



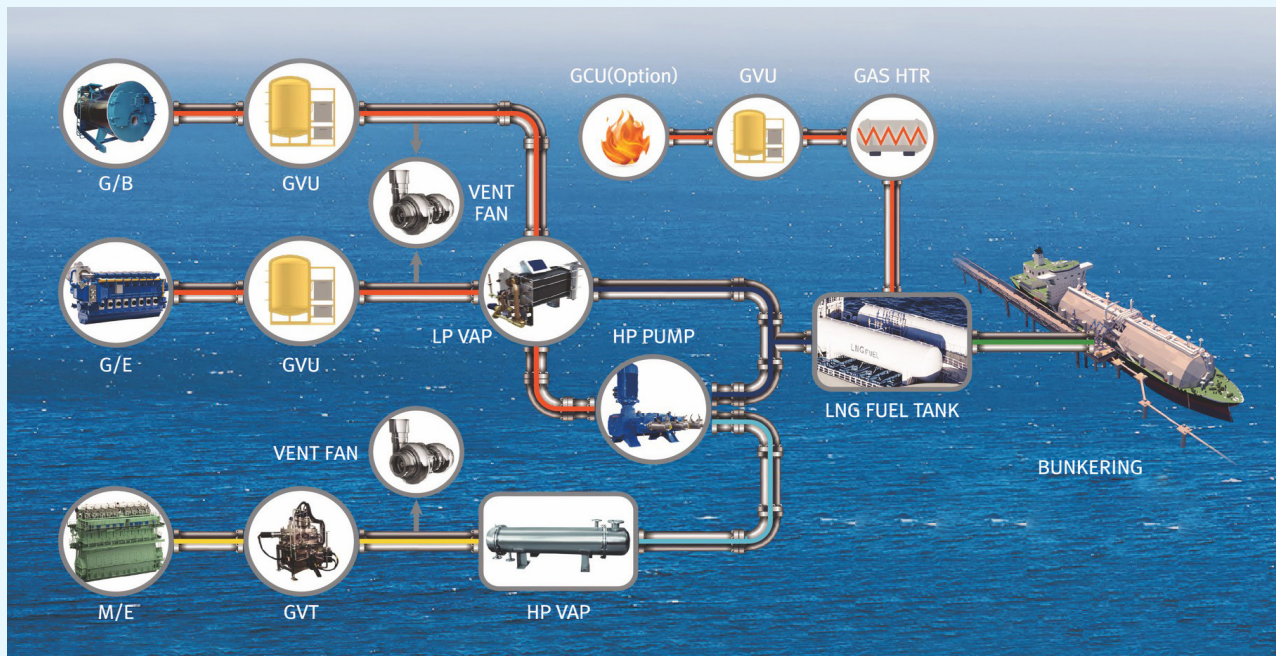
DWP & VIP

Double Wall Piping &
Vacuum Insulated Piping

DWP (Double Wall Piping)

