

REI Process Introduction

Nov-2019

Safety Culture

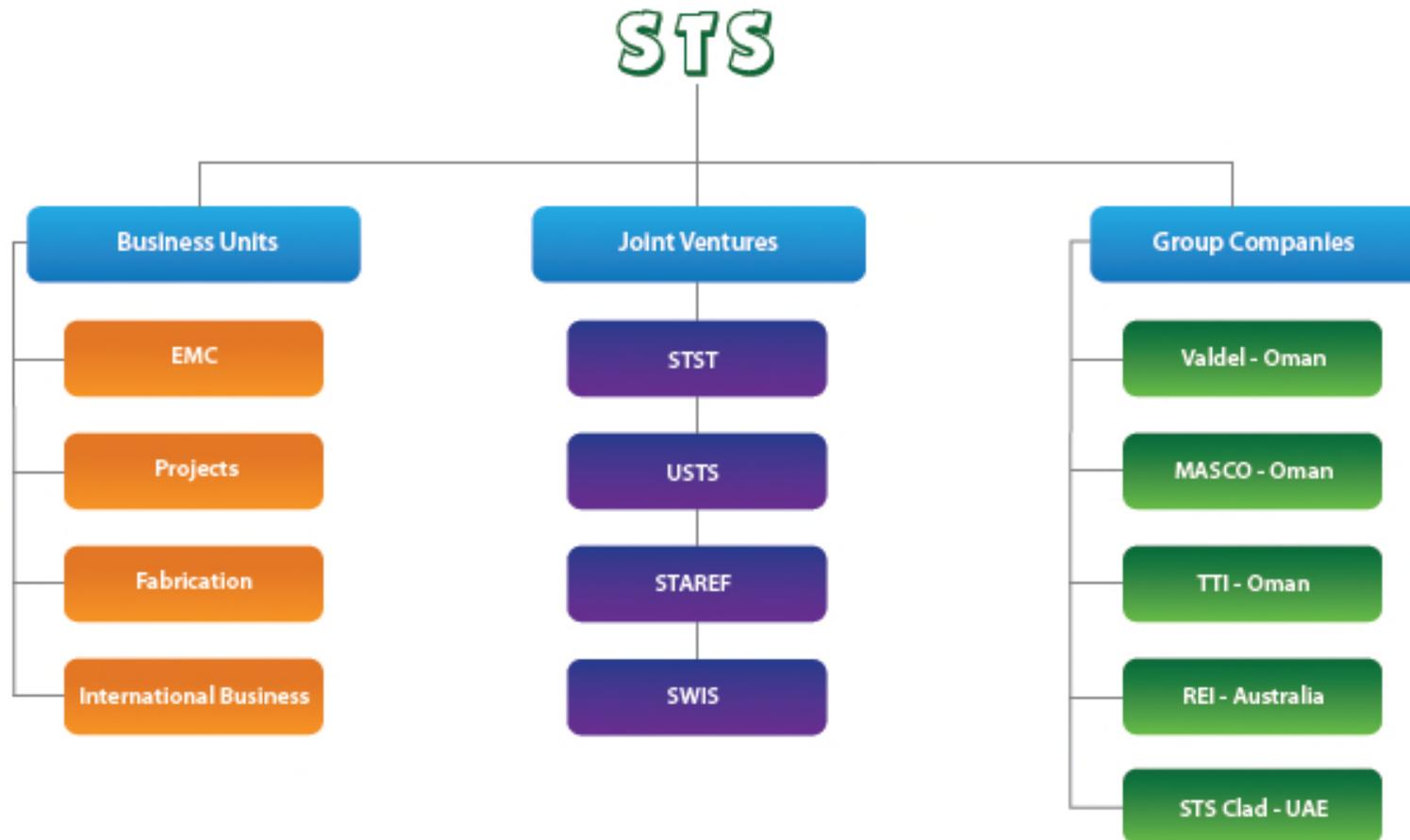


About REI Process

- Refrigeration Engineering International (REI) - founded in 1987
- +30 years of successful support to the Oil & Gas, Refinery, Petrochemical and associated industries
- Headquarters in Sydney, Australia
- Operations in Dubai / Oman / Bahrain / Saudi Arabia / Kuwait / Qatar / UAE / India & Philippines
- REI acquired by the STS Group (www.stsoman.com) in 2017
- Turnover of the STS Group > US \$500 Million
- Combined workforce of 10,000 personnel
- In 2019, REI rebranded to REI Process



