



Aramco

- Saudi Arabia

Frontier El-Dorado Refining

- El Dorado, KS

Marathon Oil Co.

Saudi Pipe

- Riyadh, Saudi Arabia



U.S. Air Force

- Holloman Air Force Base, NM
- Yakima Training Center
Yakima, WA

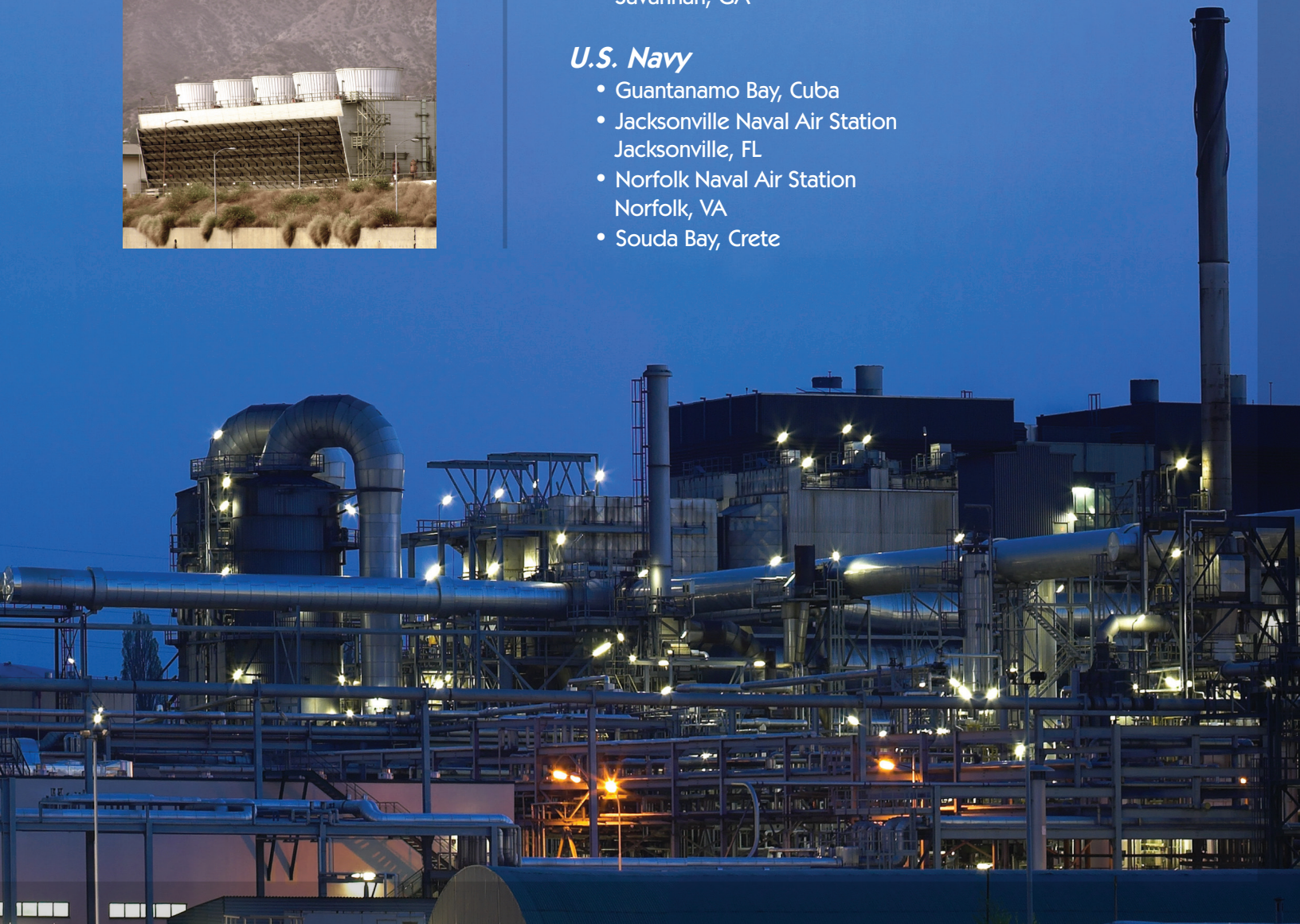
U.S. Army

- Sokcho, Korea
- Hunter Army Air Field
Savannah, GA



U.S. Navy

- Guantanamo Bay, Cuba
- Jacksonville Naval Air Station
Jacksonville, FL
- Norfolk Naval Air Station
Norfolk, VA
- Souda Bay, Crete