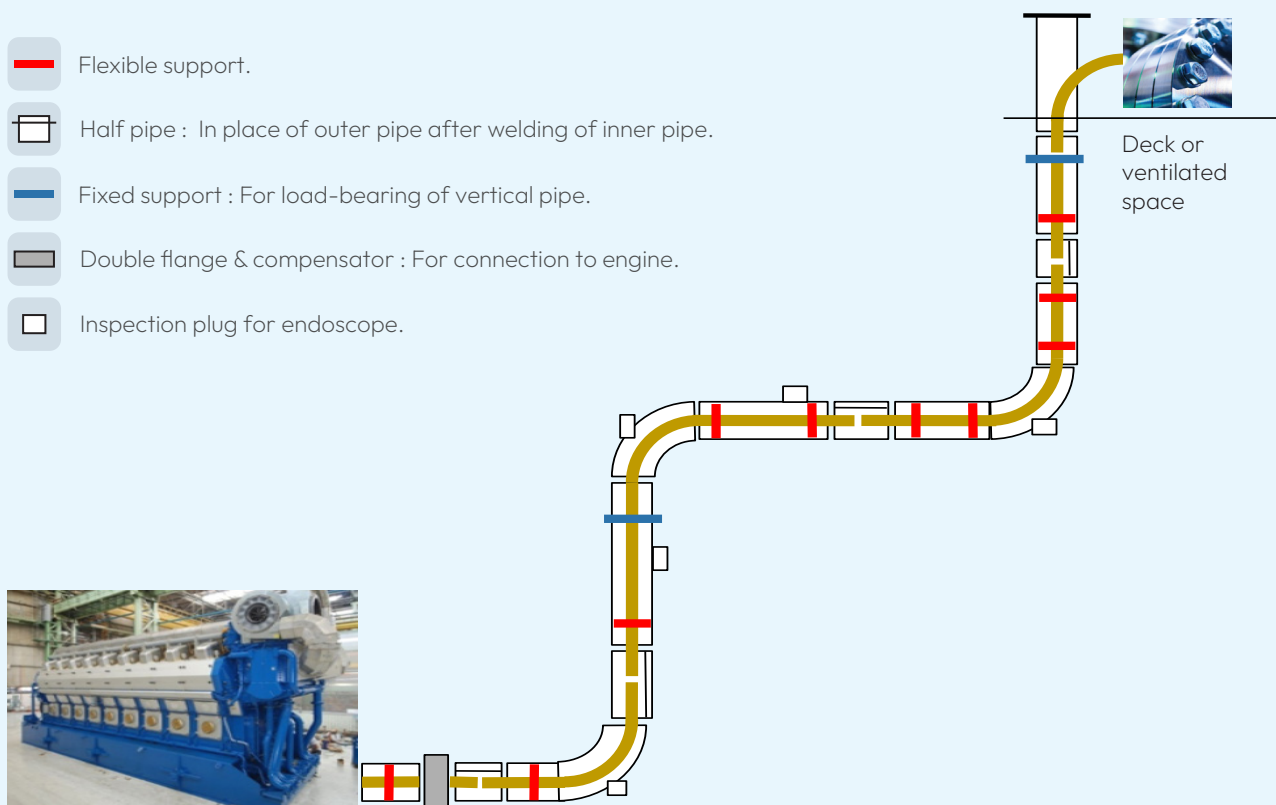
DWP is primarily designed to safely transport or store hazardous liquids and gases.

DWP consist of an inner pipe and an outer pipe. This dual structure plays a critical role in reducing the risk of leaks and preventing environmental contamination.



Double wall piping system is to supply the fuel gas to the main engine.

DWP shows excellent performance against high pressure and extreme temperatures.



HP & LP Double Wall Piping

| High Pressure

- Size
 - Inner pipe : DN25 ~ 50 in general
 - Outer pipe : DN100 ~ 150 in general
- Fluid: Natural gas (Vaporized)
- Design pressure : ~ 420 bar(g)
- Design temperature : ~ 60°C in general range
- Material
 - Super duplex, duplex, stainless steel 316L



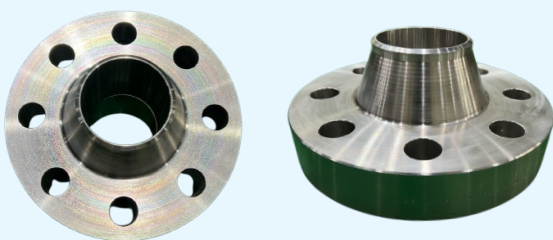
| Low Pressure

- Size
 - Inner pipe : DN50 ~ 300 in general
 - Outer pipe : DN100 ~ 450 in general
- Fluid : Natural gas & liquified gas
- Design pressure : 20 bar(g)
- Design temperature : ~ 60°C in general
- Material
 - Stainless steel 316L



| Flange for DWP

- Design pressure : 300 ~ 420 bar(g)
- Design temperature : -90 ~ 60°C in general
- Material : Super duplex, duplex, stainless steel 316L



