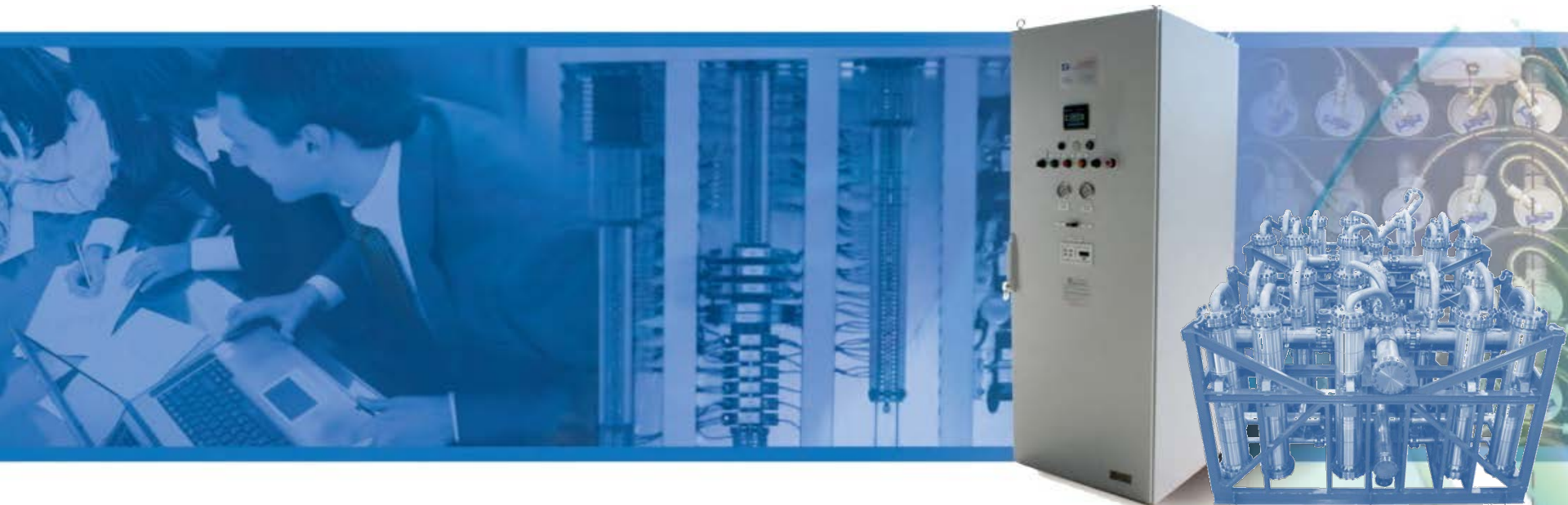


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# GENERON

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**A Design and Manufacturing Company**

Specializing in Process skids and associated equipment.

# GENERON

## Capabilities

# GENERON

- Engineering & Design
- Process Skid Fabrication
- Electrical Panel Shop
- Tubing and Instrumentation
- ASME Pressure Vessel Fabrication
- Machining
- Process Gas Separation
  - N<sub>2</sub> • O<sub>2</sub> • CO<sub>2</sub> • H<sub>2</sub> • H<sub>2</sub>S • SF<sub>6</sub> • He
- Service and Maintenance

Worldwide - Onshore - Offshore



# ISO-9000 Certified Facilities



# GENERON

РОССИЙСКАЯ ФЕДЕРАЦИЯ  
СЕРТИФИКАТ СООТВЕТСТВИЯ  
(обязательная сертификация)

ЗАЯВИТЕЛЬ: Фирма «Астория» (ООО «Астория»)  
ИЗГОТОВИТЕЛЬ: Фирма «Астория» (ООО «Астория»)  
ОРГАН ПО СЕРТИФИКАЦИИ: Федеральное агентство по техническому регулированию и метрологии (Федеральное агентство по техническому регулированию и метрологии)

**CSA Group**

Submitor: Generon IGS  
4895305 16250 Tomball Parkway  
Houston Texas 77086 USA

Is a system in place for recording customer complaints  
Traceability of Incoming Materials/Procedures Review

Observations:  
Factory: (Observations):  
Met with facility representative Andy Oliver  
Review questions or concerns related with  
Verify products at production, stock and ship  
No CSA Marked production was found during

3211-89: (Product:) N/A (Model:) N/A: (Rat  
(Marking Deviations): N/A (Notices Referen  
No CSA Marked production was found during