API Material Specifications

Pump Materials for Rentzel Pump Manufacturing API-610 Pumps

Parts	Full Compliance Material	Material Class and Material Abbreviations												
		I-1	I-2	S-1	S-3	S-4	S-5	S-6	S-9	C-6	A-7	A-8	D-1	D-2
		Cast Iron/ Cast Iron	Cast Iron/ Bronze	Stainless/ Cast Iron	Stainless/ NI-Resist	Stainless/ Stainless	Stainless/ Stainless 12% Chrome	Stainless/ Stainless 12% Chrome	Stainless/ Monel	12% Chrome/ 12% Chrome	Aus. Stainless/ Aus. Stainless	316 Aus. Stainless/ 316 Aus. Stainless	Duplex/ Duplex	Super Duplex/ Super Duplex
Pressure Casing	Yes	Cast Iron	Cast Iron	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	12% Chr	AUS	316 AUS	Duplex	
Bowls	No	Cast Iron	Cast Iron	Cast Iron	Ni-resist	Cast Iron	Car. Stl.	12% Chr.	Monel	12% Chr.	Aus SS	316 SS	Duplex	Super Duplex
Impeller	Yes	Duct. Iron	Bronze	Cast Iron	Ni-resist	Car. Stl.	Car. Stl.	12% Chr.	Monel	12% Chr.	Aus. SS	316 SS	Duplex	Super Duplex
Case Wear Rings	No	Cast Iron	Bronze	Cast Iron	Ni-resist	Cast Iron	12% Chr. hardened	12% Chr. hardened	Monel	12% Chr. hardened	Hard-faced Aus SS (1)	Hard-faced 316 SS (1)	Hard-faced Duplex (1)	Super Duplex
Impeller Wear Rings	No	12% Chr	Bronze	12% Chr	Ni-resist	12% Chr	12% Chr	12% Chr	Monel	12% Chr	Hard-faced Aus SS (1)	Hard-faced 316 SS (1)	Hard-faced Duplex (1)	Hard-faced Super Duplex (1)
Disch. Head, Ran, Col. (Wetted Weldments)	Yes	Car. Stl. or E.I.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Aus 316 SS	Aus 316 SS	Aus 316 SS	Duplex	Hard-faced Super Duplex (1)
Column Shaft Bushing	No	Nitrile	Bronze	Filled Car.	Nitrile	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Super Duplex
Bowl Shaft Bushing	No	Nitrile	Bronze	Filled Car.	Nitrile	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Filled Car.	Filled Car.
Wetted Fasteners (Bolting)	Yes	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	12% Chr Stl.	12% Chr. Stl.	K-Monel	12% Chr Stl	316 Aus SS	316 Aus SS	Duplex	Filled Car.
Shafting	Yes	416 SS	416 SS	416 SS	416 SS	416 SS	416 SS	416 SS	K-Monel	12% Chr	316 Aus SS	316 Aus SS	Duplex	Super Duplex
Seal Sleeve	No	12% Chr Stl.	12% Chr Stl.	12% Chr Stl.	12% Chr Stl.	12% Chr Stl, Hard-Faced	12% Chr Stl, Hard-Faced	12% Chr Stl, Hard-Faced	Monel	Type 316 Stl, Hard Faced	Type 316 Stl, Hard Faced	Type 316 Stl, Hard Faced	Duplex (1)	Super Duplex
Seal Packing	No Sleeve	No Sleeve	No Sleeve	No Sleeve	No Sleeve	Hard Chr Journal 12% Chr Stl	Hard Chr Journal 12% Chr Stl	Hard Chr Journal 12% Chr Stl	K-Monel	Hard Chr. Journal, Type 316 Shaft	Hard Chr Journal, Type 316 Shaft	Hard Chr Journal, Type 316 Shaft	Duplex (1)	Super Duplex (1)
Seal Gland (3)	Yes	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Car. Stl.	Monel	12% Chr	316 SS	316 Aus SS	Duplex	Super Duplex
Packing Gland	Yes	Car Stl	Bronze	Car Stl	Car Stl	Car stl	316 SS	316 SS	Monel	316 SS	316 SS	316 SS	Duplex	Super Duplex
Case and Gland Studs or Bolts	Yes	Car Stl	Car Stl	304 SS	304 SS	304 SS	304 SS	304 SS	K-Monel	304 SS	316 SS	316 SS	Duplex	Super Duplex
Gasket (Confined) (2)	No	O-Ring	O-Ring	O-Ring	O-Ring	O-Ring	O-Ring	O-Ring	PTFE Filled	Aus Spiral wound 316 SS	Aus Spiral wound 316 SS	Aus Spiral wound 316 SS	Duplex spiral wound	Super Duplex



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For more information on our premium technology,
please contact us or your local representative.

