



**ENGINEERING SERVICES  
FOR THE  
OIL & GAS INDUSTRY**

## **General Overview:**

Omega-wgo is a Germany based international plant and pipeline engineering company with decades of experience in the oil & gas industry.

Within our 6 operating division we are engineering and executing projects for our national and international clients with special attention to high quality of deliverables and schedule compliance.

In our technical departments, state of the art technologies are used and developed by the discipline engineers assisted by latest Engineering Software such as HYSIS, ACAD, PLANT 4D, Caesar II, etc.

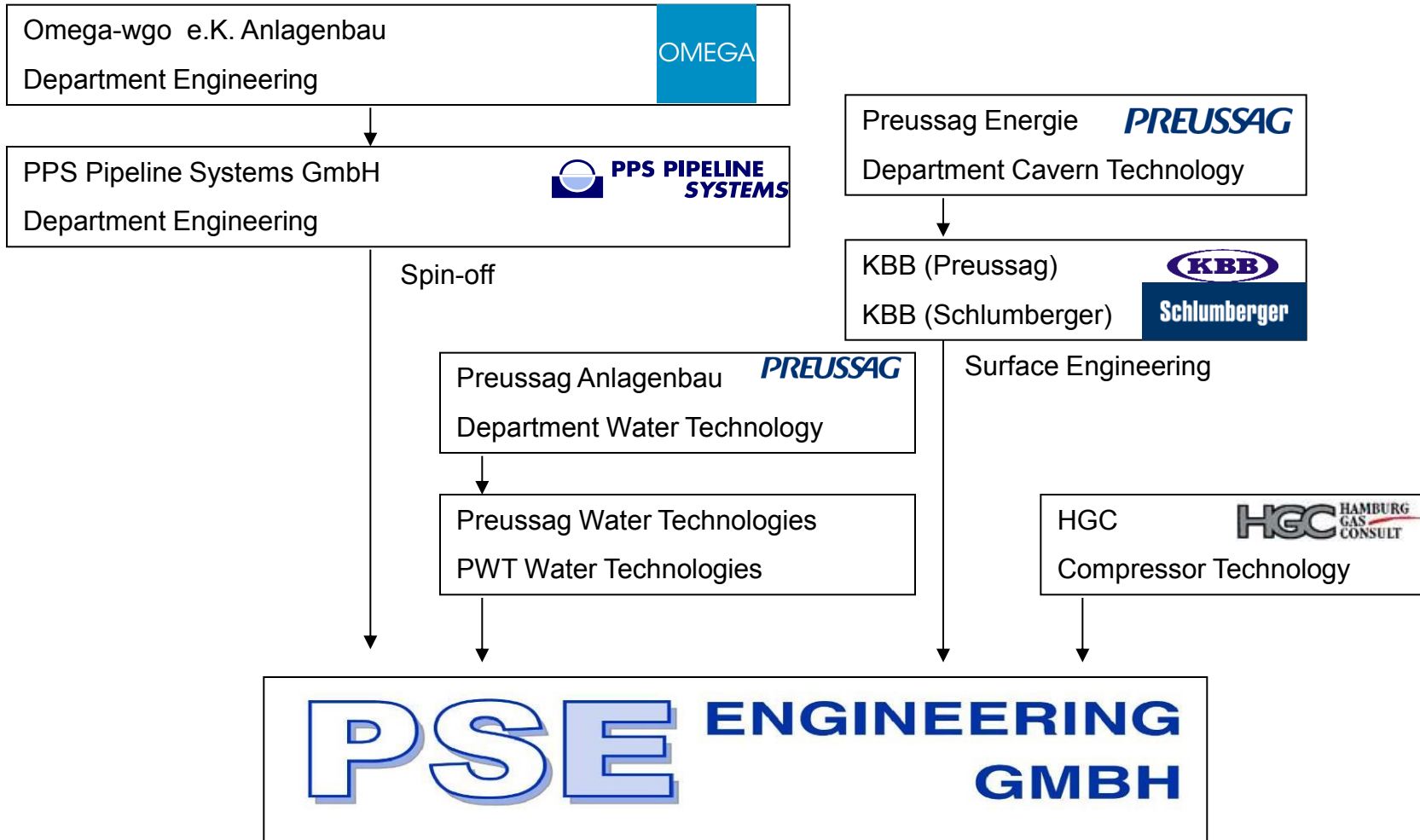
## **Our scope of services includes but is not limited to the following:**

Pipelines & Installations, Pumping Stations, Oil Treatment Plants, Terminals, Tank Farms, Underground Storage Facilities, Compressor Stations, Gas Regulating & Measurement Stations, Gas Treatment Plants, Automation & SCADA Systems, etc.

Starting from Feasibility Studies (incl. CAPEX and OPEX Analysis) over Basic and Detail Design, PSE also is managing the Construction and commissioning phase – in some cases, PSE is also handling the operation of the complete installation.

Proven management and scheduling tools such as Primavera and SAP Systems are supporting our teams with their different tasks to assure proper and in-time project execution.

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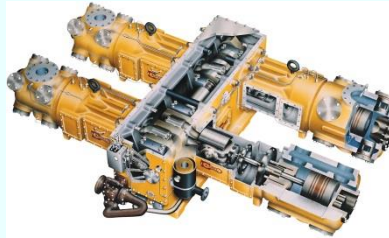


