

# GENERON



**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
  - $N_2$  •  $O_2$  •  $CO_2$  •  $H_2$  •  $H_2S$  •  $SF_6$  • He
- Service and Maintenance

Worldwide - Onshore - Offshore



# ISO-9000 Certified Facilities



РОССИЙСКАЯ ФЕДЕРАЦИЯ  
СЕРТИФИКАТ СООТВЕТСТВИЯ  
(обязательная сертификация)

Заявитель: Фирма "Астория"  
ИЗГОТОВИТЕЛЬ: ООО "Астория"  
Орган по сертификации: Федеральное агентство по техническому регулированию и метрологии

СООТВЕТСТВУЕТ  
ТЕХНИЧЕСКОМУ РЕГУЛИРОВАНИЮ И СТАНДАРТИЗАЦИИ  
24.03.2011 N 205

ПРОВЕДЕННЫЕ ИСПЫТАНИЯ И  
ПРОТОКОЛ СЕРТИФИКАЦИИ  
ООО "Астория", г. Москва

ПРЕДСТАВЛЕННЫЙ  
СРОК ДЕЙСТВИЯ

CSA Group

3211-89: (Product) N/A (Model) N/A: (Risk Marking Deviations) N/A (Notices Referenced) No CSA Marked production was found during the audit.

Factory Tests Applied:

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

Immediate Changes:

Factory: (Inspection Codes:) K (Immediate)

3211-89: (Model:) N/A (Inspection Codes:)

As the facility representative, the undersigned, hereby certifies that the information provided in this report is true and correct.

Name: Andy Oliveras (Facility Representative)  
Signature: [Signature]

Name: Rafael Rascon (CSA Representative)

I have read and understand this report as written.

Listed items not complying with CSA requirements are not eligible to bear the CSA Mark - MISUSE OF THE CSA MARK MAY BE PENALIZED BY THE CANADIAN STANDARDS ASSOCIATION. All rights reserved.

ASME U

CERTIFICATE OF AUTHORIZATION

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 National Board in accordance with its provisions.

The scope of Authorization is limited to items manufactured in accordance with:

ASME Designator(s): U U2

ISSUE DATE: December 11, 2011

EXPIRATION DATE: January 7, 2017

Executive Director: [Signature]

The American Society of Mechanical Engineers



## MANAGEMENT SYSTEM CERTIFICATE

Certificate No: CERT-02679-2004-AQ-HDSI-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

ANAB ACCREDITED

For the issuing office:  
DNV GL - Business Assurance  
1450 Ravella Drive, Katy, TX, 77449-5164, USA

Tamara Belmar  
Management Representative

QR code

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.  
ACCREDITED UNIT: DNV GL Business Assurance USA, Inc., 1450 Ravella Drive, Katy, TX 77449 USA. TEL: 281-391-1000. dnvglobal.com



