



marine



VALCO GROUP



Dedication to delivery

## More than a cryogenic valve, a proven and integrated solution to your need in a harsh environment.

**SNRI** has specialized for ages in low and medium pressure globe, gate, check valves and safety equipment for industrial valves. **SNRI** has also supplied for several decades harden cargo valves for LNG carriers, chemical tankers. With its internal Design Department, **SNRI** develops innovative products compliant with customers' needs and fully integrated with the process system.

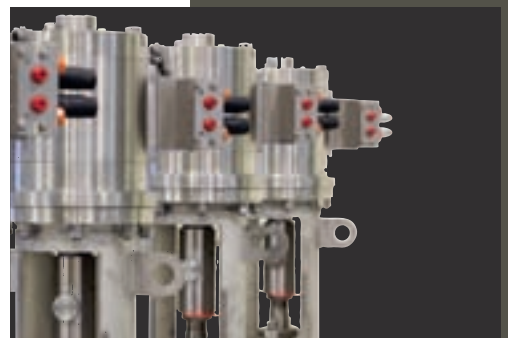
As a result of long experience of supplying LNG valves, **SNRI** with **VALCO VALVES SERVICES**, is now expanding its activities in the After Sales Services. With a qualified team, we are able to offer you the best services in terms of supervision, overhauling and preventing maintenance during dry docking and commissioning.

With more than 200 LNG carriers in service with its cryogenic globe, gate and check valves, **SNRI** is able to offer the best for your LNG Fleet in terms of performances, reliability and with a minimized maintenance.

With a new range of stainless steel actuators developed with our experience, **SNRI** is able to supply a unique range of cryogenic valves toughened for Marine application, including LNG FPSOs.

**SNRI** and Malbranque can also offer a complete package to Oil FPSO, including chokes valves with high level requirements (sour gas, ...)

**SNRI** is located at Ruffec in South West of France.



# SERVICES SUPPORT



Our Services does not stop with the completion of the installation and commissioning of the cryogenic valve package according to the requirements of shipyards. To keep the high performances of your cryogenic valves, our dedicated Servicing Company **VALCO VALVES SERVICES** is able to propose a specific Support plan according to your Maintenance policy.

Coordinated from our Sales Offices in **SNRI**, the **VVS** team can operate and support you in any dry dock in the world with genuine spare parts (to ensure valid classification type approval).

Our Service Engineers are fully trained for the Valves Maintenance and continuously work for Industrial applications with difficult environment (Petroleum and Offshore platforms, Nuclear power plants).

Their polyvalence and high skills knowledge allow them to perform preventive and curative maintenance for any type of valves and actuators, including butterfly valves and control valves.

We are also able to offer service at sea from load to discharge ports or if the LNG carrier is laid up, either than training as **VALCO VALVES SERVICES** is recognized as an official Training Center.

Also available is a cryogenic valve serviceability review and replacement including retrofit or overhaul of the main cryogenic cargo discharge valves. We are able to propose a complete revamping program, including replacement of obsolete actuators by last up to date design.

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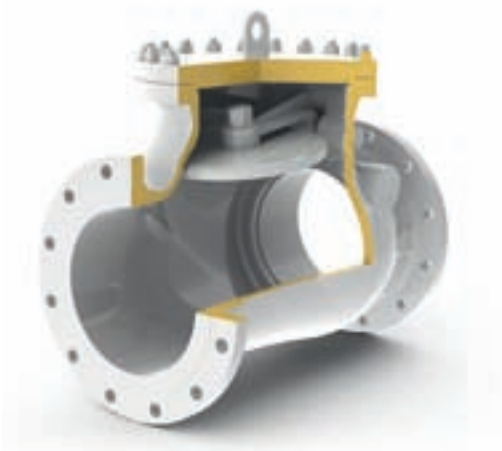
## Cryogenic globe valve