# OPERATING DIVISIONS

## Oil & Gas



## Compression Systems



## Underground Storages



## Industrial Plants



## Cathodic Protection Systems



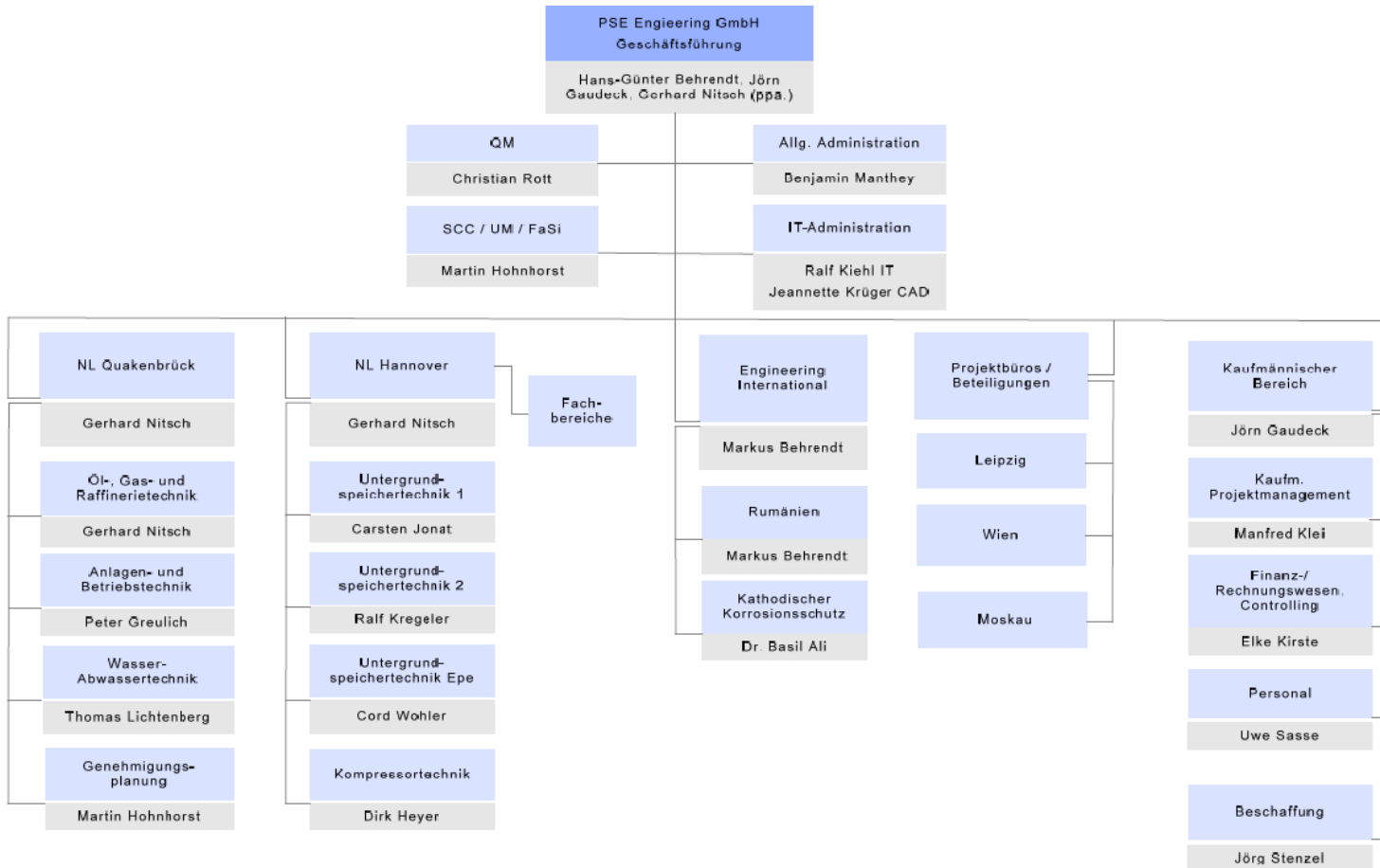
## Water Technologies



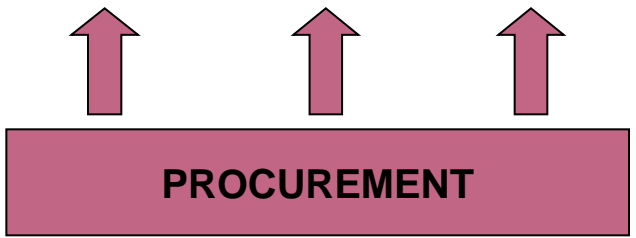
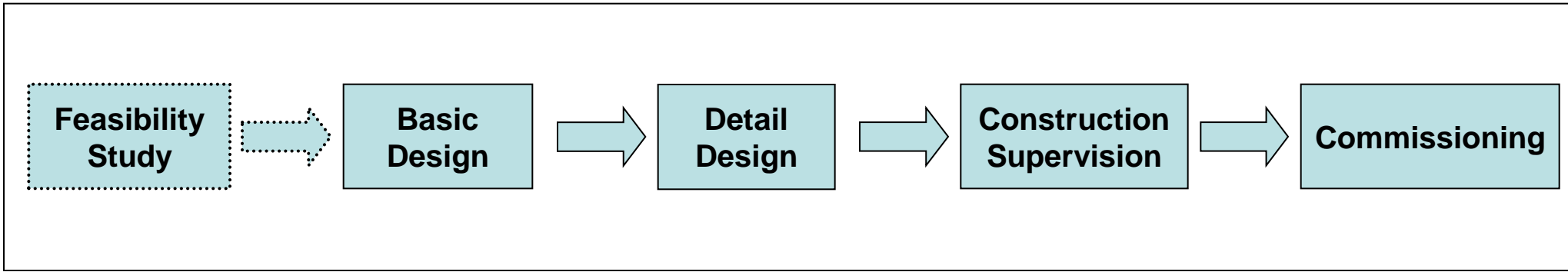
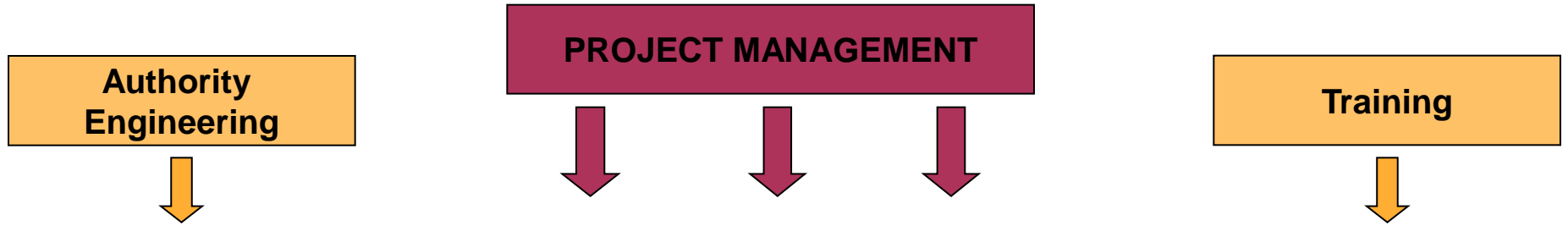


## Omega-wgo e.K.

Management                      Özkan Aksoy  
 Oil & Gas Business development  
 manager/Engineer                Gasim Elteгани



# SCOPE OF SERVICES



ISO 9001

ISO 14001

SCC

Certificate

Standard ISO 9001:2008

Certificate Registr. No. 01 100 055124

Certificate Holder: **PSE ENGINEERING GMBH**

Pfaffenstraße 11 • D - 49610 Quakenbrück

Including the locations  
Ahrensburger Straße 1 • D - 30659 Hannover  
Südstraße 75a • D - 20097 Hamburg

Scope: Consulting, engineering, project management, erection, construction supervision, commissioning and service of plants, compressor systems, pipe systems and pipelines for the storage, transportation and supply of hydrocarbons, operating media, heating, cooling, steam, compressed air, potable-, industrial- and waste water

An audit was performed. Proof has been furnished that the requirements according to ISO 9001:2008 are fulfilled. The due date for all future audits is 12-08 (dd.mm).

Validity: The certificate is valid from 2014-08-25 until 2017-08-24. First certification 2005

2014-08-14

*Job. Bl.*  
TÜV Rheinland Cert GmbH  
Am Grauen Stein • 51105 Köln



www.tuv.com



Certificate

Standard ISO 14001:2004

Certificate Registr. No. 01 104 069676

Certificate Holder: **PSE ENGINEERING GMBH**

Pfaffenstraße 11 • D - 49610 Quakenbrück

Including the locations  
Ahrensburger Straße 1 • D - 30659 Hannover  
Südstraße 75a • D - 20097 Hamburg

Scope: Consulting, engineering, project management, erection, construction supervision, commissioning and service of plants, compressor systems, pipe systems and pipelines for the storage, transportation and supply of hydrocarbons, operating media, heating, cooling, steam, compressed air, potable-, industrial- and waste water

An audit was performed. Proof has been furnished that the requirements according to ISO 14001:2004 are fulfilled. The due date for all future audits is 07-13 (dd.mm).

Validity: The certificate is valid from 2012-08-25 until 2015-08-24. First certification 2007

2014-08-14

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Certificate

Standard SCC<sup>P</sup>: 2011

Certificate Registr. No. 01 013 060052

Certificate Holder: **PSE ENGINEERING GMBH**

Pfaffenstraße 11 • D - 49610 Quakenbrück

Including the location  
Ahrensburger Straße 1 • D - 30659 Hannover

Scope: Consulting, engineering, project management, erection, construction supervision, commissioning and service of plants, compressor systems, pipe systems and pipelines for the storage, transportation and supply of hydrocarbons, operating media, heating, cooling, steam, compressed air, potable-, industrial- and waste water

An audit was performed, Report No. 060052. Proof has been furnished that the requirements of the regulation "Sicherheits-Certifikat Contraktoren" (SCC), version 2011, on a SGU management system in conformity with the standard SCC<sup>P</sup> petrochemistry are fulfilled.

The due date for all future audits is 16-05 (dd.mm).

Validity: The certificate is valid from 2013-05-29 until 2016-05-23. First certification 2007

2013-05-24

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## Clients

- **E-ON AG**
- **RWE**
- **Exxon Mobil GmbH**
- **IVG - Logistik GmbH**
- **Gaz de France**
- **DOW Inc.**
- **Statoil**
- **Salzgitter AG**
- **SMS DEMAG**
  
- **OMV Petrom S.A. (Romania)**
- **TPAO (Turkey)**
- **Petro Santander (USA)**
- **Arcelor (Belgium)**
- **Transgas (Portugal)**
- **RWE Dea (Egypt)**

## Regions

- **Germany**
- **Austria**
- **UK, Ireland**
- **Poland**
- **Lithuania**
- **Romania**
- **Russia**
- **Belarus**
- **Portugal**
- **Greece**
- **Turkey**
- **Egypt**
- **Tunisia**
- **Morocco**

# SERVICE PROFILE

## Oil & Gas & Water

- Pipelines and Installations
- Pumping Stations
- Oil Treatment Plants
- Terminals
- Tank Farms
- Underground Storage Facilities
- Compressor Stations
- Receiving Stations
- Natural Gas Treatment Plants
- Water Treatment Plants
- Industrial Water Treatment
- Waste Water Treatment Plants

**Instrumentation / Automation Systems / Monitoring Systems / SCADA Systems**



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# PRESENTATION

Ca Y[ U!k [ c'UbX'PSE ENGINEERING SERVES INTERNATIONAL

- PIPELINE TECHNOLOGY -

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More than 45 years of competences in studies, engineering, design and execution of complete pipeline systems in the area of:

- Gas & Oil
- Oxygen (O<sub>2</sub> Pipeline)
- Petro-Chemicals
- Telecommunication and Cable networks



*Our Services in the Pipeline Technology Sector*

Studies, Consultancy Services

Basic Engineering

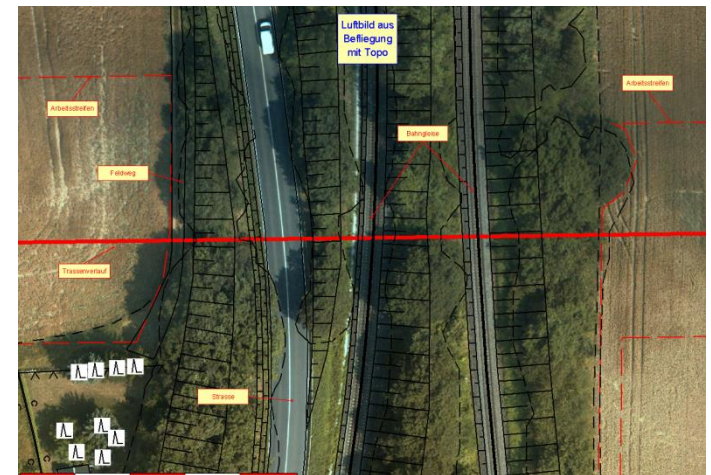
Detailed Engineering

Project Management and Control

Construction Supervision

Commissioning

- Feasibility Studies
- Profitability studies
- Permitting Engineering
- Land Survey
- 3D Airborne Laser Scanning
- Line Routing
- License application procedures
- Environmental Issues
- Re-soiling
- Right of Way - Acquisition
- Specialities (HDD, Micro Tunnelling etc.)
- As Built Documentation







- **Site Management**
- **HSSE Monitoring and Co-ordination**
- **Welding Engineers**
- **Monitoring of Test Procedures**
- **Commissioning**
- **Start up Support**
- **Claim Management**



- Long Distance heat pipeline incl. river crossing
- Rehabilitation of existing facilities
- Polyethylene pipe works
- Relining of pipes in different methods
- Corrosion investigation for pipelines and plants
- Inside inspection of pipelines with ultrasonic and
- Magnet-Flux Pigs