# ISO-9000 Certified Facilities



# GENERON

M2

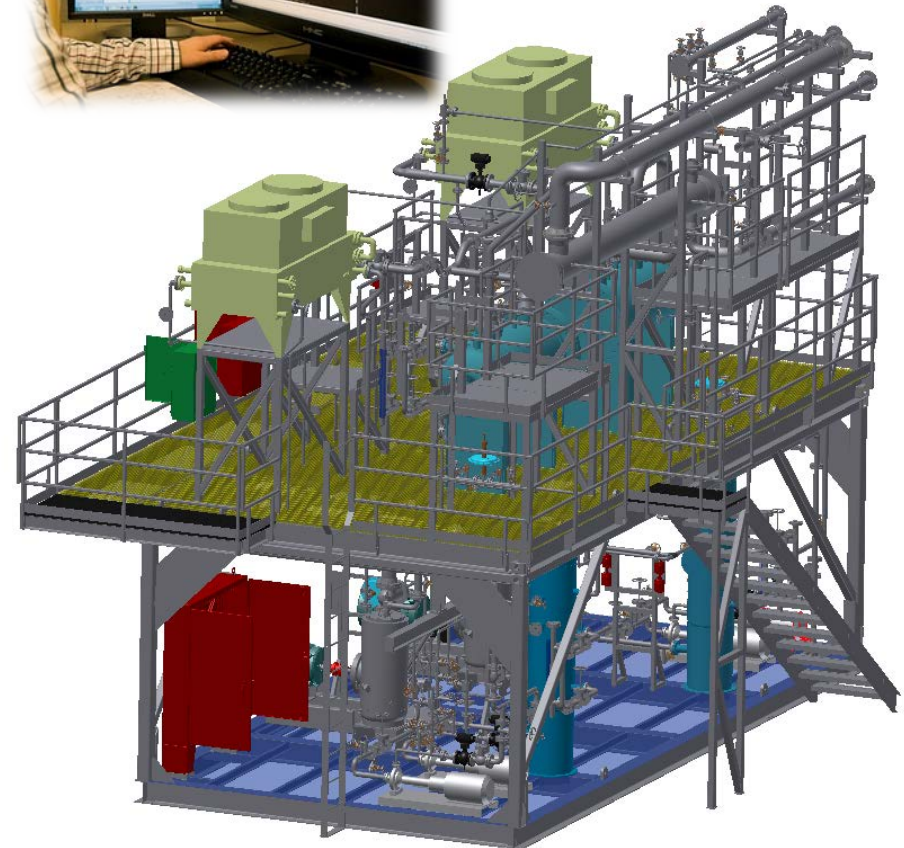
- Land Area 22 Acre / 89,000 M2
- Total Building Size 121,200 Ft2 / 11,260
- Office Space 17,400 Ft2 / 1,617 M2
- Manufacturing 103,800 Ft2 / 9,643 M2
- Outside Staging Areas 260,000 Ft2 / 24,155 M2
- Testing Capabilities up to 1000 HP
- Natural Gas Equipment Testing (Compressors, Engines, etc.)
- Total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