Business Structure



International Operations & Footprint

Sydney, Australia

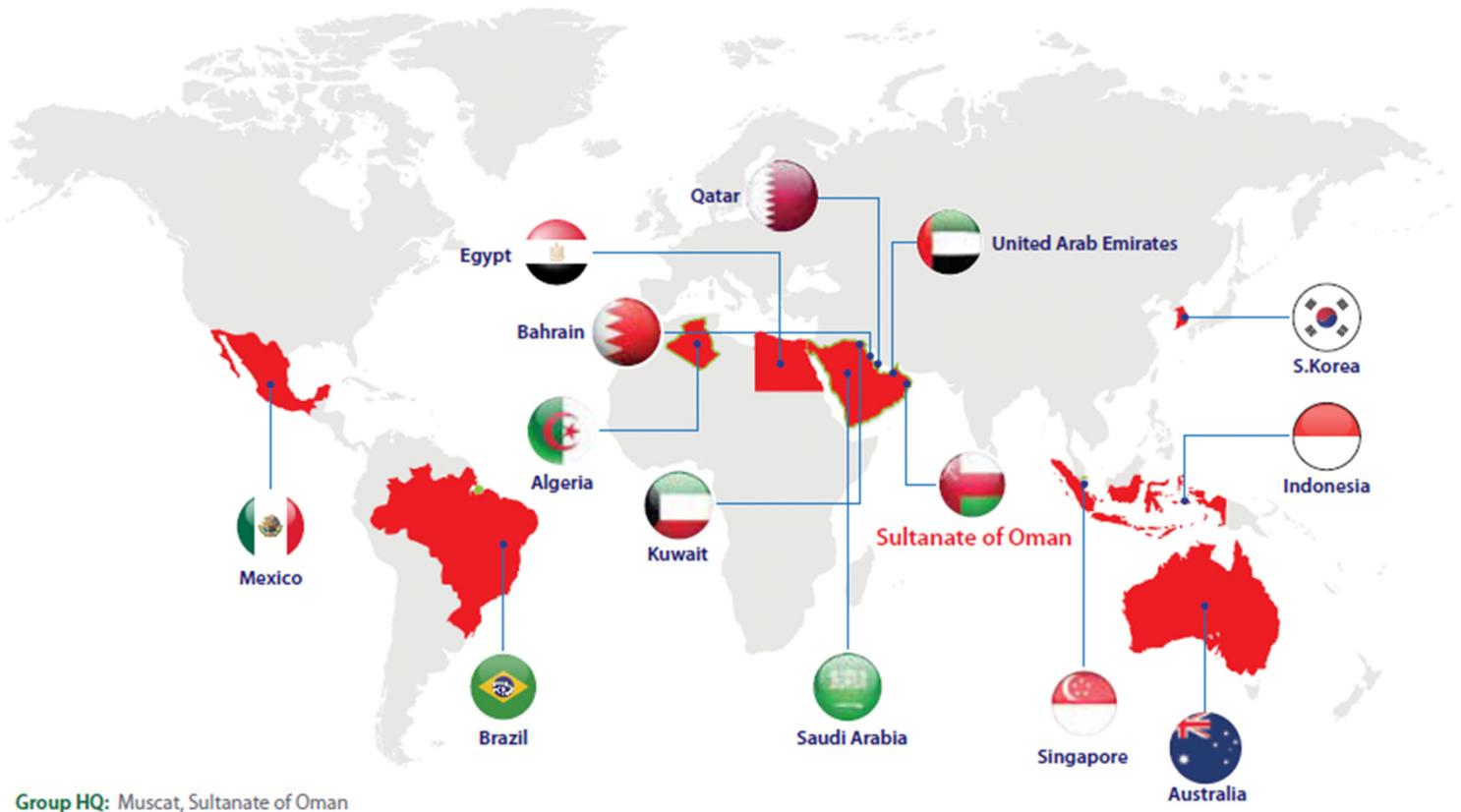
- Head Office
- Engineering / Design
- Project Management

Dubai, UAE

- Sales / BD / Marketing
- Procurement
- Project Management
- Construction Management

Oman, Muscat

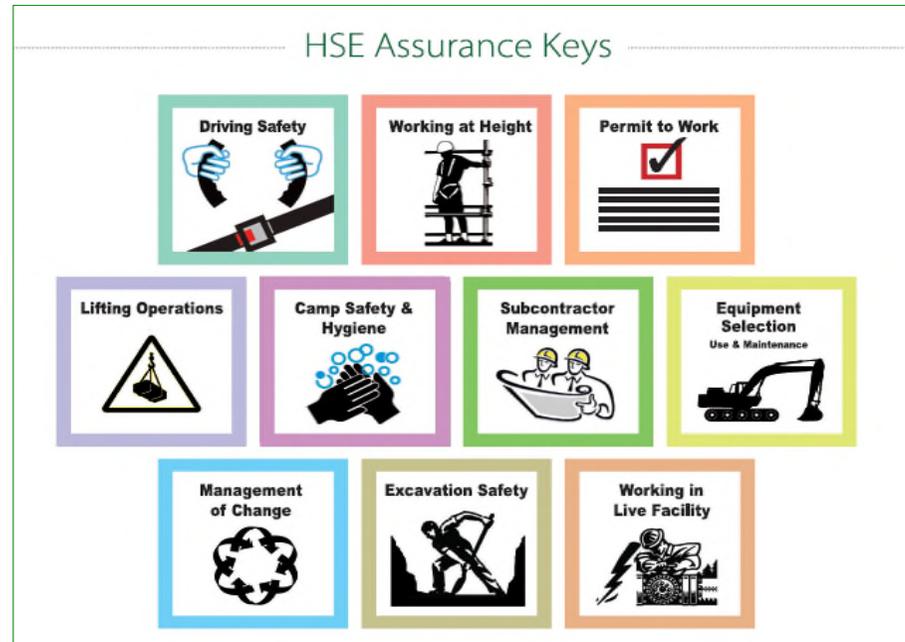
- STS Manufacturing



Health, Safety & Environment

As part of the STS Group, REI Process is fully committed to the highest standards of HSE in all aspects of its operations. The HSE Management System implemented in within the group is certified to:

- ISO 9001:2015
- ISO 14001:2015
- ISO 45001:2018
- OHSAS 18001:2007



Overview

Specialising in design and supply of modular, skid-mounted packages

- Completely manufactured and tested in controlled, safe, environment.
- Easily transportable and with minimal site time to install and commission

In-house process design & guarantee

- Not subject to 3rd party vendors for normal processes

In-house expertise – delivering one stop solution

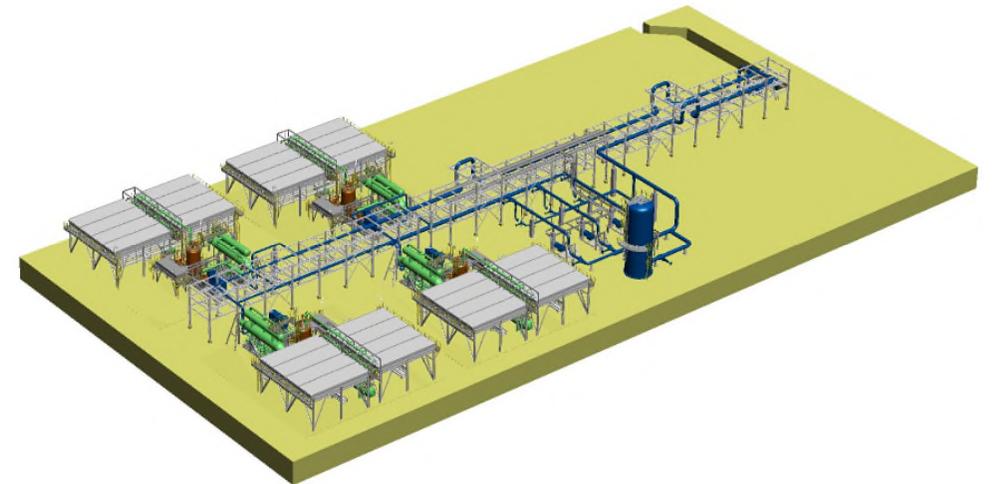
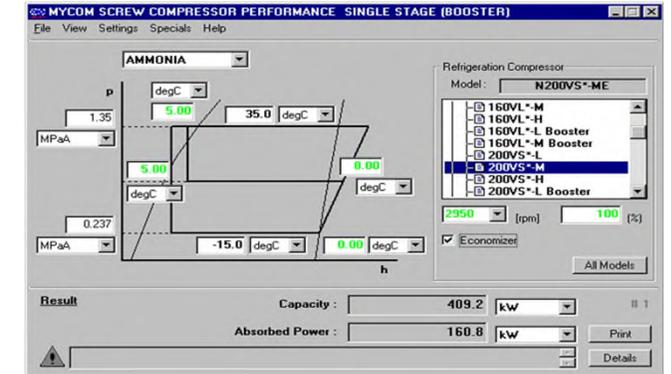
- Process, Mechanical, Electrical, I&C – All guaranteed from one source
- Thermal Design
- Drafting & 3D Modelling
- Project Management and Execution
- Fabrication

Technology Solutions

- process gas cooling
- refrigeration packages
- chiller packages
- dew point control
- condensate stabilization
- fuel & seal gas treatment
- gas compression
- hydrocarbon vapor recovery
- boil off gas recovery
- low temperature separation
- LPG & condensate recovery
- tank cooling
- gas turbine air coolers
- long term service agreements
- operator training
- maintenance & spare parts

Software Licences

- Process Modelling: HYSYS & VMG
- Thermal Design: HTRI
- Compressors: Howden / Mycom / Kobelco / GEA
- 2D & 3D Modelling: SolidWorks / Cadworx / AutoCad
- Stress Analysis: Ceasar II
- Project Scheduling – Primavera / MS Project



Compressors

Compressor range

- Oil flooded screw
- Reciprocating
- Centrifugal



At REI Process we take a flexible approach to designing the compression package needs to match the specific client requirements. Some of the Compressor manufacturers we support include

We work with many manufacturers

- Mycom
- Howden
- Frick
- Burkhardt
- Aerzen
- Kobelco
- Atlas Copco
- Knox Western

Services

- Installation supervision
- Commissioning
- Maintenance
- Operational support
- Training