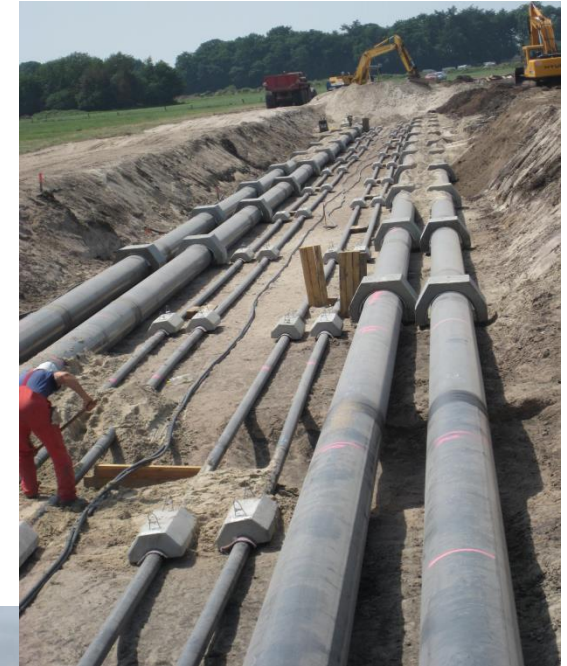
- City Aachen, Gaspipeline 48 km  
DN 400, PN 100
- Exxon Mobil, Gaspipeline 170 km  
DN 900, PN 100
- RWE/DEA, Study connecting Oil  
Pipeline DN 1000 incl. Jetty at North Sea  
Side
- IVG div. Oil Pipeline Projects up to DN  
1100, PN 100
- Statoil, Gas Pipeline 77 km  
DN 40" PN 80

**Scope of Services:**

PSE personnel decisively contributed the entire range of services and capabilities to the development and operation of the gas & oil transport lines including evaluation studies, project management, telecommunication technology, detailed design, commissioning and start up.



- **Messer-Griesheim, Oxygen & Nitrogen Pipeline 53 km, DN 400, PN 63**
- **GHG Gasspeicher Hannover GmbH  
Brine Pipeline 35 km, DN 300 PN25  
Portable Water Pipe 8 km, DN 300 PN 16**
- **Statopil Europipe, Gaspipeline 67 km,  
DN 42" PN 80**



**PSE currently works on Field Pipeline Projects in EPE and Etzel Germany for companies like Essent, Nuon, RWE, Trianel, Statoil, IVG, eon-Ruhrgas, EWE**

**Pipeline DN 300 – DN 1100, PN 16 – PN 230**





**PSE performed for Serept Tunisia (Member of OMV Group) a Pipeline Inspection on their Crude Export Line from the Oilfields close to the Algerian border to the Port of Sfax**

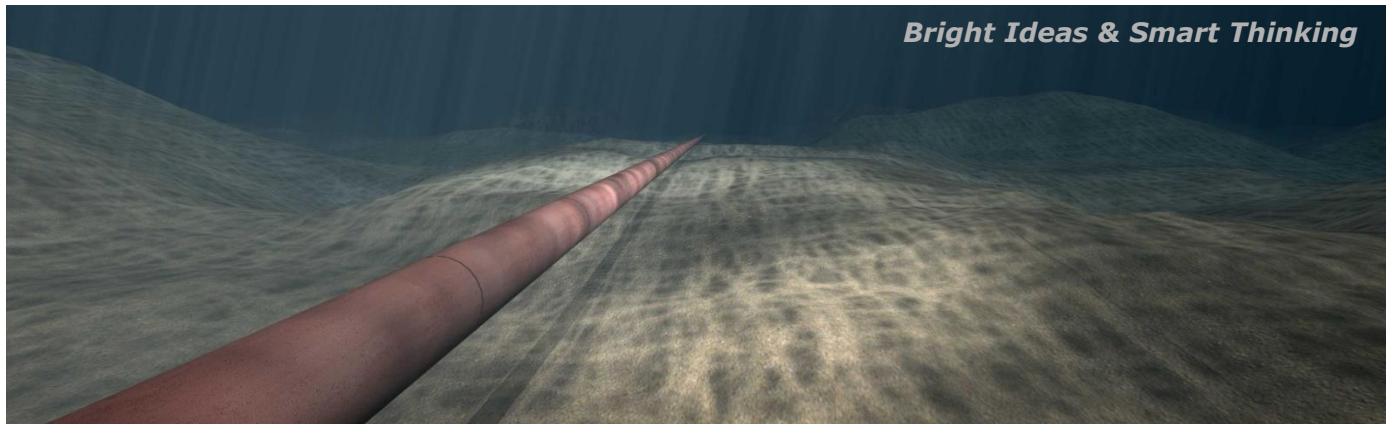


- Pipeline Inspection on complete Route (ca. 170 km)
- Preparation of Inspection Report
- Detailed Programme for Pipeline Rehabilitation & Intelligent Pigging
- Recommendations to upgrade the pipeline on actual standards
- Cathodic Protection Concept and Recommendations

# PRESENTATION

Ca Y[ U!k [ c'UbX'PSE ENGINEERING SERVES INTERNATIONAL

**- CATHODIC PROTECTION SYSTEMS -**



## CATHODIC PROTECTION

PSE provides complete Cathodic Protection services to clients for all industrial complexes, such as those in the gas, oil, refineries, petrochemicals, onshore and off-shore pipelines / structures, water pipelines and related

The Various Range of Services also include the following:

- Site Survey & Reports
- Detail Design & Engineering
- Project Consultancy
- Material / Equipment Manufacture and Supply
- Installation & Supervision
- Testing & Commissioning
- Maintenance
- Training





## CATHODIC PROTECTION

### MAJOR CATEGORIES

Cathodic corrosion protection

### PROTECTION OBJECTS

- Pipelines
- Well Casings
- Plant areas
- Internal Protection
- Off-Shore Structures
- Steel in Concrete



## CATHODIC PROTECTION

### SPECIALIZED SERVICES

- Periodic Monitoring
- Repair / Replacement Service
- Remote Monitoring Service
- Intensive Survey
- Stray Current Investigation
- Pearson Survey
- Fault Location
- Computerized Close Interval Potential Logging Survey
- Computer Based Calculation of AC Induced High Voltage
- Computerized Deep Soil Resistivity Measurement
- Cathodic Protection – Application Software Development Service
- Training Courses and Development Seminars



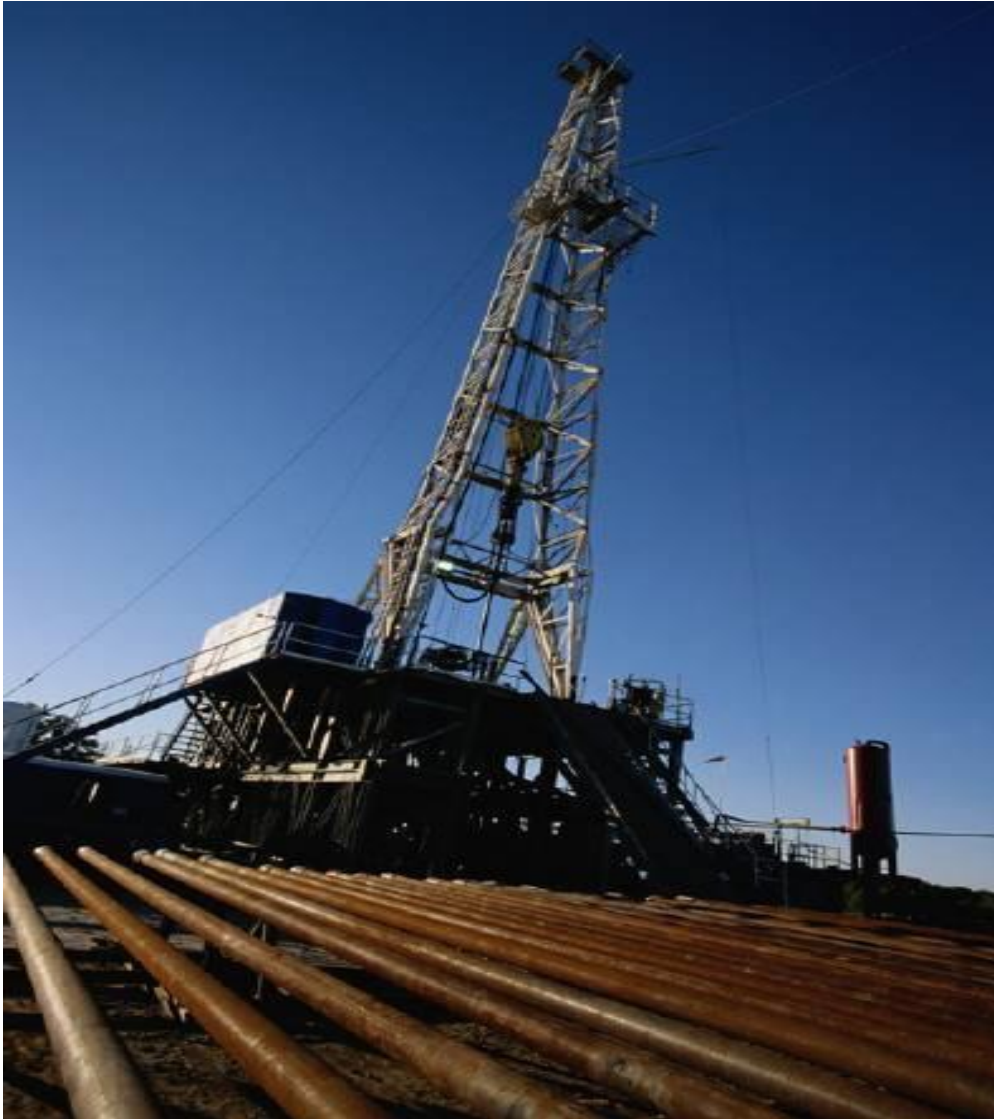
# PRESENTATION

Ca Y[ U!k [ c'UbX'PSE ENGINEERING SERVES INTERNATIONAL

**- OIL & GAS TECHNOLOGY -**

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FIELD DEVELOPMENTS &  
RE-DEVELOPMENTS