Your Local Representative is:

API Service Pumps

API-610: VS1 | VS6

OFFSHORE
REFINERY SERVICE
OIL AND GAS
PIPELINE

Premium Technology for Harsh Environments



Rentzel
Pump Manufacturing





Rentzel

Pump Manufacturing

for the Petroleum Industry

API-610 Services:

- Offshore Platform/Sea Water Lift
(Crude Oil Transfer)
- Pipeline Booster
- Vertical Process
- LPG Transfer
- Refinery Service
- Pipeline
- Aircraft Fueling
- Light Hydrocarbon, High Vapor
Pressure (Low NPSHA)
- Cooling Water
- Waste Water
- Secondary Recovery
- Cryogenic Liquid

Vertical Suspended
Single Casing
(Sump Type)
VS1
Wet Pit

API-610 VS1

Drivers:

- Engine/gear drives, electric motors, variable speed drives, and steam turbines.

Materials of Construction:

- Any alloy that can be machined or welded.
Any combination available.

Pump Configuration:

- Vertical close coupled single or multistage turbine. Wet pit.

API-610 Class Type:

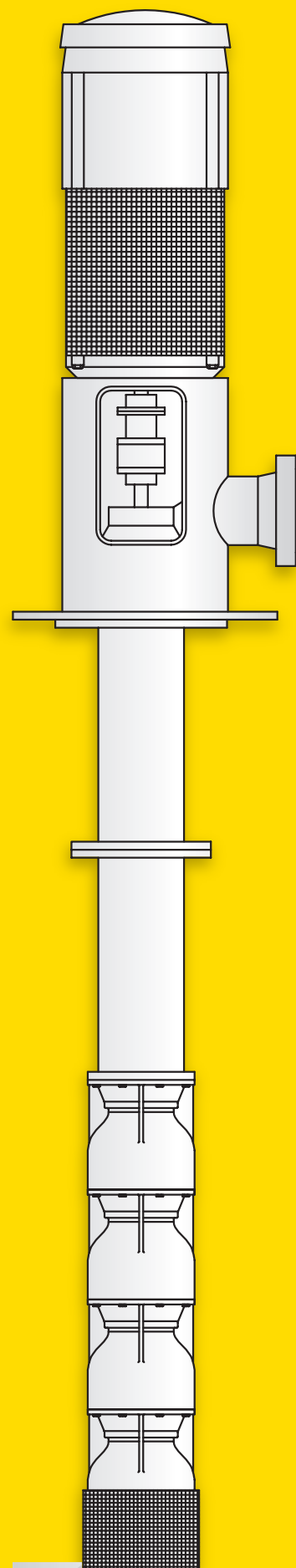
- Vertical suspended, single casing wet pit type (VS1).

Capacity:

- To 14,000 USGPM.

Liquid Handled:

- Hydrocarbons, water, and chemical solutions (alkaline or acidic).



API-610 VS1

Vertical Suspended
Double Casing
(Can Type)
VS6

API-610 VS6

Drivers:

- Engine/gear drives, electric motors, variable speed drives, and steam turbines.

Materials of Construction:

- Any alloy that can be machined or welded. Any combination available.

Pump Configuration:

- Vertical close coupled single or multistage turbine with closed suction.

API-610 Class Type:

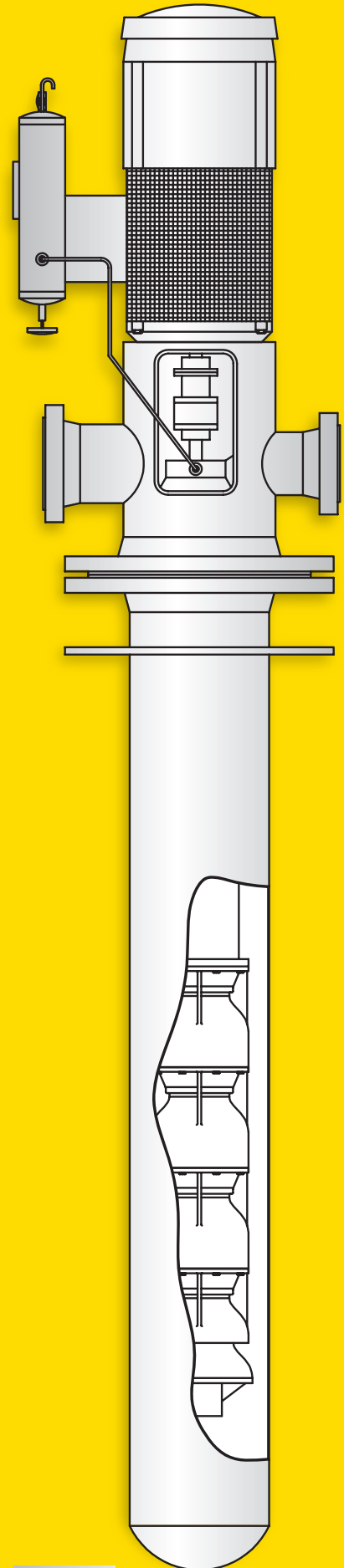
- Vertical suspended, double casing can type (VS6)

Capacity:

- To 14,000 USGPM.

Liquid Handled:

- Petroleum, hydrocarbons, water, condensates, L.P.G. and chemical solutions.



API-610 VS6