Class No.	Type of test	Manufacturer
3211-89	Dielectric	Billde

Immediate Changes:  
Factory: (Inspection Codes:) K (Immediate  
3211-89: (Model:) N/A (Inspection Codes:)

Class No.	Inspection Codes	In conformance with certification requirements?	Compliance with marking requirements?	In the (100% aware of the new marking scheme)?	Are there any other issues?
Factory: K					
3211-89	K, Z	N/A	N/A	N/A	N/A

The manufacturer agrees to apply the following markings:  
\* Products shall be marked with the markings specified  
\* Products certified for Canada shall have all Certified  
Additional marking requirements set covered by the product and  
apply these additional markings where applicable, in accordance

As the facility representative, the undersigned, hereby  
Name: Andy Oliveres (Facility Representative)  
Signature:  I have read and understand this report as written.

Name: Rafael Rascon (CSA Representative)

Listed items not complying with CSA requirements are not eligible to bear the CSA Mark - MISUSE OF THE CSA MARK MAY BE  
DQD 513 Rev. 2013-02-12 © The Canadian Standards Association. All rights reserved.

CERTIFICATE OF AUTHORIZATION

ASME U

The named organization (ASME) for the ASME Boiler and Pressure Vessel Inspectors agreement set mark shall have and Pressure

COMPANY:

SCOPE:  
Manufacture the above

AUTHORIZED EXPIRES: CERTIFICATE

The American Society of Mechanical Engineers

THE NATIONAL BOARD OF BOILER & PRESSURE VESSEL INSPECTORS  
Certificate of Authorization

This is to certify that  
HOUSTON VESSEL MANUFACTURING, LL  
16250 TOMBALL PARKWAY  
HOUSTON, TX 77086

is authorized to apply the "NB" mark and register boiler vessels, or other pressure retaining items with the Nation in accordance with its provisions.  
The scope of Authorization is limited to items manufactured as follows:

ASME Designator(s): U U2

ISSUE DATE: December 11, 2011  
EXPIRATION DATE: January 7, 2017

Executive Director:



## MANAGEMENT SYSTEM CERTIFICATE

Certificate No: CERT 02679-2004-AQ-H001-ANAB Initial certification date: 14 March, 2009 Valid: 06 March, 2019 - 06 March, 2022

This is to certify that the management system of

**Generon IGS**  
16250 Tomball Parkway, Houston, TX, 77086-1014, USA  
and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:  
**ISO 9001:2015**

This certificate is valid for the following scope:  
The Design, Manufacture, and Management of Maintenance & Service of Systems for: Air Separation; Process Gas Separation; Air Dehydration & Instrument Air; Air and Gas Compression Systems and Equipment

Place and date: Katy, TX, 06 March, 2019



For the issuing office:  
DNV GL - Business Assurance  
1400 Ravalle Drive, Katy, TX, 77449-0164, USA

Tameez Balamra  
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.  
ACCREDITED TO: DNV GL Business Assurance, USA, Inc., 1400 Ravalle Drive, Katy, TX 77449 USA. TEL: 281-336-1000. dnvglobal.com