ON & OFFSHORE FACILITIES

SURFACE FACILITY ENGINEERING

SEPARATION FACILITIES

TANK FARMS

PRODUCTION & SALES METERING

PUMPING & COMPRESSOR STATION

FLOW LINES / PIPELINES

ENVIRONMENTAL STUDIES

FIELD DUE-DILLIGENCE

INITIAL PROJECT CONCEPT

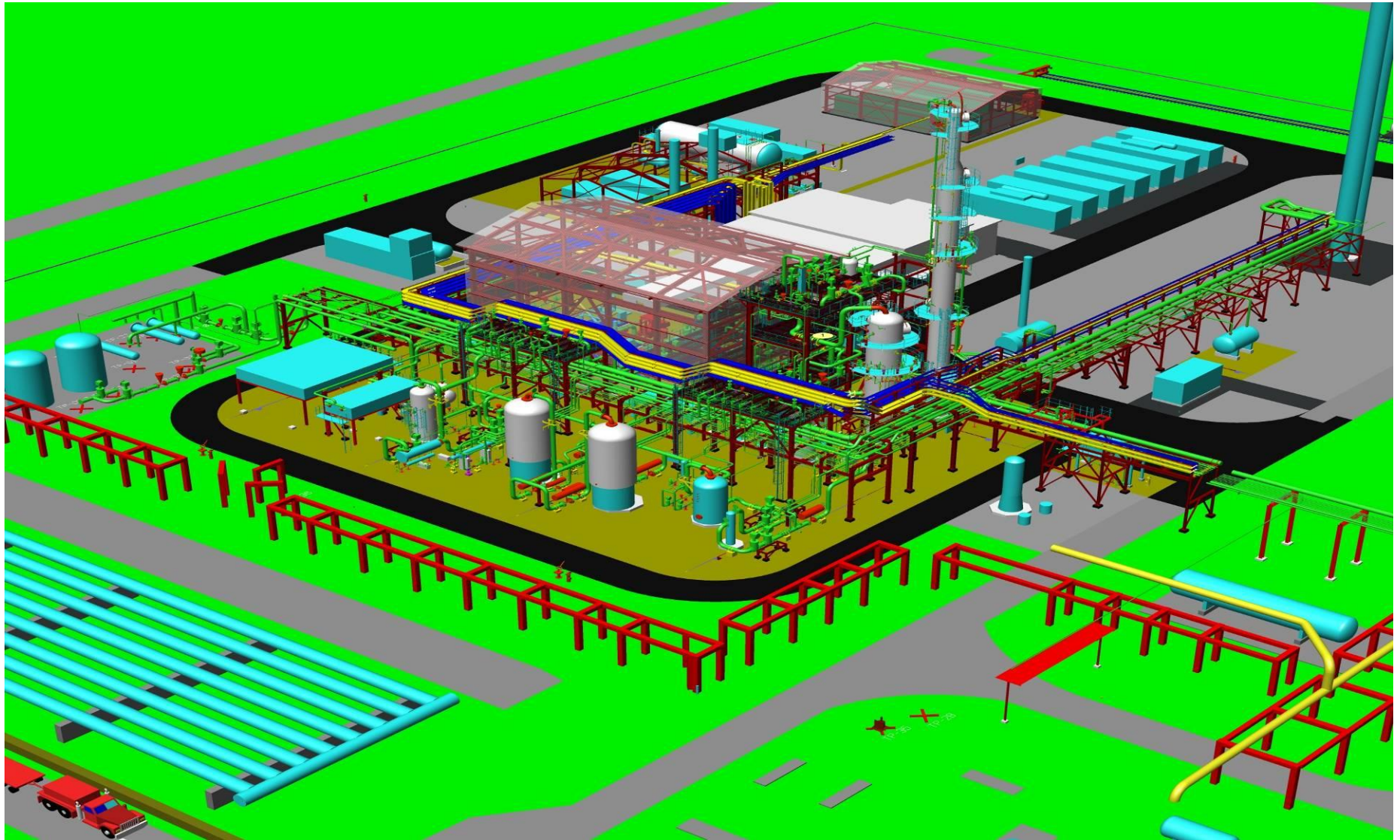
C3+ Recovery > 99 %

Natural Gas Feed:  
3 200 000 Nm<sup>3</sup>/day  
133 333 Nm<sup>3</sup>/h  
GHV = 1625 MW



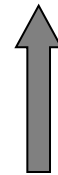
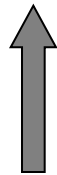
Sales Gas to Pipeline:  
3 079 500 Nm<sup>3</sup>/day  
128 312 Nm<sup>3</sup>/h  
GHV = 1382 MW  
33 168 MWh/d

C3+ Product to  
Storage and Loading:  
286 t/day





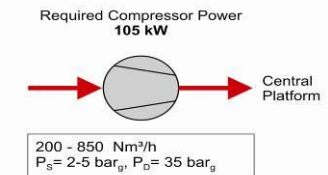
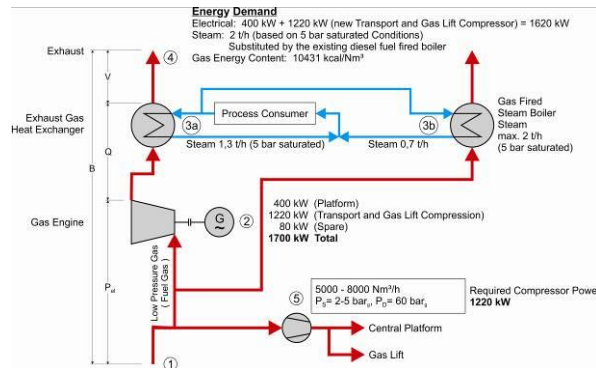
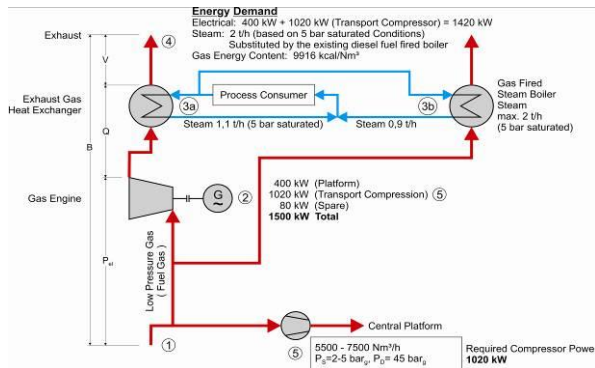




1 Gas Transport Compressor  
1 Cogeneration Unit

1 Gas Transport/Gas Lift Compr.  
1 Cogeneration Unit

1 Gas Transport Compressor



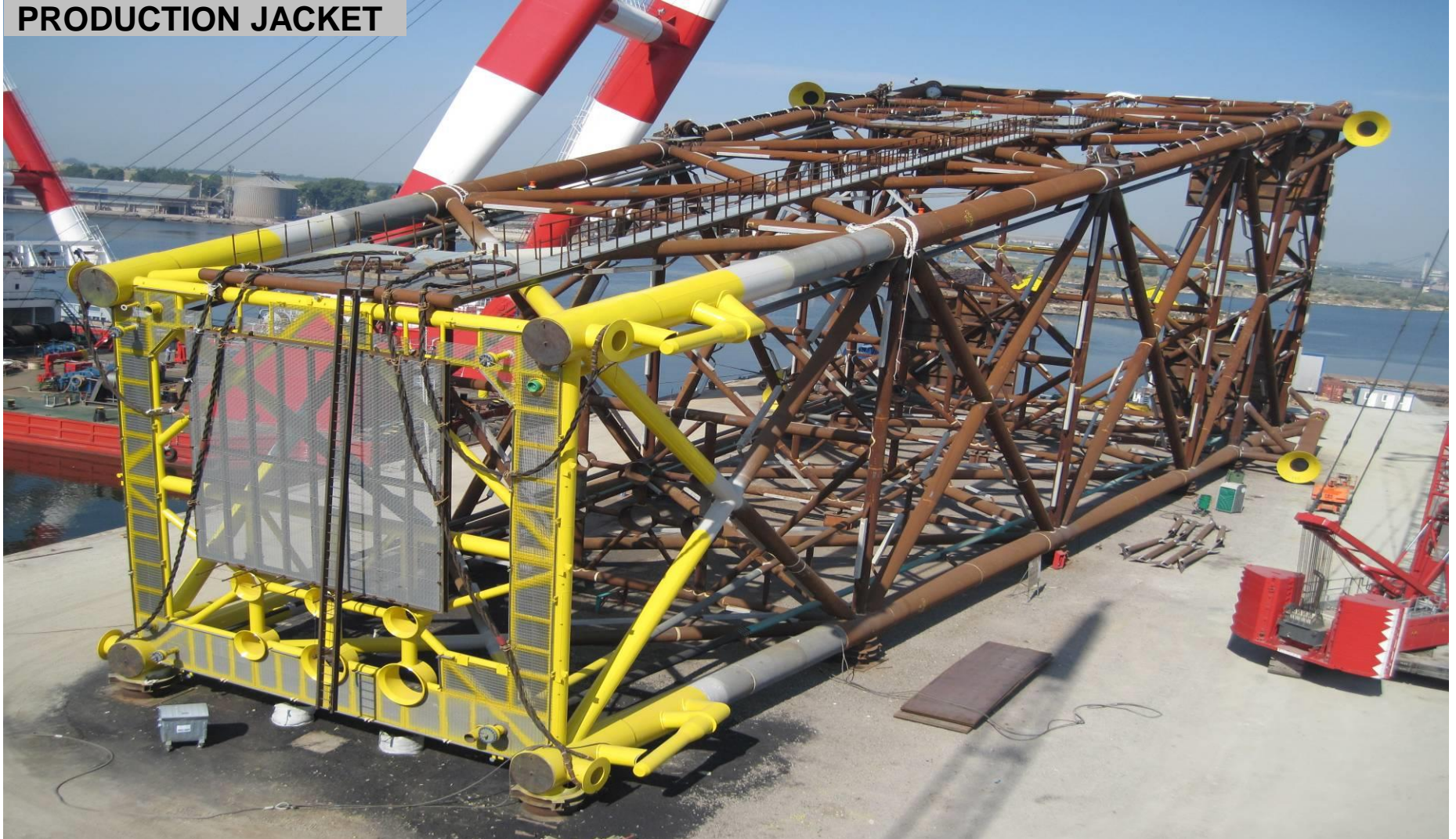


PRODUCTION TOPSIDES





PRODUCTION JACKET





INSTALLED PLATFORM





# PRESENTATION

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**- COMPRESSION TECHNOLOGY -**