Pressure rating	ANSI Class 150/300
Temperature range	+200 to -196°C
Size range	DN15 to 400
Material	Stainless steel CF8M and CF3M
Types	Flanged and Butt Welded
Services	On/Off and throttling service in LNG systems



## Cryogenic gate valve

Pressure rating	ANSI Class 150/300
Temperature range	+200 to -196°C
Size range	DN50 to 400
Material	Stainless steel CF8M and CF3M
Types	Flanged and Butt Welded
Services	On/Off service in LNG systems
Option	Lockable device for safe operating with a manual gauge level



## Cryogenic check valves

Pressure rating	ANSI Class 150/300
Temperature range	+200 to -196°C
Size range	DN25 to 500
Material	Stainless steel CF8M and CF3M
Types	Flanged and Butt Welded
Services	Lift, check and duo types in LNG systems

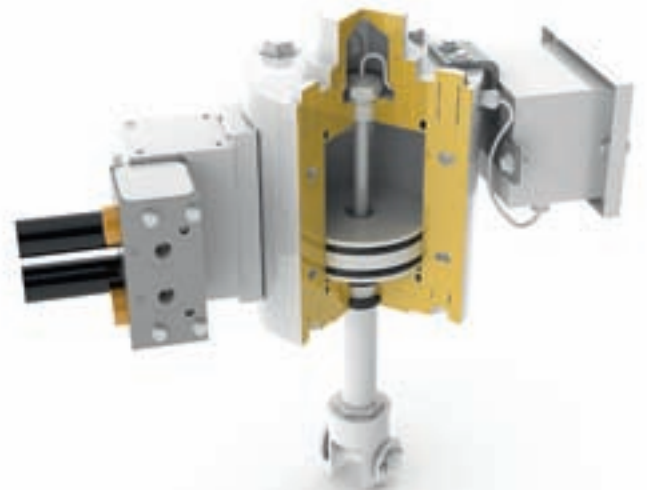
# A COMPLETE RANGE OF PRODUCTS

## High Pressure valves for Oil & Gas

Pressure rating	ANSI Class 900/2500
Temperature range	+450 to -196°C
Size range	DN50 to 400
Material	Stainless steel CF8M and CF3M, Duplex, WCB, LCB, LCC
Types	Flanged and Butt Welded Globe or gate type
Services	On/Off and throttling service in NG or Oil systems for FPSO

## Actuator

Size range	For globe & gate valves from DN25 to 400
Material	Stainless steel 316
Types	Hydraulic and pneumatic
Services	On/Off and throttling service