# ISO-9000 Certified Facilities



# GENERON

M2

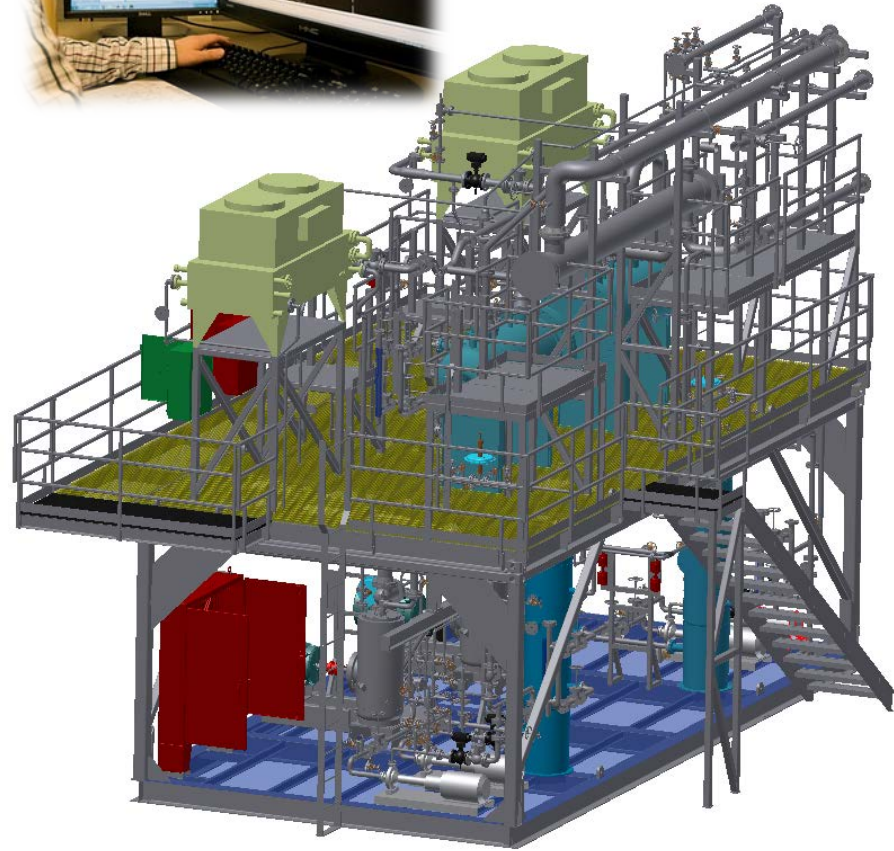
- Land Area **22 Acre / 89,000 M2**
- Total Building Size **121,200 Ft2 / 11,260**
- Office Space **17,400 Ft2 / 1,617 M2**
- Manufacturing **103,800 Ft2 / 9,643 M2**
- Outside Staging Areas **260,000 Ft2 / 24,155 M2**
- Testing Capabilities **up to 1000 HP**
- Natural Gas Equipment Testing (Compressors, Engines, etc.)
- Total Handling Capacity **80 Ton (36,000kg)**
- Plasma Cutting , Pipe Profiling, Pipe Bending



## Engineering Capabilities



- AutoCad Inventor®
- Compress® Pressure Vessel Designer
- Panel Design
- Allen Bradley HMI / PLC Systems
- Siemens HMI / PLC Systems
- ProFace HMI
- Modicon PLC
- Red-Lion Display Systems



# Full Manufacturing and Fabrication Capabilities



## Welding Capabilities

- DNV Certified Lifting Frames
- MIG
- TIG
- Orbital
- Sub-arc



## Process Piping Systems

- ASME B31.3 Piping Systems
- Pipe Bending Capabilities:  
2" Sch. 160 ; 4" Sch. 40
- Welding Certifications

## Machining Centers

- CNC Turning and Milling Centers

In-house Hydrostatic Testing facility for piping & vessels

Pressures up to 10,000psi



American Welding Society



# Full Manufacturing and Fabrication Capabilities



## Electrical Panel Shop



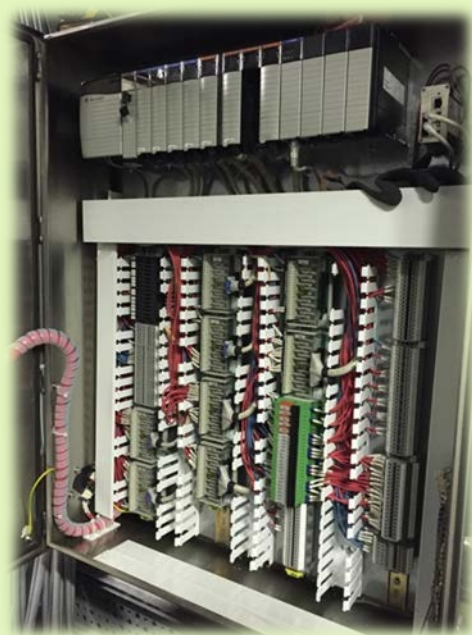
UL 508A by CSA

ATEX



IECEX

BV, DNV, Lloyds Register certified systems



# Full Manufacturing and Fabrication Capabilities

# GENERON

## Tubing & Instrumentation

- Hydraulic Systems
- Pneumatic Systems
- Flaring and Compression
- Autoclave Medium & High Pressure
- Tube and Pipe bending to ASME B31.3



## STANDARDS

- ASME
- NCCER
- Autoclave Engineers





# Full Manufacturing and Fabrication Capabilities

# GENERON

## Pressure Vessels

ASME Sec VIII Div. 1 & 2

PED (Europe)

CRN (Canada)

NR-13 (Brazil)