High Pressure

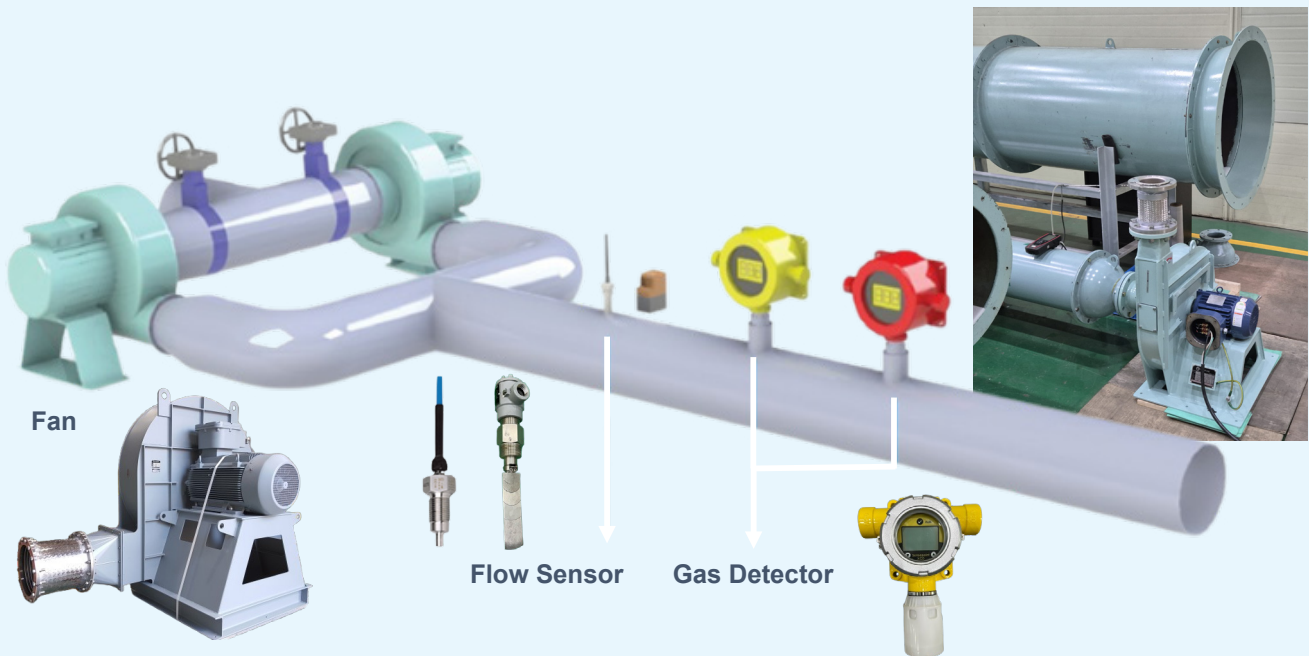
- Design pressure : 10 ~ 16 bar(g)
- Design temperature : -20 ~ 60°C in general
- Material : Stainless steel 316L



Low Pressure

Ventilation system for DWP

Talent LNG has been designing and fabricating total ventilation system package according to customers' needs and applications.

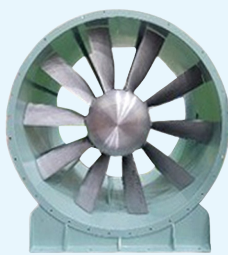


Fans

- Centrifugal Fan (Ex-proof / Normal type)
- Axial Flow Fan (Ex-proof / Normal type)
- Jet Fan
- Mushroom Head
- Damper (Fire / Ex-proof / Normal)
- Silencer
- Manhole Fan (For shipbuilding)