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ORDER INTAKE



ENGINEERING

PROCUREMENT



PACKAGING



PLANT CONSTRUCTION (TURN KEY)

COMMISSIONING

SPARE PARTS & SERVICE



OPERATION & MAINTENANCE



PSE Engineering GmbH

Halberstädter Maschinenfabrik

PSE Engineering GmbH

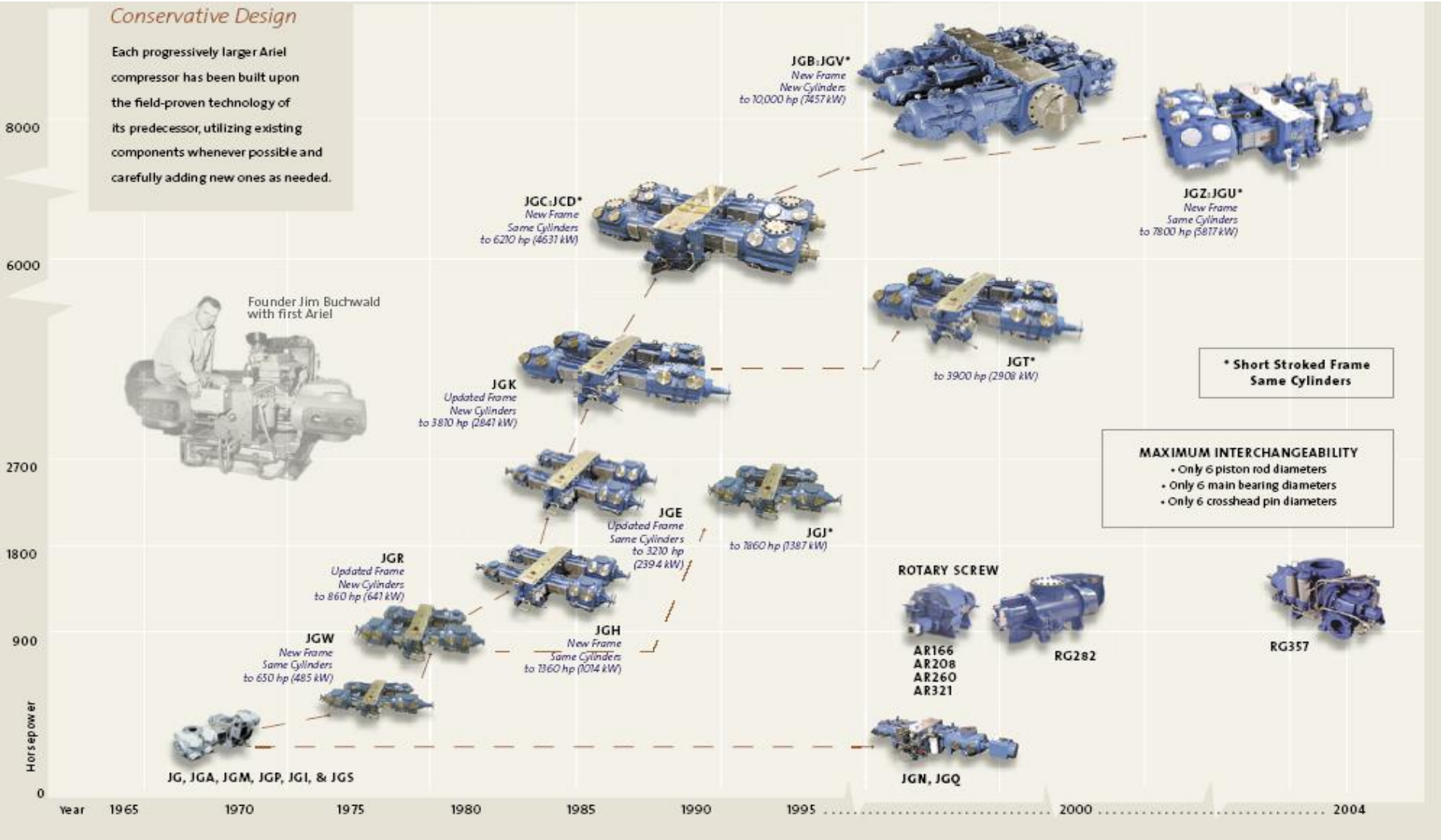
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(IN CASE OF CLIENT REQUEST)



# DEVELOPMENT OF FRAMES

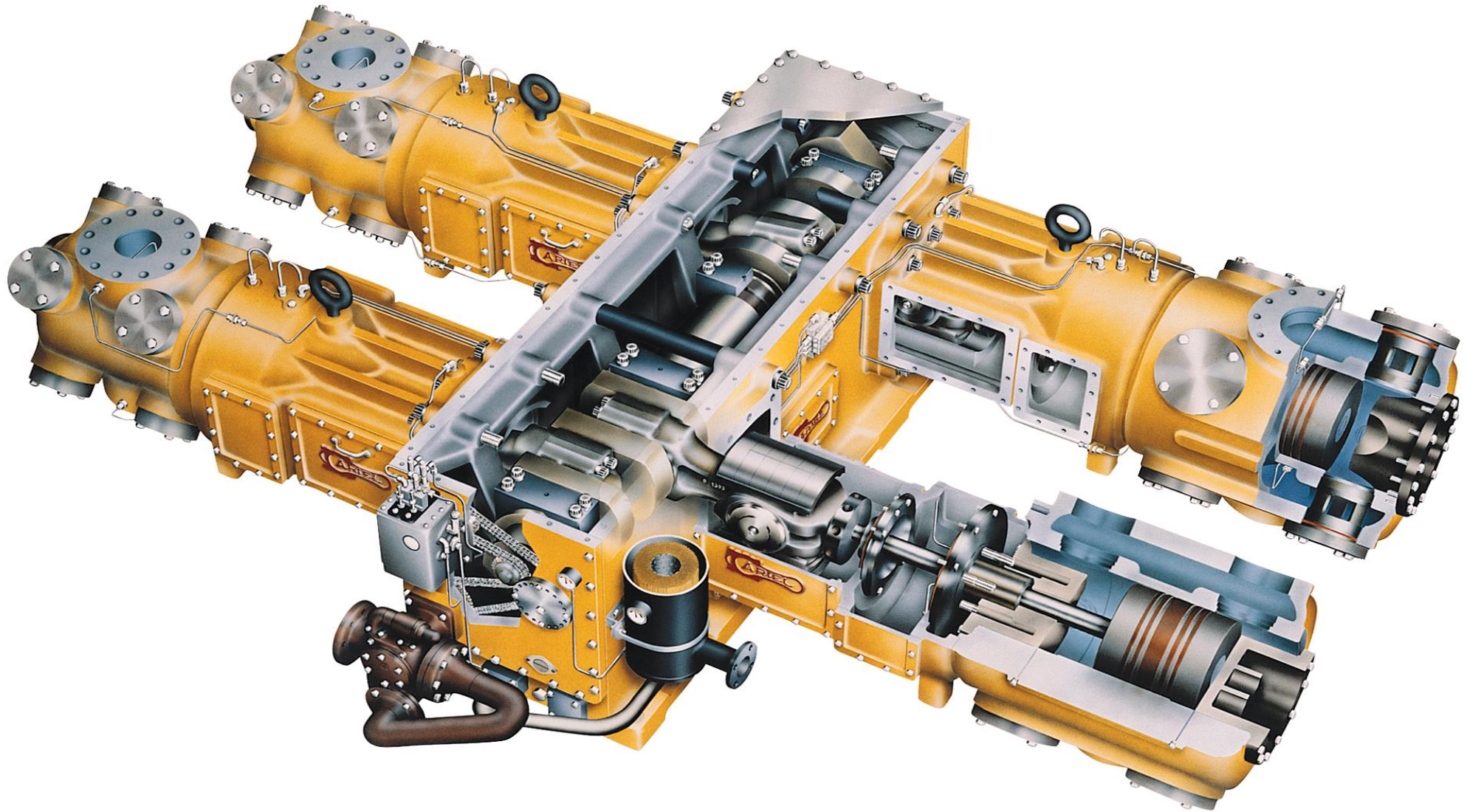
## Conservative Design

Each progressively larger Ariel compressor has been built upon the field-proven technology of its predecessor, utilizing existing components whenever possible and carefully adding new ones as needed.