## BTEX Processing Skid

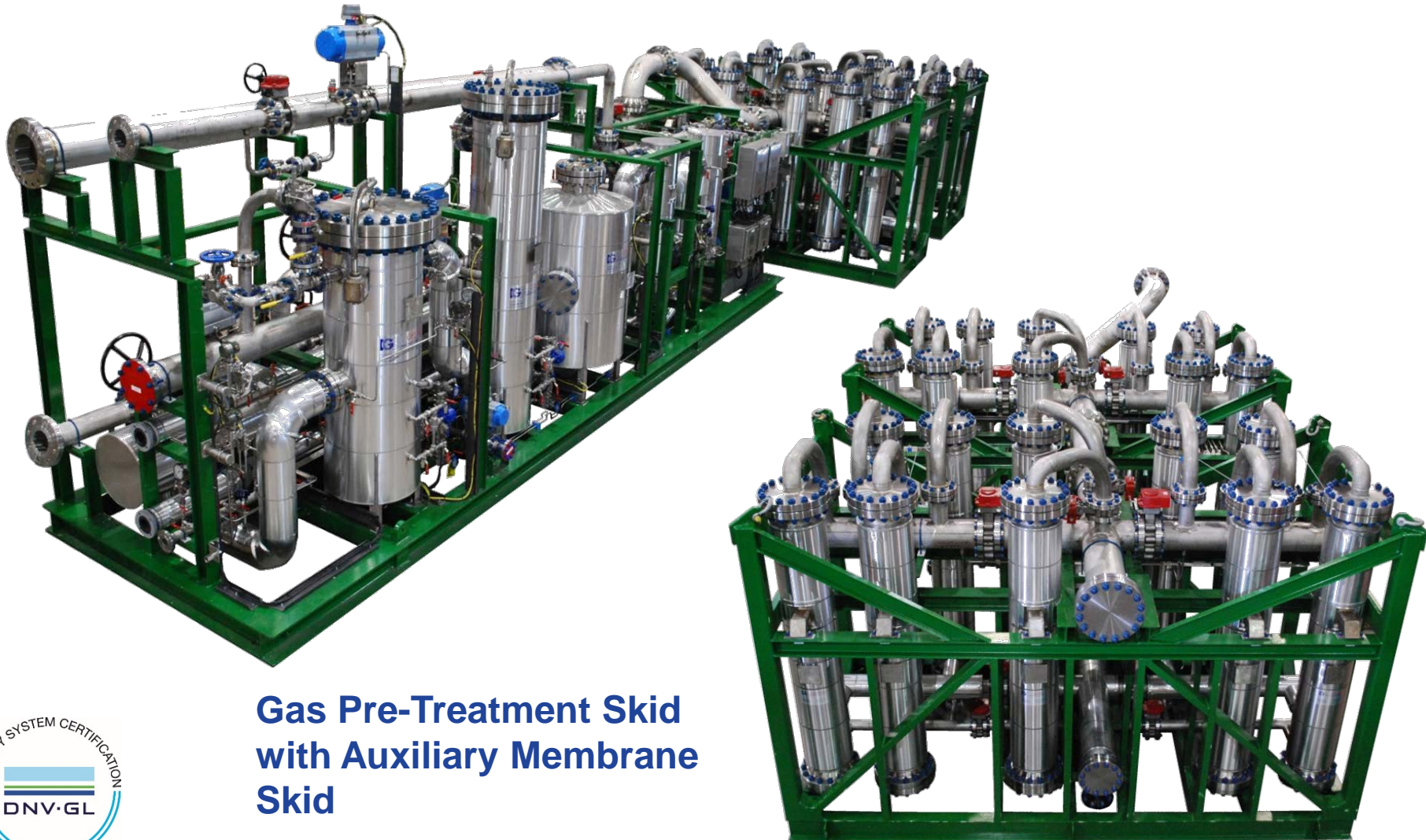


## Process Gas Technologies

- $\text{CO}_2$ 
  - Removal
  - Recovery
- $\text{H}_2\text{S}$  Removal
- $\text{H}_2$
- Helium
- $\text{SF}_6$  Recovery