# GENERON

## 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

# GENERON

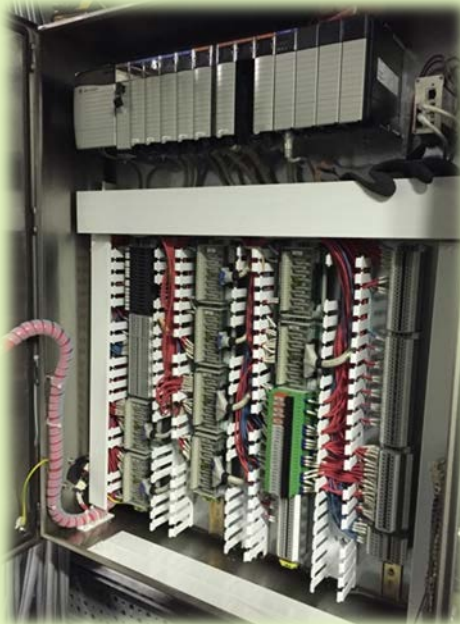
## Electrical Panel Shop

UL 508A by CSA

ATEX

IECEX

BV, DNV, Lloyds Register certified systems





# Full Manufacturing and Fabrication Capabilities

# GENERON

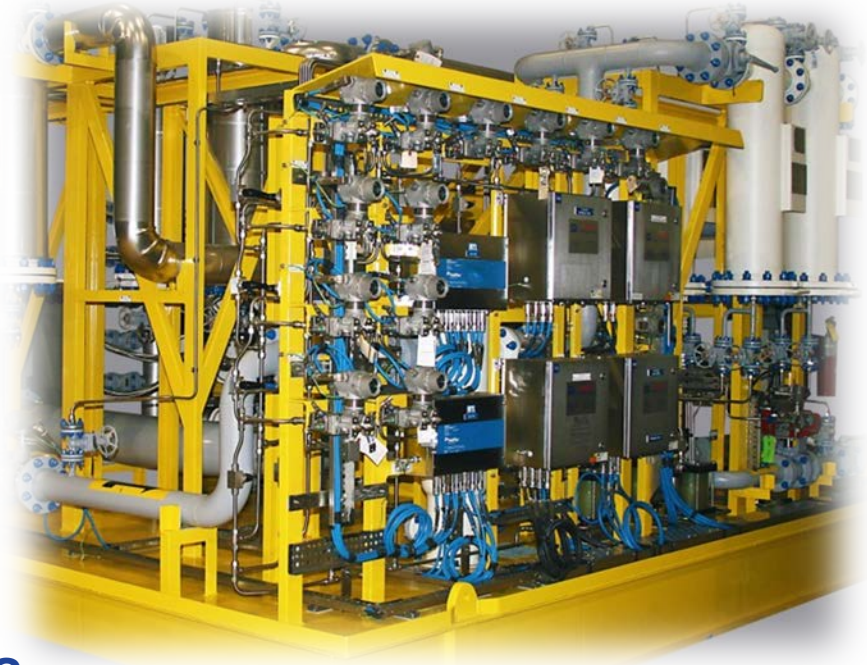
## Tubing & Instrumentation

- 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



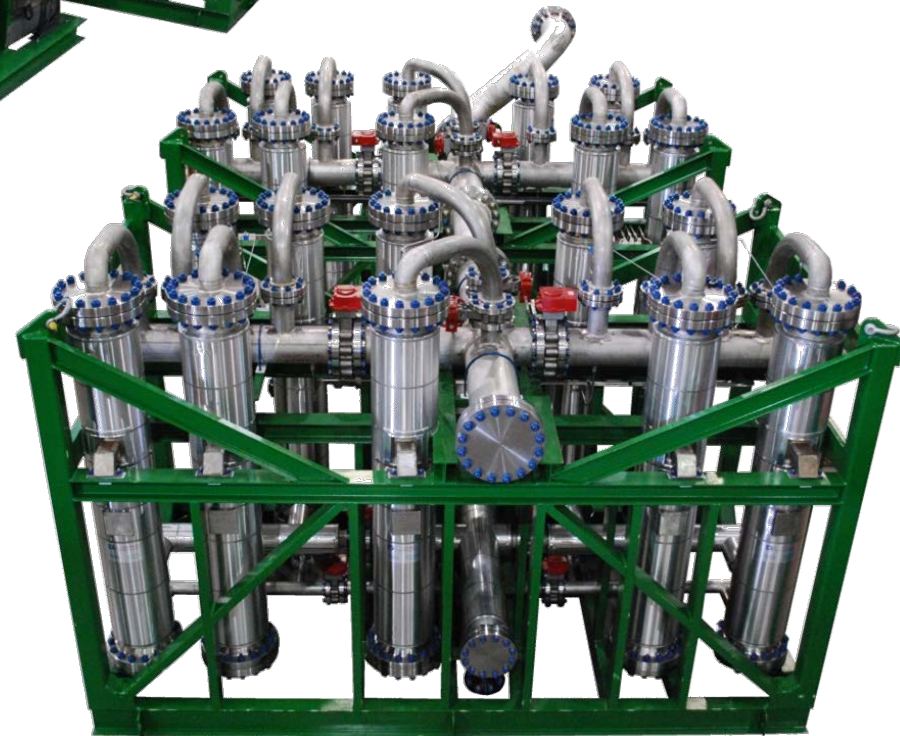