Project examples

Refrigeration

Client



ExxonMobil

Project

New Pitch Gasification Project

Location

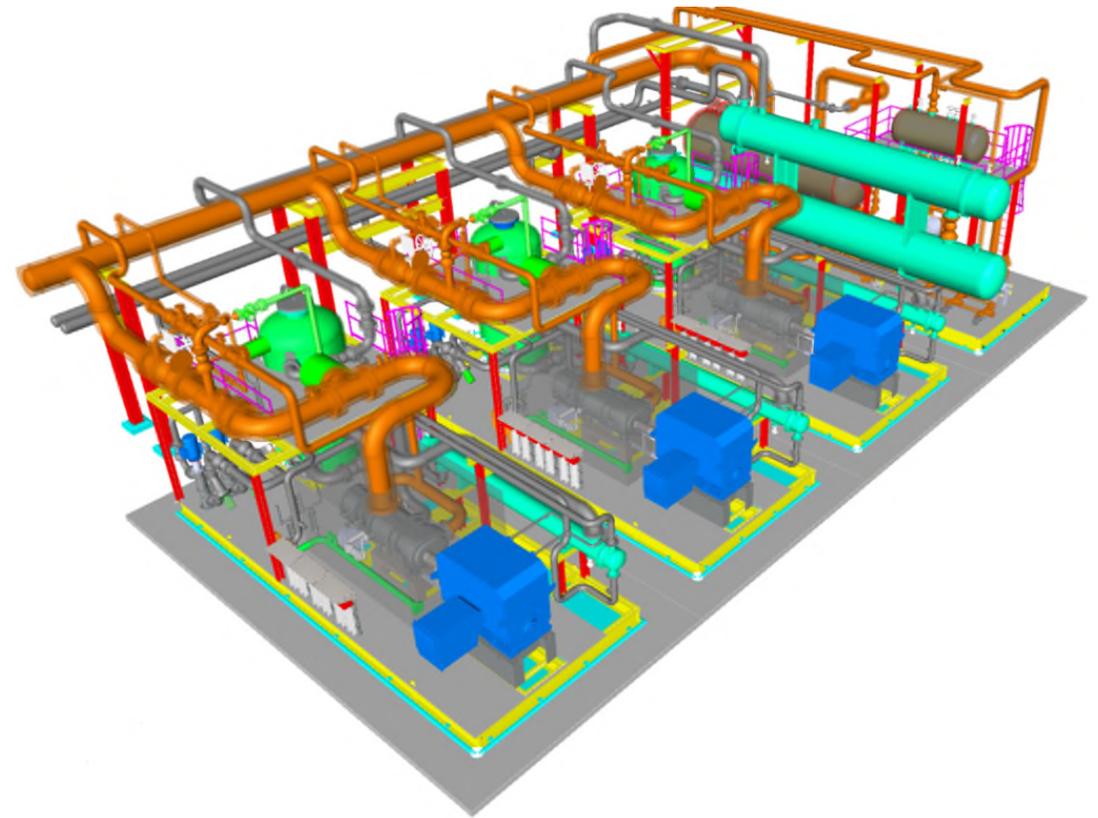
Singapore, Onshore

Delivery

2020

Description/Scope:

- 3 x 50% Refrigeration Units
- Mycom Compressors, 2,500kW motors
- Haz. area Class 1 Group D Div II.
- Cooling duty of 5,075kW at -40°C
- Design pressure 2,500 kPa (25 bar)

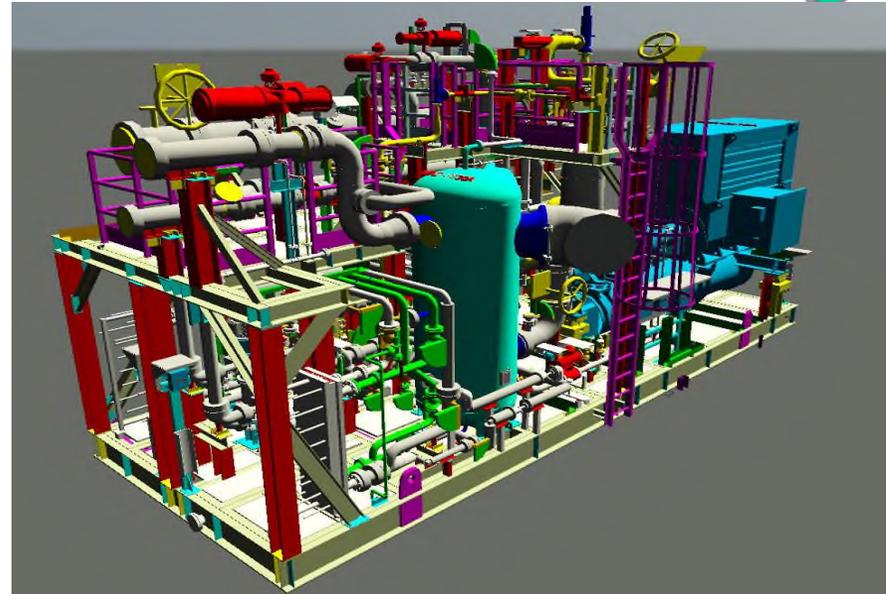
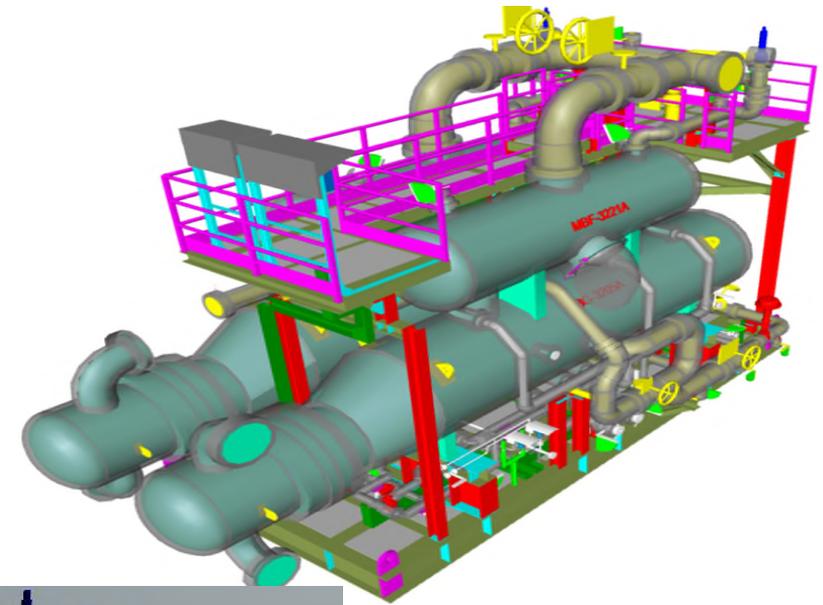