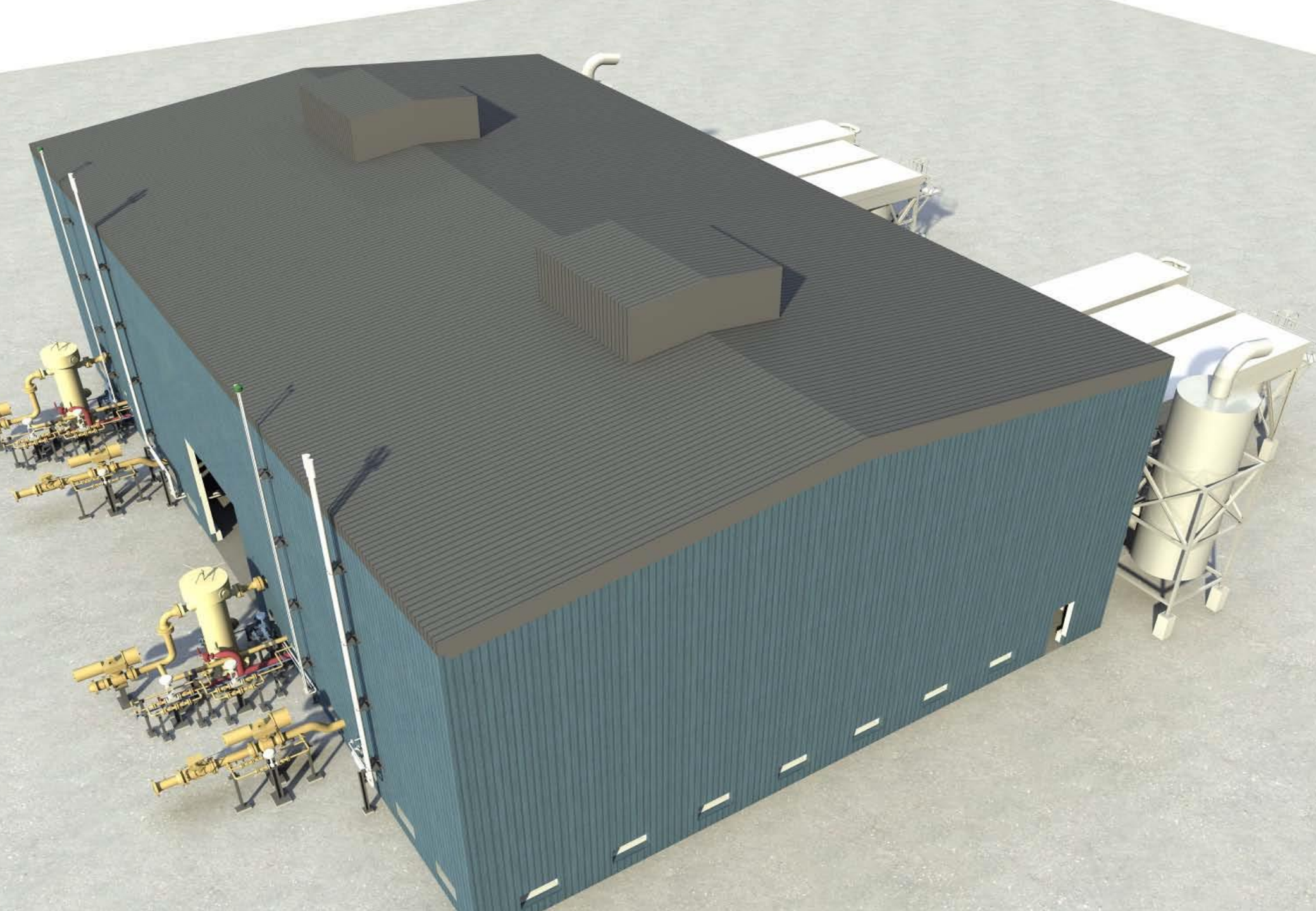


# ARIEL COMPRESSOR

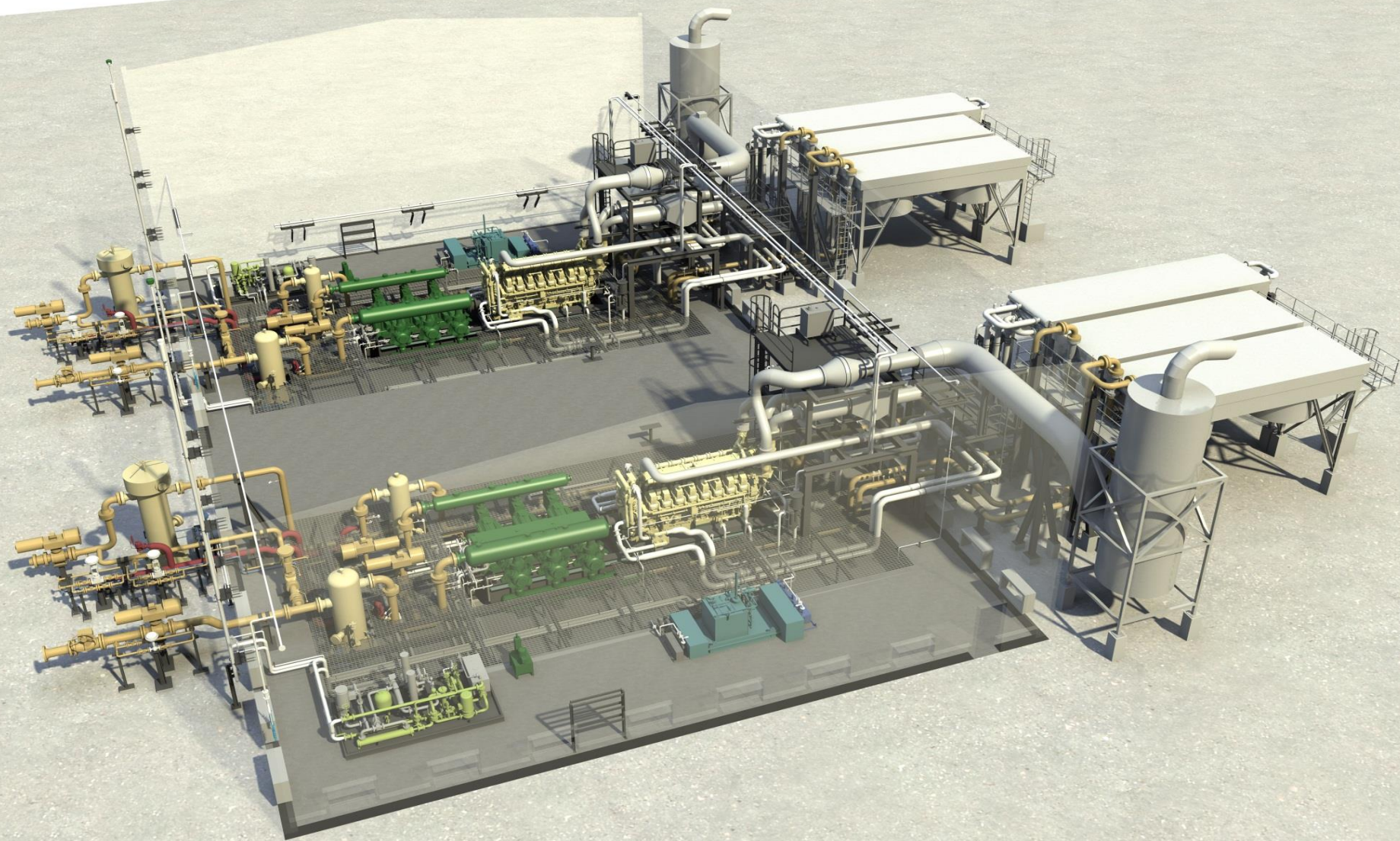
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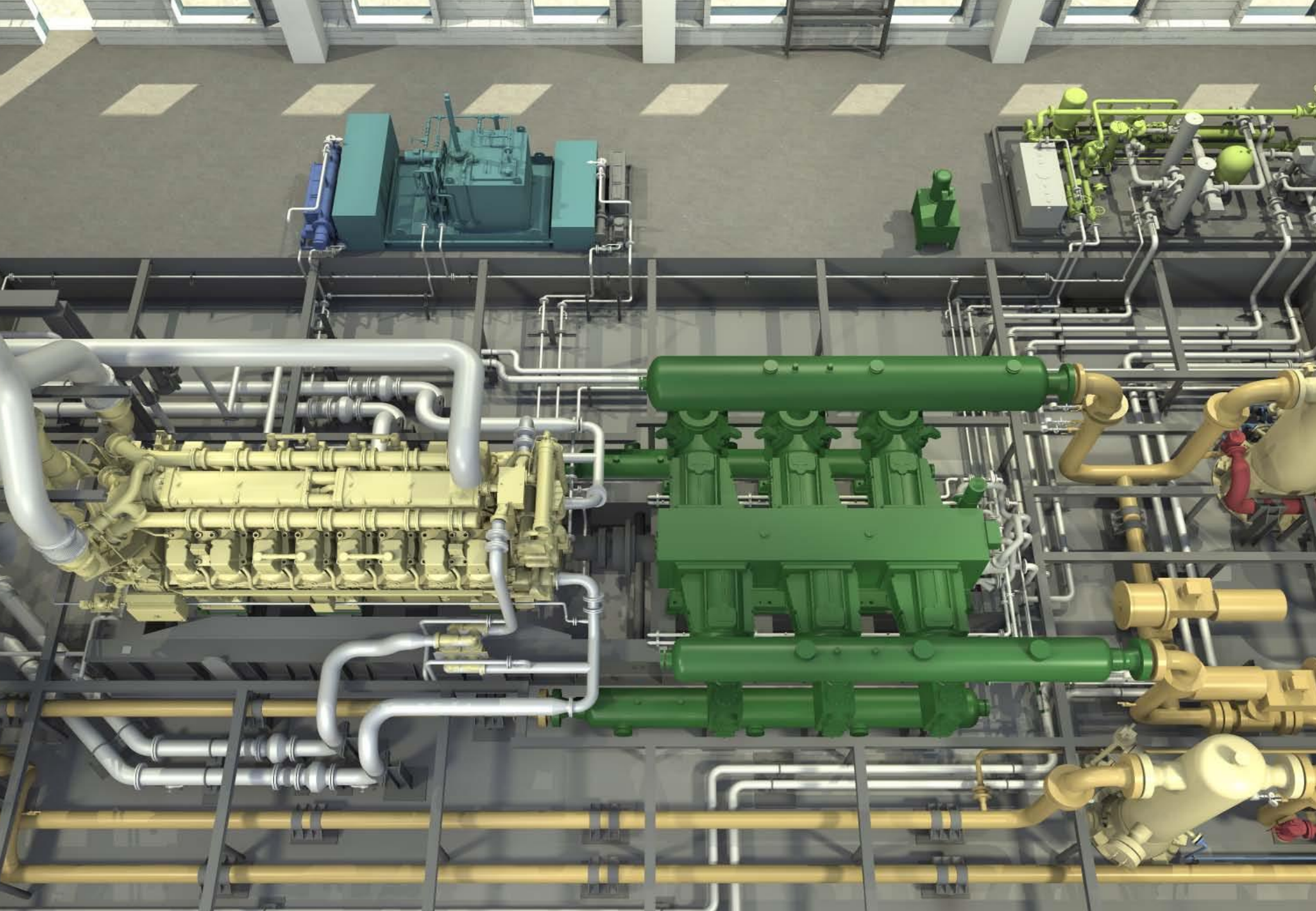






