## Process Gas Technologies

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



# Process Gas Separation Skidded Equipment / Components

# GENERON

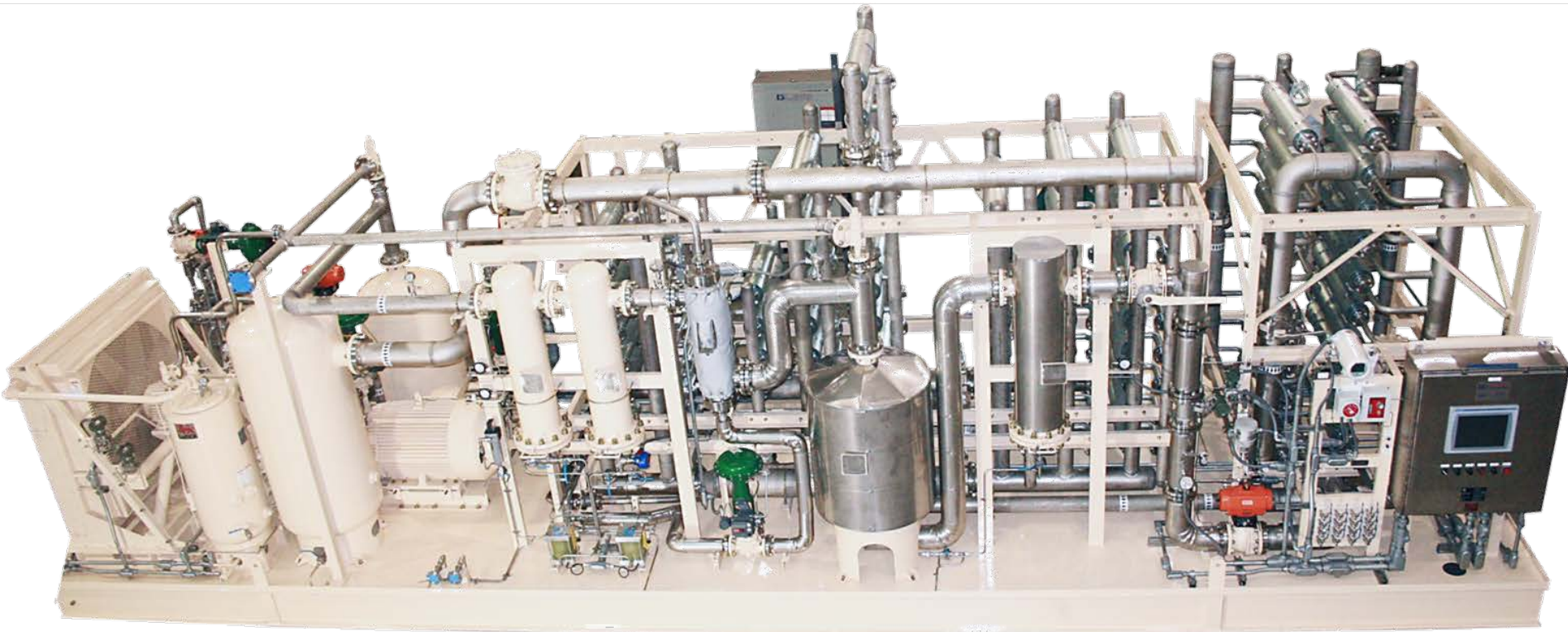


**Gas Pre-Treatment Skid  
with Auxiliary Membrane  
Skid**



# 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

$H_2$  - CO  
Separation



$SF_6$  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

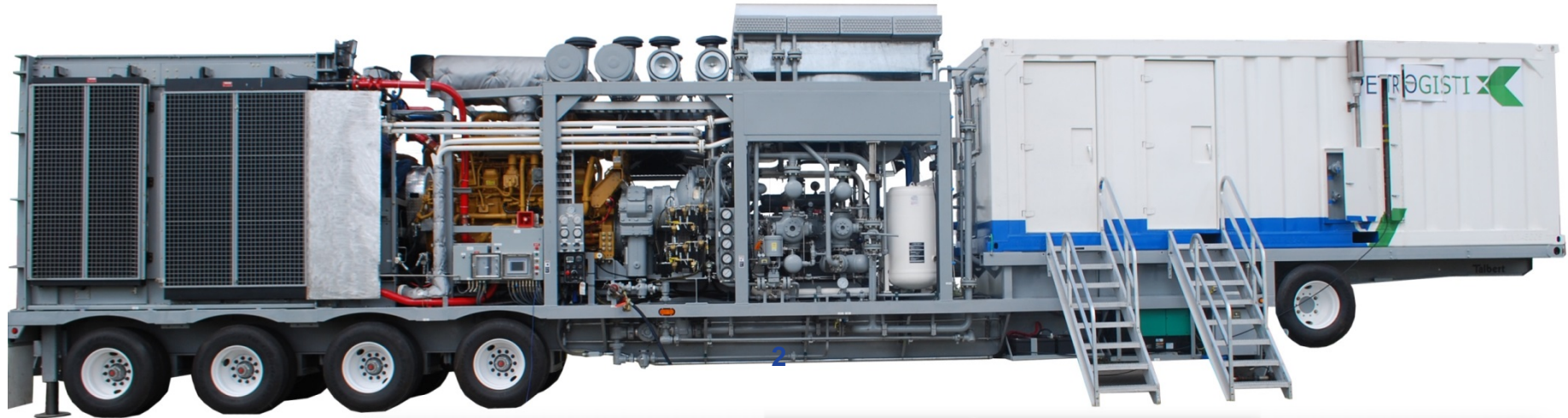
# GENERON

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