Refrigeration

Client **MODEC** **PETROBRAS**
Project **FPSO Guanabara MV31**
Location **Brazil, Offshore**
Delivery **2019**

Description/Scope:

- Fuel Gas Refrigeration Unit
- Mycom Compressors, 2,000kW motors
- Haz. area Class 1 Group D Div II.
- Cooling duty of 3,000kW at 3°C
- Design pressure 5,000 kPa (50 bar)



Refrigeration

Client

Petrofac 



Project

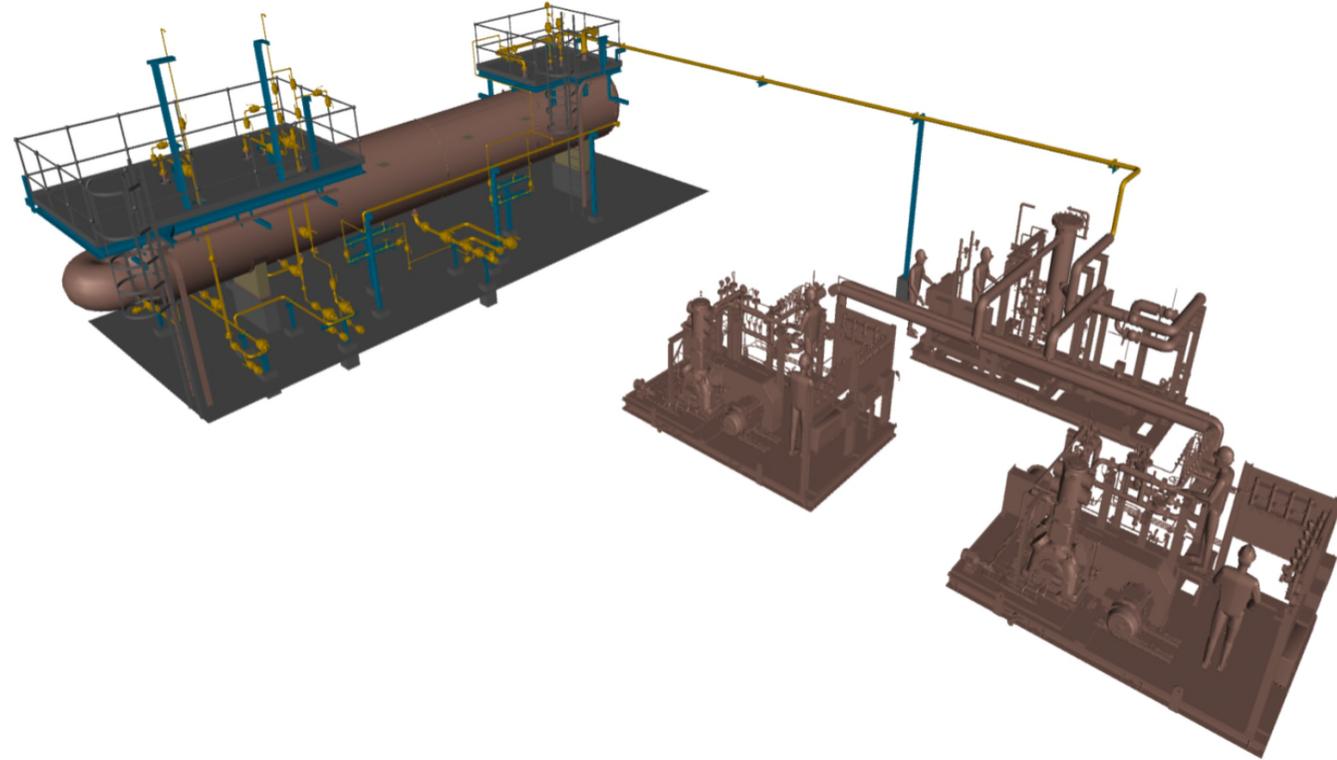
GC-32 Project

Location

Kuwait, Onshore

Delivery

2019



Description/Scope:

- Refrigeration Compressor & Storage Unit
- SIAD Compressors
- API & Shell DEP compliant design
- Haz. area Class 1 Group D Div II.

Refrigeration / DPCU

Client

Petrofac



شركة الغاز العمانية ش.م.ع.م.
OMAN GAS COMPANY S.A.O.C

Project

Salalah LPG Extraction

Location

Oman, Onshore

Delivery

2019



Description/Scope:

- Propane Refrigeration, Chiller & BOG Unit
- HOWDEN Compressors, 2,000kW motors
- Haz. area Class 1 Group D Div II
- Full on-site string test
- Cooling duty of 3,000kW at -15°C
- Design pressure 1,800 kPa (18 bar)