OMEGA

COMPRESSION SYSTEMS

PSE ENGINEERING  
GMBH





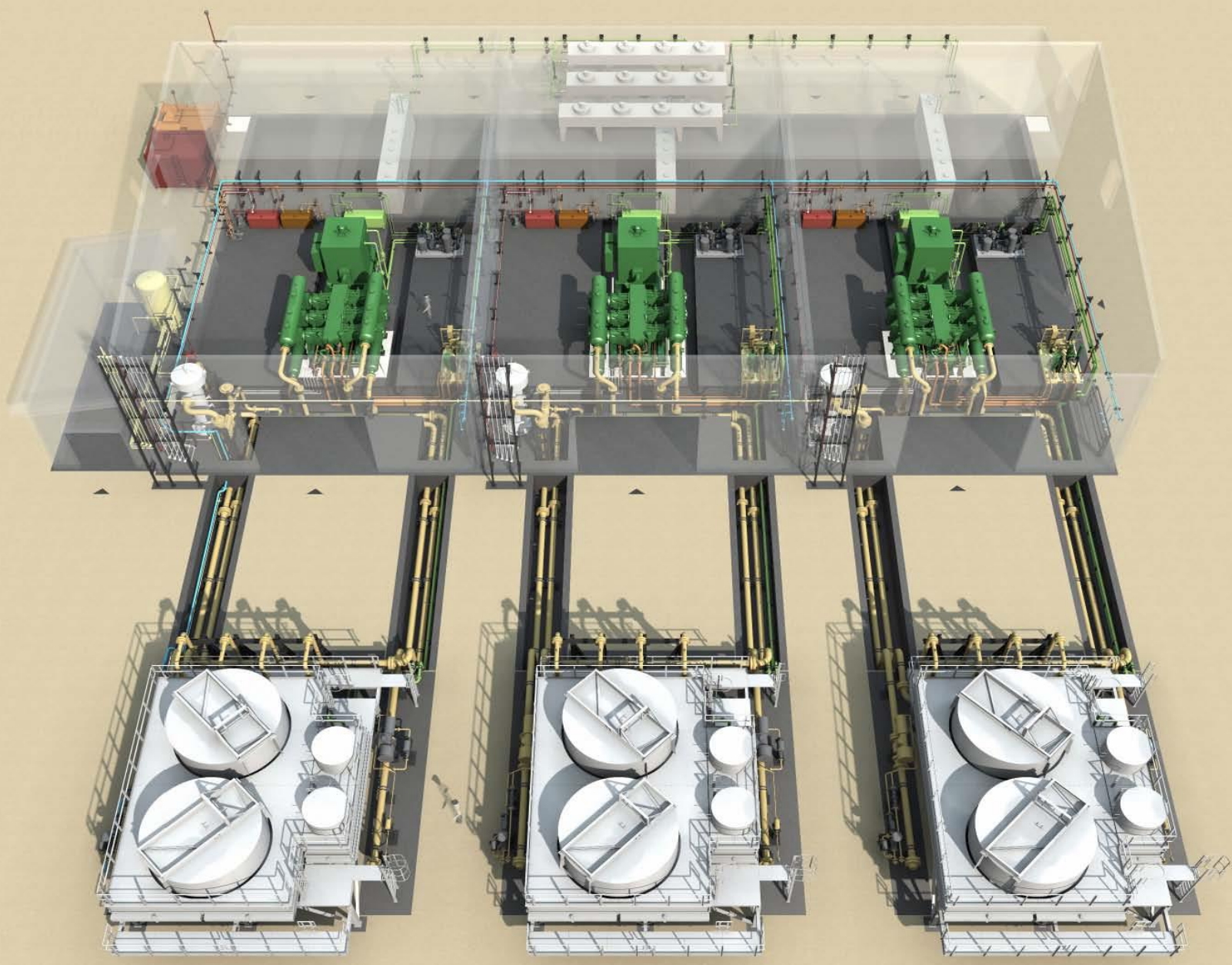
OMEGA

COMPRESSION SYSTEMS

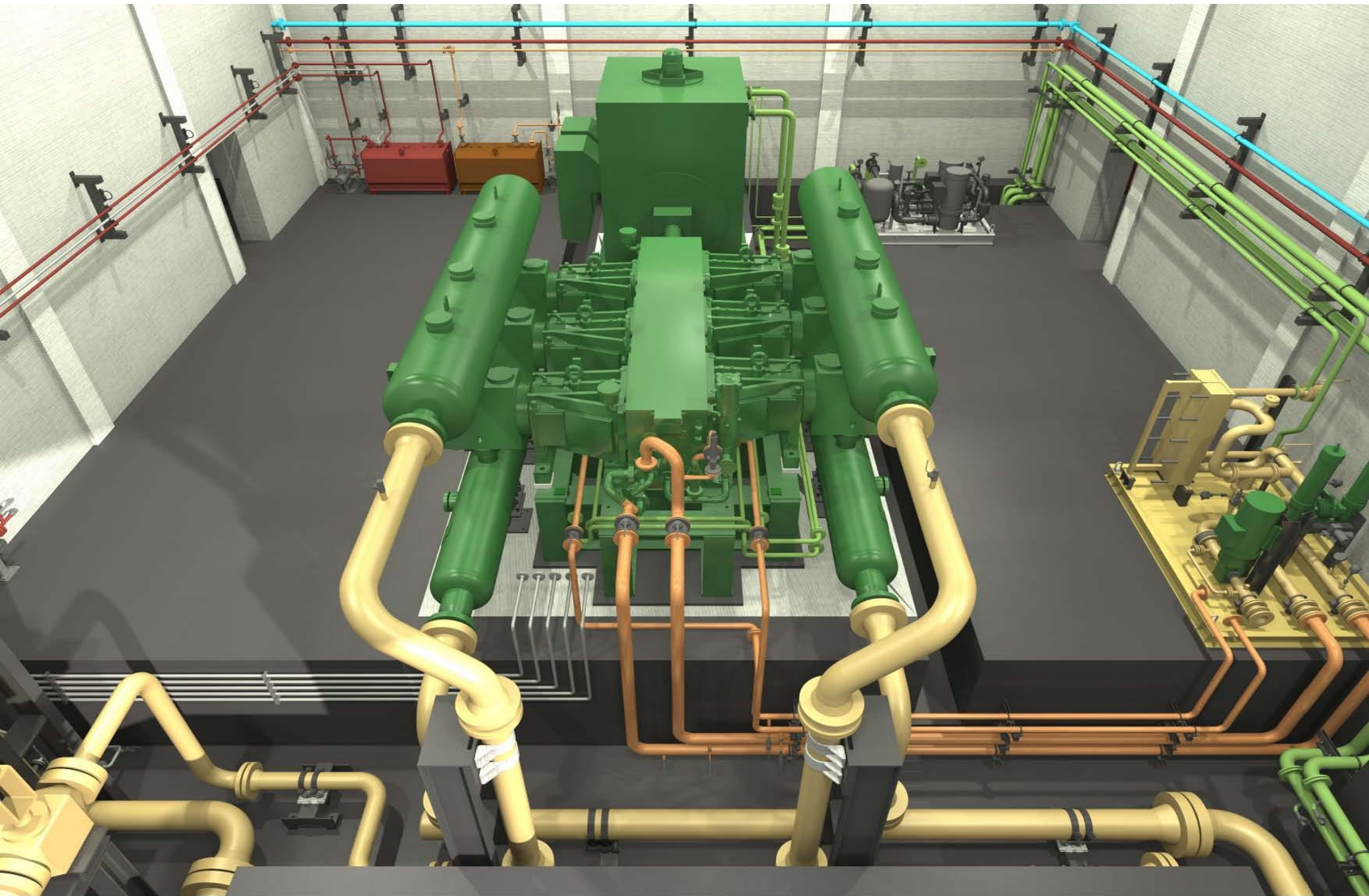
PSE ENGINEERING  
GMBH











**Ca Y[ U!k [ c'UbX'PSE ENGINEERING SERVES INTERNATIONAL  
OIL & GAS FACILITIES OPERATORS  
WITH EXPERIENCE GATHERED IN DECADES**