Centrifugal Fan



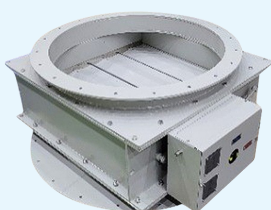
Axial Flow Fan



Jet Fan



Mushroom Head



Damper



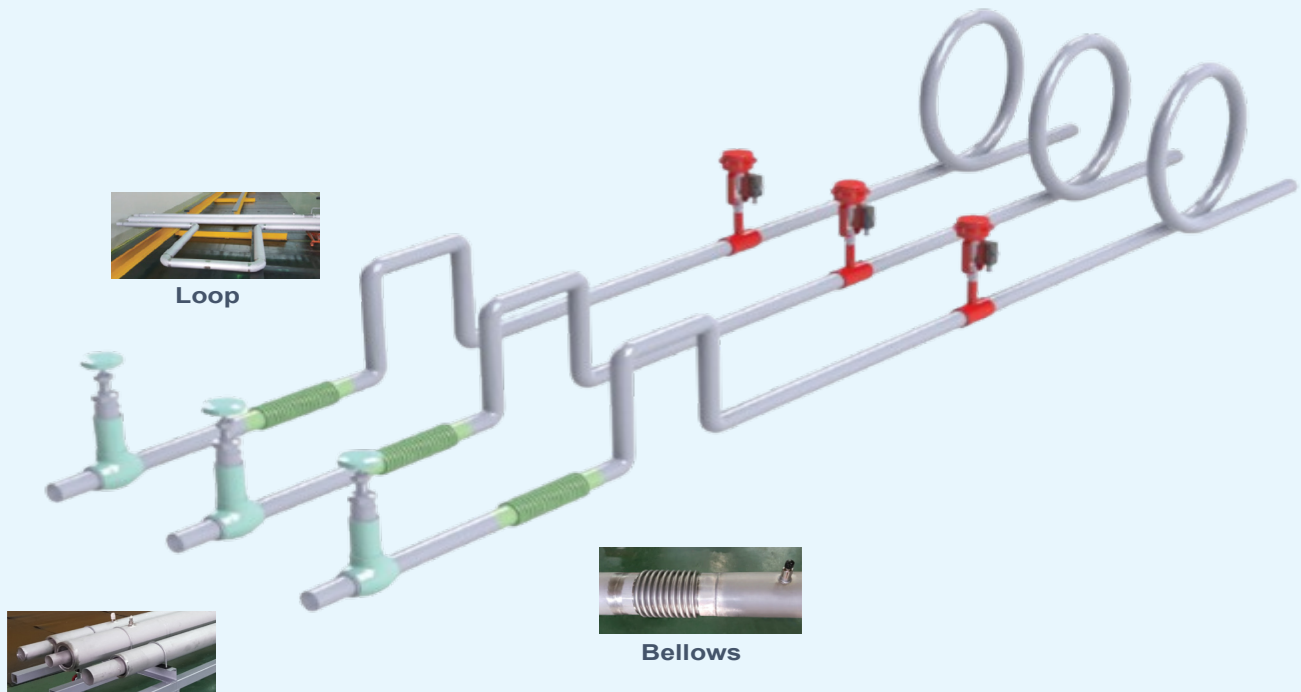
Silencer



Manhole Fan

VIP (Vacuum Insulated Piping) System

VIP is specifically designed to transport cryogenic fluids safely and efficiently. It maximizes insulation performance which minimizes the exposure of the fluid to external heat, protecting it from the vaporization



Specifications

- Size : 1/2" ~ 40"
- Vacuum grade : $\sim 5 \times 10^{-6}$ torr
- Design temperature : $-296^{\circ}\text{C} \sim$
- Design pressure : ~ 30 bar(g)
- Connection type : Welding type, clamp & flange (Bayonet) type
- Fluid : LNG, LEG, LHe, LH2, LN2, LO2, LAr & others

Vacuum Gauge Controller

- Type : Digital / Analog / Portable / etc.
- Input & output signals : Various
- Measuring range : $\sim 1.0 \times 10^{-9}$ torr

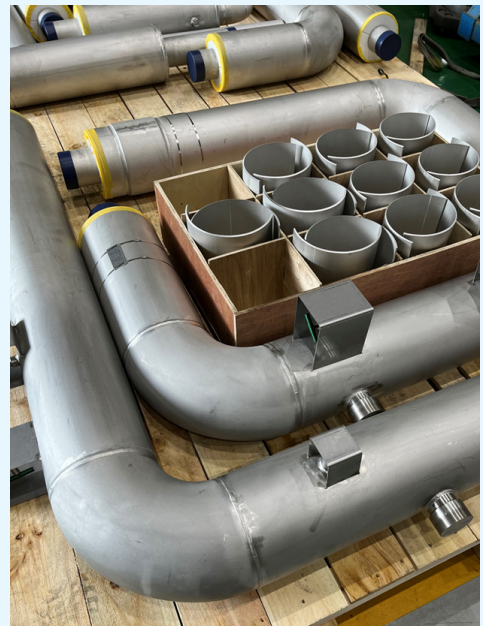


NAME

Why Vacuum Insulated Piping?

LNG Bunkering piping trend

- Higher efficiency compares to urethane form insulation.
- Outer pipes secure inner pipes safely in case of an accident such as an explosion.
- Easy to check cracks on inner pipes and leakages.
- Recommended by shipowners and classifications.
- Meets the requirement of IMO rules. (IMO requires DWP)
- Almost no radiant heat loss.
- No condensation at room temperature.
- Relatively small and saves space.



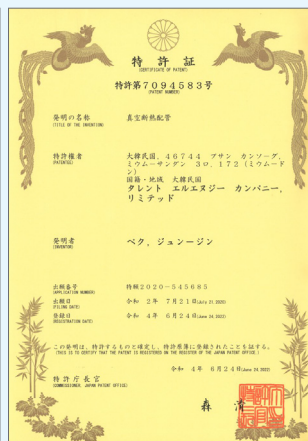
Certified



Vacuum Insulated Piping



Vacuum insulated double pipe



Vacuum insulated pipes
(China)



Vacuum insulated pipes
(Japan)