Refrigeration / BOG / Compression

Client



Project

Bulk Liquids Terminal

Location

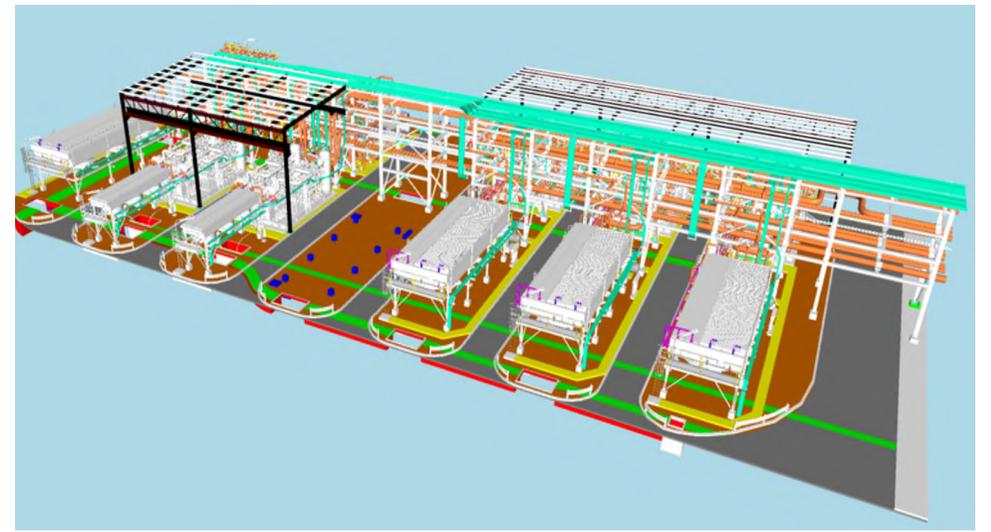
Egypt, Onshore

Delivery

2019

Description/Scope:

- 6 x BOG compression & liquefaction units
- 4 x Refrigeration system for subcooling condensed liquid BOG
- PLC control system & MMS
- Kobelco & Mycom Compressors
- Complete package scope, including pipe rack and site installation.



Dehydration

Client



Project

QCLNG Upstream Phase II

Location

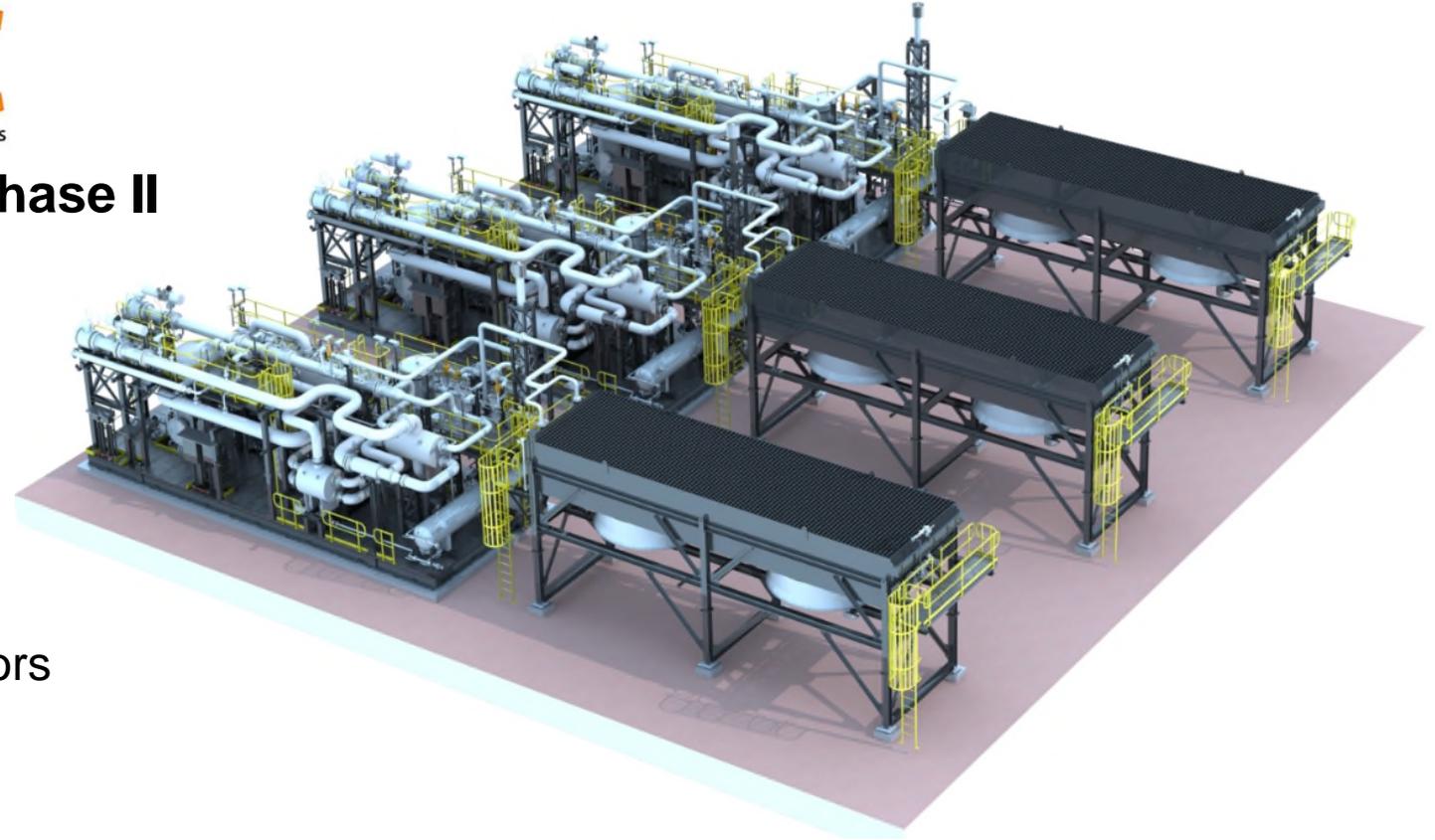
Australia, Onshore

Delivery

2015

Description/Scope:

- Dehydration to a dP of 10°C
- HOWDEN Compressors, 350 kW motors
- Haz. area Class 1 Group D Div II
- Cooling duty of 950 kW at 10°C
- Design pressure 1,500 kPa (15 bar)



Dew Point Control

Client

ConocoPhillips  PERTAMINA

Project

Belida Gas Platform

Location

Indonesia, Offshore

Delivery

2012

Description/Scope:

- Dew Point Control Unit
- FPSO, Offshore
- Mycom 250L compr's, 500kW motors
- Haz. area Class 1 Group D Div II.
- Cooling duty 865kW at -2°C
- Design pressure 10 MPag (100 barg).



ONSHORE

Year	Project	Client	End-User	Location	Scope of Supply	Refrigerant	Capacity (kW)
2019	New Pitch Singapore Project	Linde AG	Linde Gas / Exxon Mobile	Singapore	Refrigeration System	Propane	7,000 kW
2018	GC-32	Petrofac	Kuwait Oil Company (KOC)	Kuwait	Refrigerant Transfer System Tank Storage	-	-
2017	Salalah LPG	Petrofac	Oman Gas	Oman	Refrigeration System	Propane	3,000 kW
2017	Sonker Bulk Liquids Terminal	Petrojet	Sonker Energy	Egypt	Gas Compression Package BOG Recovery Unit Refrigeration System Tank Storage	-	-
2017	Orbost Gas Plant Upgrade	Worley Parsons	Cooper Energy	Australia	Dew Point Control Unit Refrigeration System	Propane	594 kW
2015	QCLNG Upstream Phase II	QGC Pty Limited	Shell	Australia	Dehydration System Dew Point Control Unit Refrigeration System	R-134a	4,500 kW
2015	KNPC Clean Fuels Project	JGC Corporation	Kuwait National Petroleum Company (KNPC)	UAE	Chiller Refrigeration System	R-134a	204 kW
2015	SAMAC MMA/PMMA Project	CTCI Corporation	SABIC	Saudi Arabia	Refrigeration System	Ammonia Glycol Ethylene	6,400 kW
2014	Safah Gas Plant	Occidental of Oman Inc.	Occidental Petroleum Company (Oxy)	Oman	Refrigeration System	Propane	1,700 kW
2014	Gorgon Barrow Island Project	Procom	Chevron	Australia	Refrigeration System BOG Recovery Unit Tank Storage	R-507c	25 kW
2014	Matindok Donggi Project 5	PT. Rekayasa Industri	Pertamina	Indonesia	Dew Point Control Unit Refrigeration System	Propane	1,250 kW
2014	AKKAS Gas Field Project	Daewoo Engineering & Construction Co	Korean Gas Corporation (KOGAS)	Iraq	Gas Compression Package Refrigeration System	Propane	9,000 kW
2014	Jazan Refinery	JGC Corporation	Saudi Aramco	Saudi Arabia	Refrigeration System Chiller	Propane	380 kW
2014	Zauliyah Gas Compression Project	Frames	Petroleum Development Oman (PDO)	Oman	Dew Point Control Unit Refrigeration System	R-134a	440 kW
2013	Saudi Elastomers Project (SEP) EPDM and PBR Facilities	Tecnicas Reunidas (TR)	SABIC	Saudi Arabia	Chiller	-	1,030 kW
2013	Saudi Elastomers Project (SEP) EPDM and PBR Facilities	Tecnicas Reunidas (TR)	SABIC	Saudi Arabia	Refrigeration System	Propane	7,036 kW
2012	Sadara Project	Linde AG	Saudi Aramco	Saudi Arabia	Refrigeration System BOG Recovery Unit Liquefaction System	Ammonia	224 kW
2012	EVA Plant & Utilities Project	GS Engineering & Construction	Siphem	Saudi Arabia	Tank Storage Refrigeration System	R-134a	26 kW
2012	Petroleum Development Oman (PDO)	Process Group	Petroleum Development Oman (PDO)	Oman	Dew Point Control Unit Refrigeration System	Propane	404 kW
2010	Minerva Gas Project	Process Group	BHP	Australia	Refrigeration System	Propane	686 kW
2008	Bass Gas CO2	Air Liquide	Exxon Mobil	Australia	Gas Compression Package BOG Recovery Unit Refrigeration System	Ammonia	629 kW