# Process Gas Separation Skidded Equipment / Components

**GENERON**

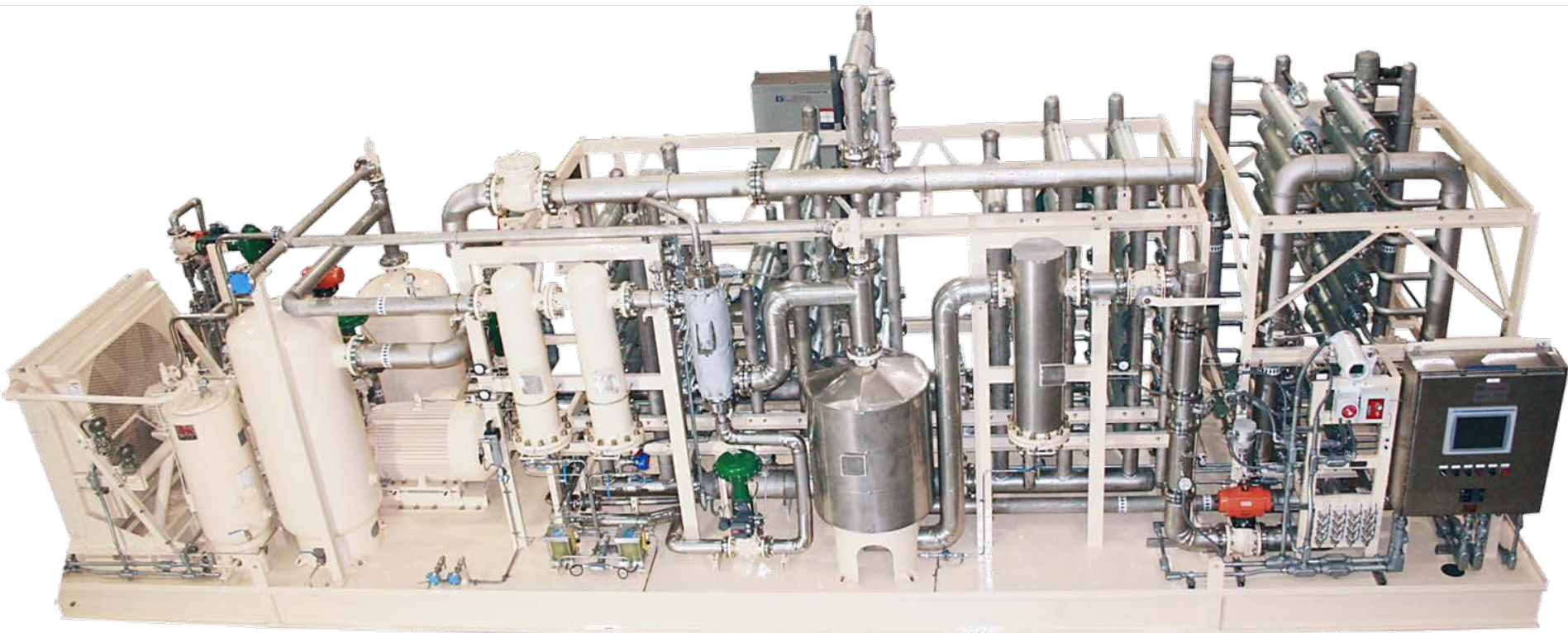


**Gas Pre-Treatment Skid  
with Auxiliary Membrane  
Skid**



# Process Gas Separation Complete Systems

**GENERON**



**Integrated CO<sub>2</sub> System –  
Gas Compression, Gas Pre-treatment,  
and Membrane Processing Plant**



# Process Gas Separation

# GENERON

H<sub>2</sub> - CO  
Separation



SF<sub>6</sub> Recovery System

# Compression Systems

## Primary Compression

**GENERON**



Class I Div. 2 - Gulf of Mexico

DNV Offshore container – ATEX, IECEx



# Compression Systems Booster Packages

**GENERON**



**DNV Offshore container – ATEX, IECEx**



# Instrument Air Twin Tower Systems

**GENERON**



**Desiccant Air Dryers**





# Nitrogen Generation Systems Patented Membranes

# GENERON



Class I Div 2 & ATEX  
certification available



# Nitrogen Generation Systems

## PSA Technology

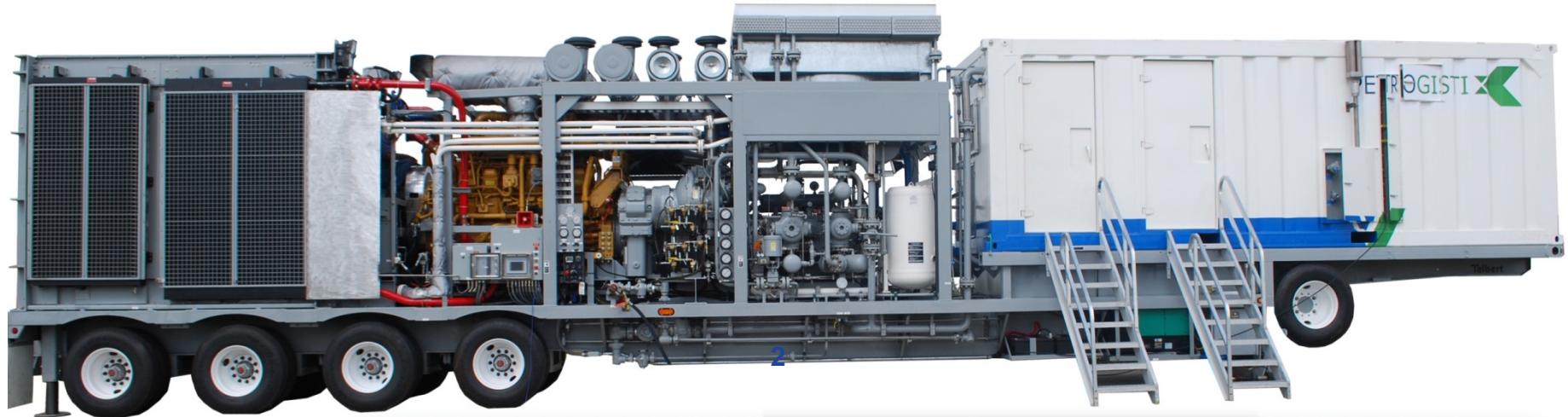


Purities to 99.999%



# Mobile Compression and N<sub>2</sub>

# GENERON



# GENERON Product Line

# GENERON

## Primary Air Compression

Standard, Integrated & Customized

## Instrument Air Packages

Membrane & Desiccant Dryers

## Nitrogen Generators

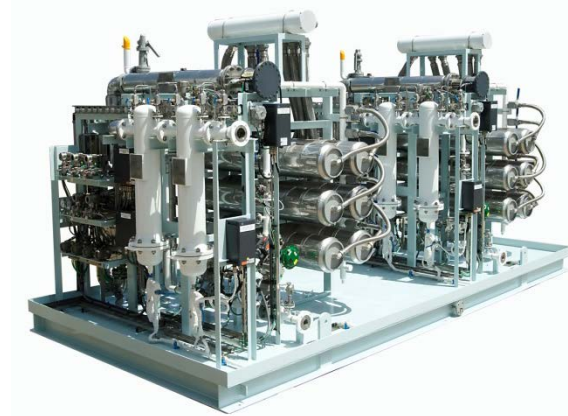
Membrane & PSA

## Process Skids

CO<sub>2</sub>, Hydrogen, Natural Gas & More

## Post Compression

Nitrogen & Natural Gas Boosters



- Personnel Certifications