**WE OFFER OPTIMUM SOLUTIONS FOR THE COMPLETE RANGE OF  
DESIGN – CONSTRUCTION – COMMISSIONING – OPERATION  
OF OIL & GAS FACILITIES  
PSE PROVIDES FULL SERVICES FROM FEASIBILITY STUDIES  
AND THE DIFFERENT DESIGN STAGES TO COMPLETE TURN-KEY PLANTS**







MAIN PROCESS PLANT

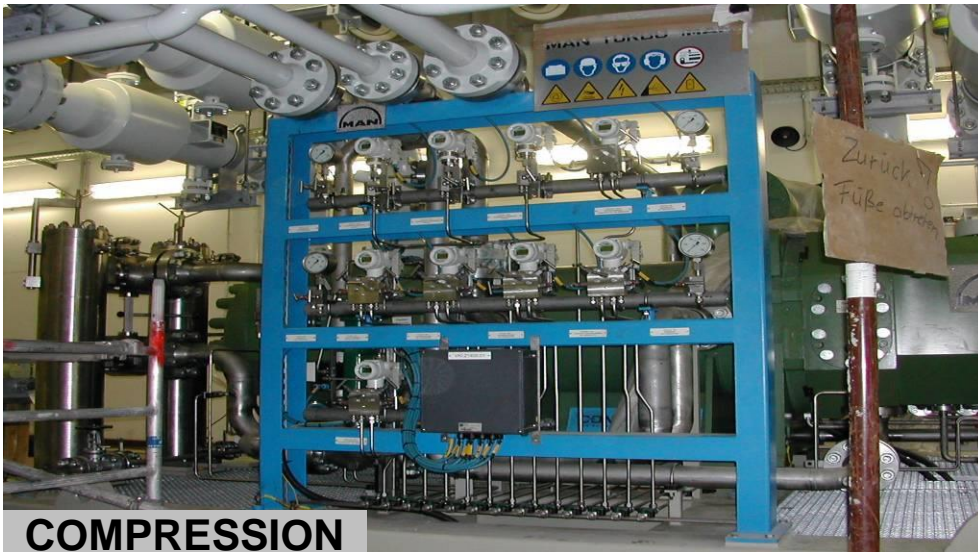




**GAS DRYING**



**PLANT VIEW**



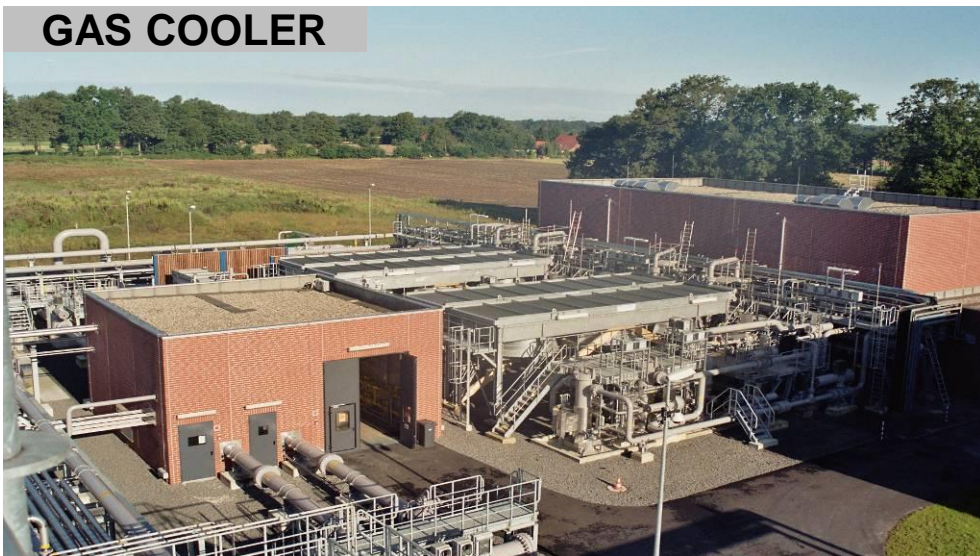
**COMPRESSION**



**PLANT VIEW**



**GAS COOLER**



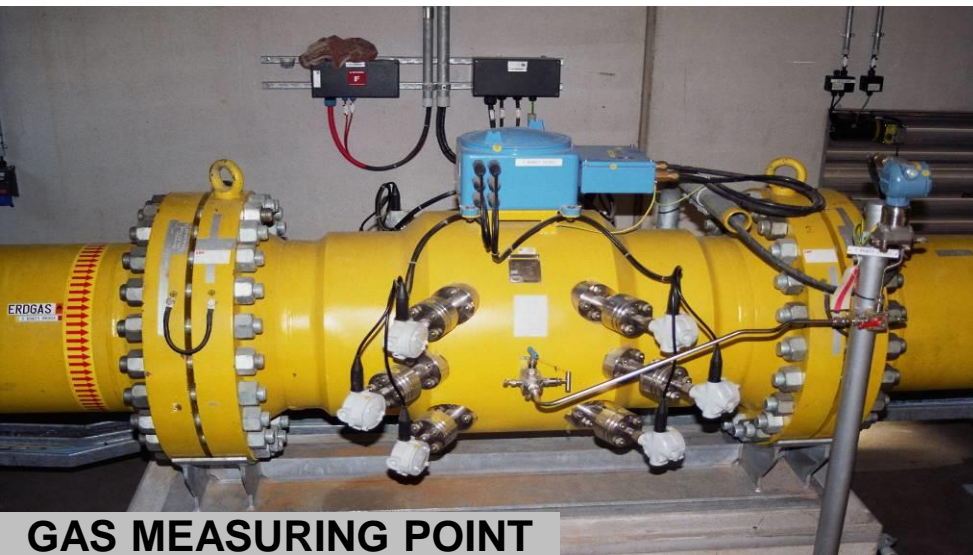
**HP-SEPARATION**



**GAS DRYING**



**GAS DRYING**



**GAS MEASURING POINT**



**COMPRESSOR**

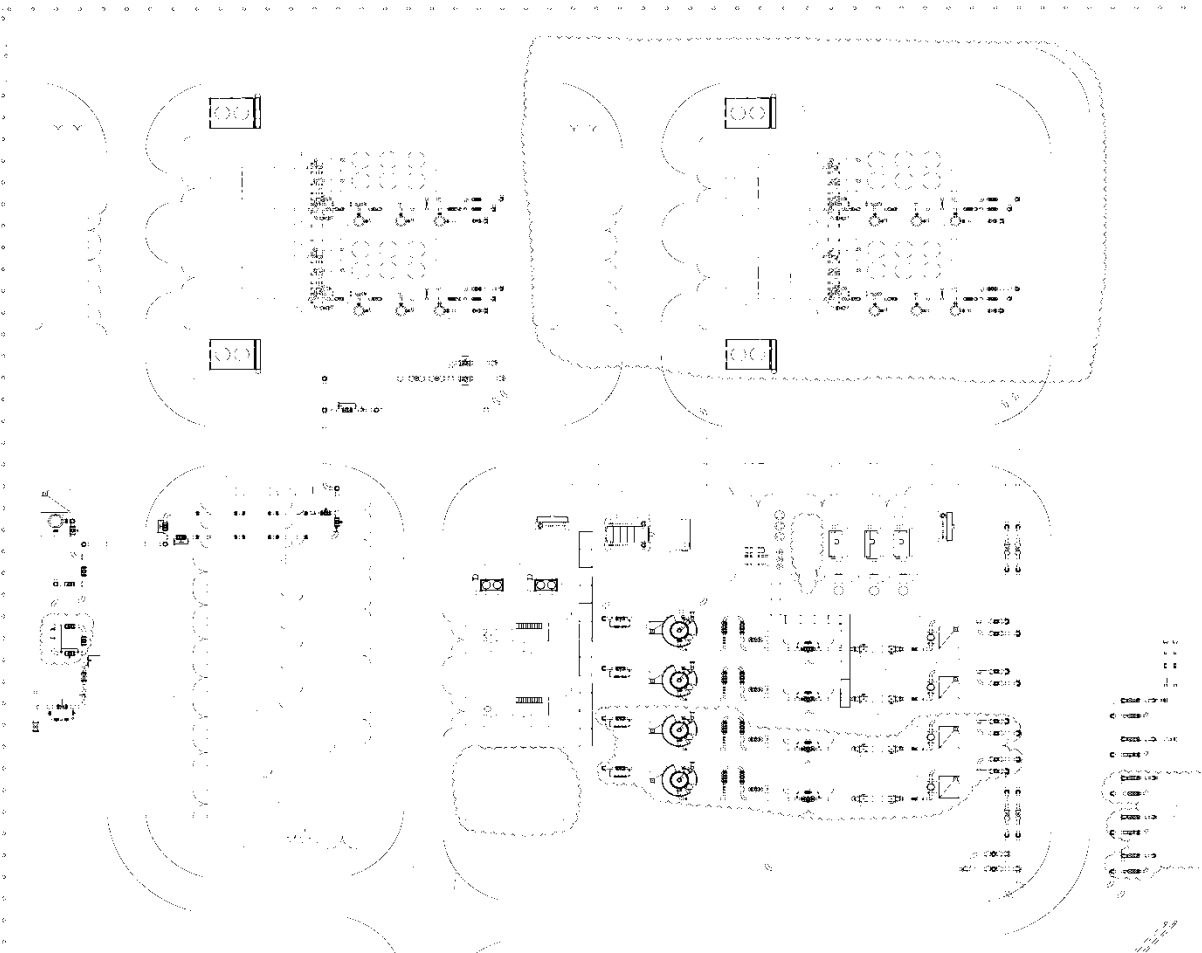


**GLYCOL-REGENERATION**



Construction Time: 2009 - 2011

15 Years of Operation for Client: 2009 - 2024



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**THANK YOU FOR YOUR PATIENCE**  
**FOR QUESTIONS WE ARE AT YOUR DISPOSAL**

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