Refrigeration in Oil & Gas industry

Expertise for maximum performance, profitability and environmental protection
Your partner in productivity gains via refrigeration efficiency

**REFRIGERATION SOLUTION**

- Complete set of Refrigerants / Process fluids:
  - Freon (Hydrofluorocarbons [R134a, R410a etc.])
  - Ammonia
  - Hydrocarbons (Propane, Ethane, Ethylene, Propylene, Butane etc.)
  - CO2
  - Mixed refrigerant

- Hazardous area installation
  - Zone 1/2

Compressor Technology selection
- Screw oil injected / dry
- Reciprocating
- Centrifugal

as function of application feature via different indicators, e.g.:
- Pressure ratio
- Discharge temperature
- Process fluid composition

Complete Unit String test

**CUSTOMIZED EXECUTION**

- **Studies and Analysis**
  - Process simulation
  - HAZOP
  - Safety integrity levels
  - RAM
  - FMECA Analysis

- **Customers’ design & engineering practice**
  - Shell DEP
  - PETRONAS
  - SAUDI ARAMCO
  - Other

- **Countries certificates**
  - PED
  - SASO
  - TR CU
  - Any internazional local certification

- **Design codes**
  - API
  - ASME
  - TEMA
  - GOST
  - Other

Refrigeration level from ambient to cryogenic range

- from +25°C up to -170°C

Process Cooling/Boil Off Gas/ Chiller/Cascade system

with cooling capacity from 250 kW up to 40 MW
Application list

**UPSTREAM**
- Refrigeration solution for Onshore production
- Refrigeration solution for Offshore production
- Gas Dew Point control by refrigeration
- Hydrocarbons recovery

**MIDSTREAM**
- Refrigeration in Natural gas processing
- Gas to Liquid applications
- Vapor recovery units (VRU)
- Boil Off Gas recovery (ethylene, propylene, propane, butane, LPG etc.)
- Loading/Unloading Refrigeration
- Small scale LNG liquefaction

**DOWNSTREAM**
- Process cooling
- Hydrocarbons cooling
- Mixed hydrocarbon, compression & liquefaction
- CO2 processing
- Gas liquefaction
- Light ends separation
- LPG and condensate recovery by turboexpander
- De-ethanizer condenser refrigeration
- Flare gas/vent/vapor recovery
- Chemical reaction temperature control
- Nitrogen chilling
- Gasoline fractionation
- Utility cooling (chilled water, chilled glycol)
- Fertilizers plant, Ammonia BOG & Ammonia refrigeration system
We live our values.

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