Safety



- Technical & Trained Expertise in

- Control Software - Allen Bradley / Siemens
- Electrical & Control Troubleshooting – DC / AC / 4-20mA - 4160v
- Compressors - Gardner Denver / Ariel / GE / LeRoi / Sullair / Rix  
Ingersoll Rand / Kaeser / Roots / CompAir

**\*\* GENERON provides Preventive Maintenance Program for all System Types**



# Service and Maintenance

## Onshore Service

# GENERON

- Pressurizing/pressure testing
- Purging (hot or cold)
- Drying & Inerting
- Leak testing
- Pipeline Purging & Pigging
- Nitrogen cooling
- Plant Shutdowns (turnarounds)
- Mine Seal Inerting
- Enhanced Oil Recovery
- Well Completion
- Well Cleanout
- Under Balance Drilling
- Gas Lifting
- Fracking
- De-gassing
- Offshore Support
- Artificial Stimulation
- De-Watering



# Service and Maintenance Offshore Service

# GENERON

- Offshore Support
- De-Watering
- Pressurizing/pressure testing
- Purging (hot or cold)
- Drying & Inerting
- Leak testing
- Inert Line Purging & Pigging
- Nitrogen cooling
- System Shutdowns (turnarounds)
- Enhanced Recovery
- Well Completion
- Well Cleanout
- Gas Lifting
- De-gassing



GENERON Products are used throughout the world by a wide range of Industries for a multitude of applications in manufacturing, transportation, and production.



**Oil & Gas**



**Process Gasses**



**Marine & Shipping**



**Custom  
Fabrication and  
Manufacturing**

**THANK YOU**