REI
Process

OFFSHORE

Year	Project	Client	End-User	Location	Scope of Supply	Refrigerant	Capacity (kW)
2018	FPSO Guanabara MV31	MODEC	Petrobras	Brazil	Refrigeration System	Propane	3,000 kW
2018	FPSO Carioca MV 30	MODEC	Petrobras	Brazil	Refrigeration System	-	-
2013	FPSO Cidade de Saquarema	SBM Offshore Group	Petrobras	Brazil	Dew Point Control Unit Refrigeration System	Propane	4,400 kW
2013	FPSO Cidade de Marica	SBM Offshore Group	Petrobras	Brazil	Dew Point Control Unit Refrigeration System	Propane	4,400 kW
2011	FPSO Cidade de Ilhabela	SBM Offshore Group	Petrobras	Brazil	Dew Point Control Unit Refrigeration System	R-134a	4,400 kW
2007	FSO Unit	Keppel SingMarine	Lukoil	Russia	Vapour Recovery Unit	-	-
2004	Enfield FPSO	Worley Parsons	Woodside Energy	Australia	Compression Package	-	650 kW
2002	Belida Platform Project	PT Istana Karang Laut	Pertamina	Indonesia	Dew Point Control Unit Refrigeration System	R-134a	860 kW
2002	Hang Tuah Platform Project	PT Istana Karang Laut	Pertamina	Indonesia	Dew Point Control Unit Refrigeration System	R-134a	1,720 kW
2002	Jambi Gas Field	PT Titis Sampurna	Pertamina	Indonesia	Dew Point Control Unit Refrigeration System	Propane	2,000 kW
1993	Griffin Venture FPSO	BHP Petroleum	BHP Petroleum	Australia	Dew Point Control Unit Refrigeration System	Propane	820 kW
1989	Barracouta Offshore Platform	Esso	Esso	Australia	Dew Point Control Unit Refrigeration System	Propane	180 kW

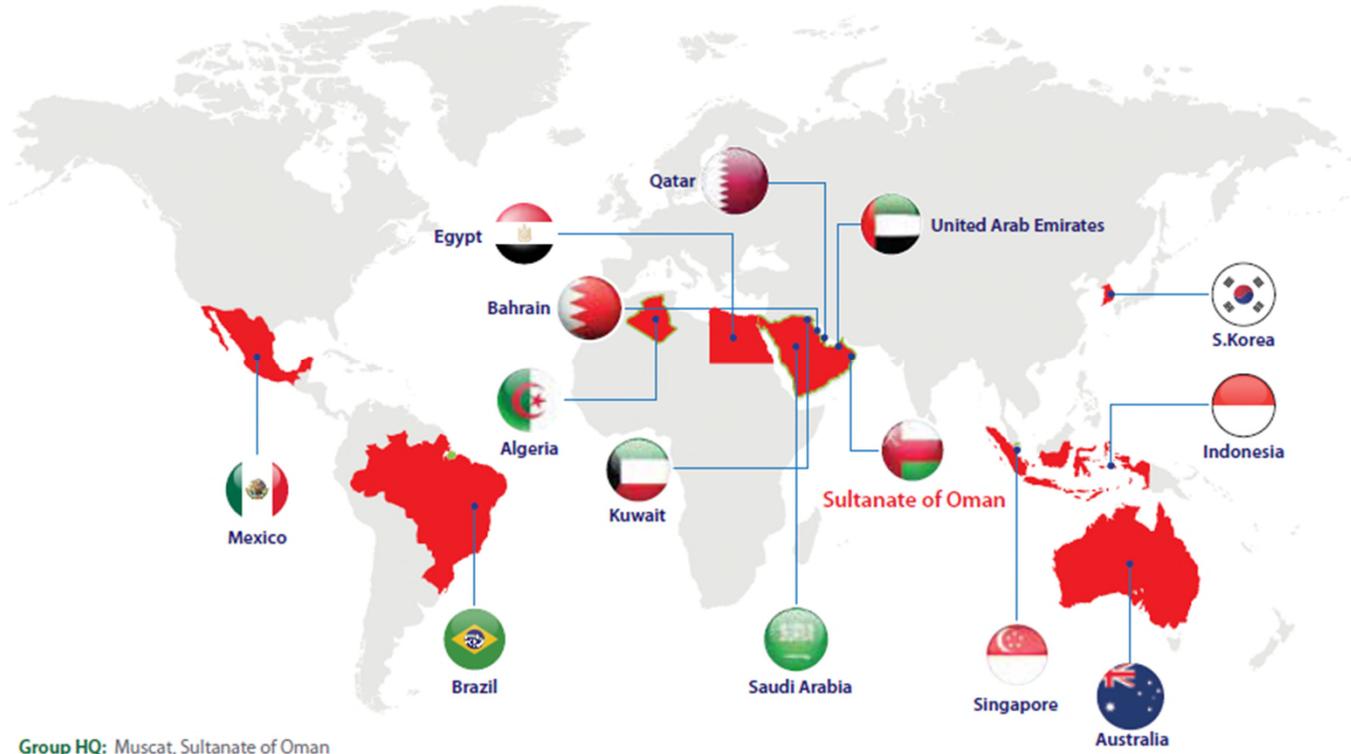


Locations & Contact Details

Dubai
Ph: +971 4 885 0099
Email: sales@reiprocess.com
Web: www.reiprocess.com

Australia
Ph: +61 2 4249 4000
Email: sales@reiprocess.com
Web: www.reiprocess.com

Oman
Ph: +968 2464 7100
Fax: +968 2469 7100
Email: info@stsoman.com
Web: www.stsoman.com



Group HQ: Muscat, Sultanate of Oman

- REI Offices & Fabrication Facilities:
- Agents:
- Fabrication Partners:

Sydney (Australia), Dubai (UAE) & Muscat (Oman)

Italy / Spain / Indonesia / S. Korea / Malaysia / Oman /
Kuwait / Egypt / Bahrain

UAE / Indonesia / Singapore / Oman / India

Thank You