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# TEST CONTROL CAPABILITIES

## Test benches

### at ambient temperature

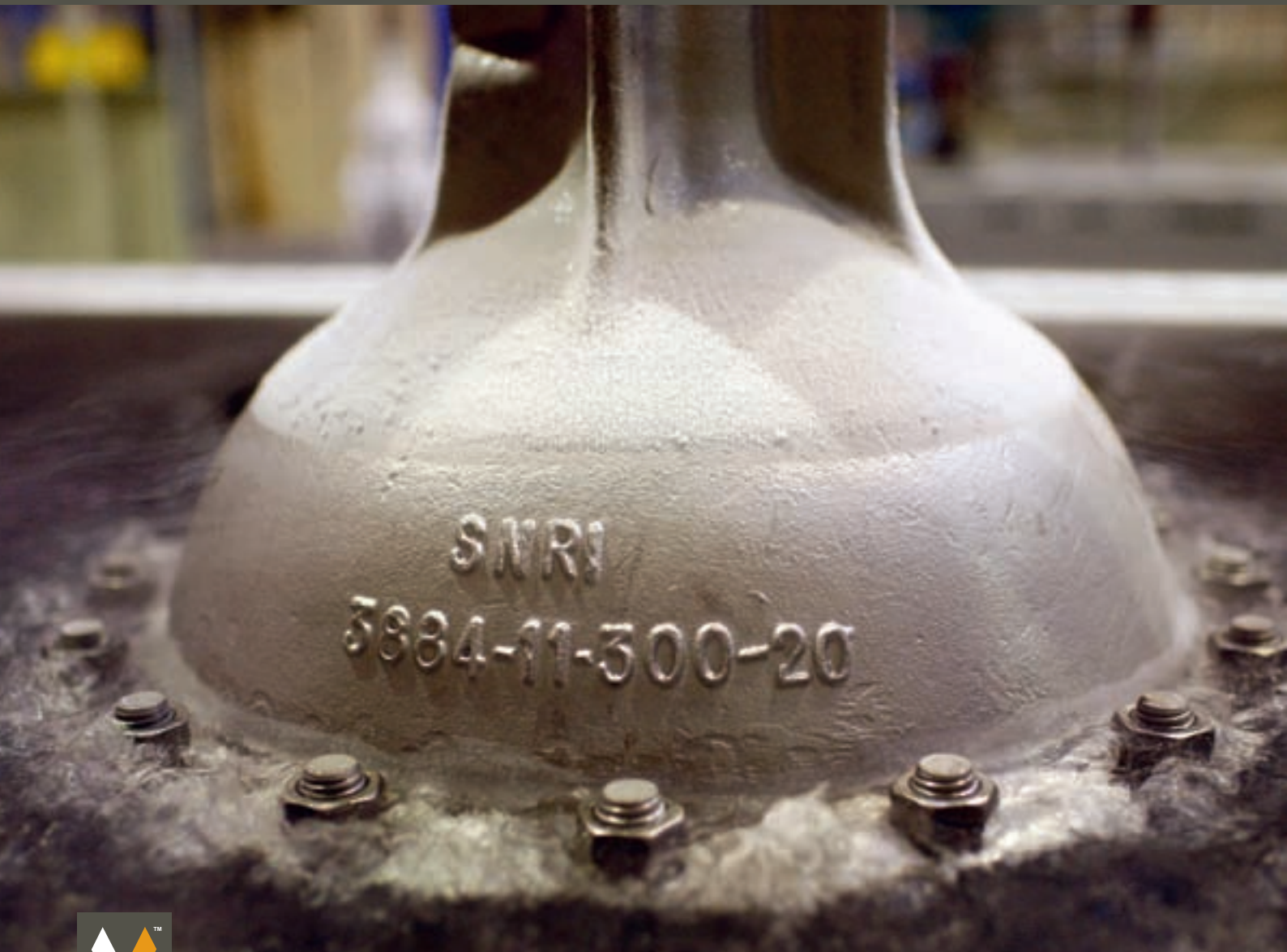
Water tests  
Air tests  
Helium tests  
Nitrogen tests  
Pressure test pool  
(pneumatic)

### at cryogenic temperature

Down to -196°C

### NDE facilities

Visual examination  
Dye penetrant  
Ultrasonic testing  
X-rays  
Magnetic particle examination  
Positive material identification  
Thickness measurements  
Hardness testing  
Any other specific on test demand



## MAIN REFERENCES

SNRI IS PROUD TO HAVE SUPPLIED TO THE LIKE OF:

Samsung Heavy Industries

Hyundai Heavy Industries

Daewoo Shipbuilding & Marine Engineering

BP Shipping

MISC

Total

Kawasaki Heavy Industries

Hudong Zhonghua

Mitsubishi Heavy industries

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## QUALITY CERTIFICATION

ISO 9001 – 2000



CE MARKING



API 6A, 6D, API 600



FIRE SAFE DESIGN



GOST



DNV

CLASS NK



LLOYD'S REGISTER



BUREAU VERITAS

ABS



### Construction standards

API 6A, API 6D, API 600

ASME B31.1, B31.3, B16.5,

B16.10, B16.25, B16.34,

Section VIII, Section IX

ASTM as per client's request

MSS SP25, SP55, SP61, SP82

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