Insulation & Smart Air Heating System

Insulation Solutions



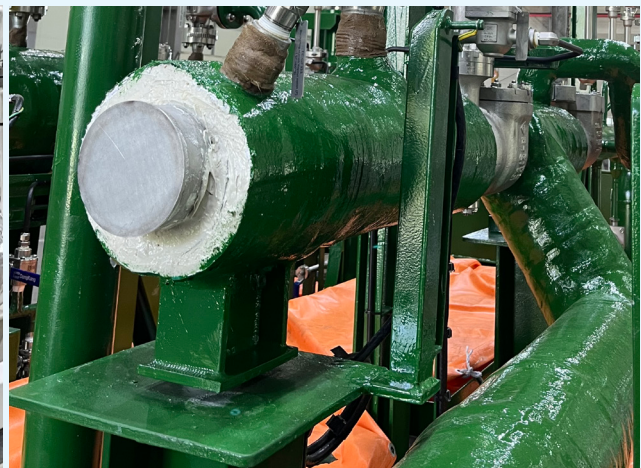
PIF or PUF



Mineral Wool (Glass Wool & Rock Wool)



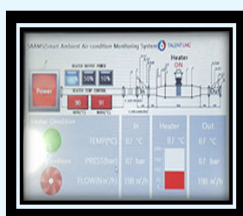
Aerogel (Cryogel, Pyrogel)



Insulation solutions

Smart Air Heating System

Smart air heating system maintains the best conditions for ship engines that are using LNG, LPG, LEG and LH2 as fuel at an appropriate temperature and improves the fuel efficiency.



HMI
Monitoring

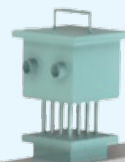
Flow
Meter



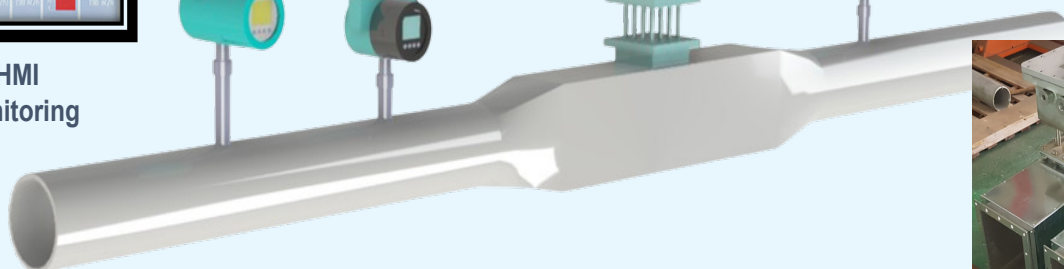
Temperature
Sensor 1



Air
Heater



Temperature
Sensor 2



Certificates



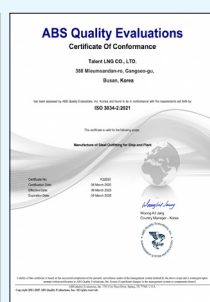
ISO 9001 (ABS-2015)



ISO 14001 (2015)



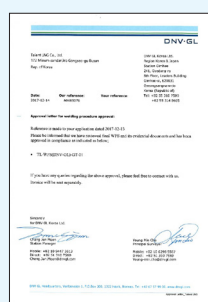
ISO 45001 (2018)



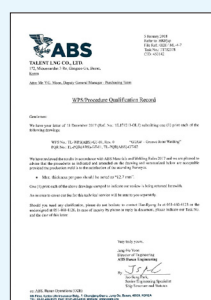
ABS ISO 3834-2 (2021)



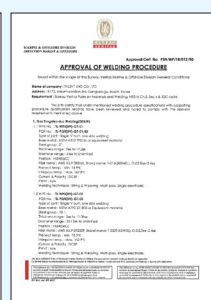
WPS-Procedure Qualification Record (DNV-GL)



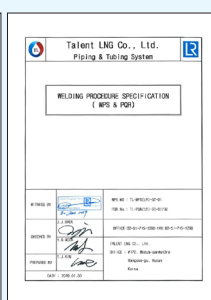
WPS-Procedure Qualification Record (DNV-GL)



WPS-Procedure Qualification Record (ABS)



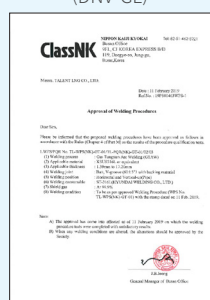
WPS-Procedure Qualification Record (BV)



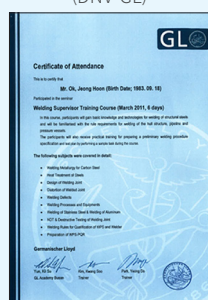
WPS-Procedure Qualification Record (LR)



WPS-Procedure Qualification Record (RINA)



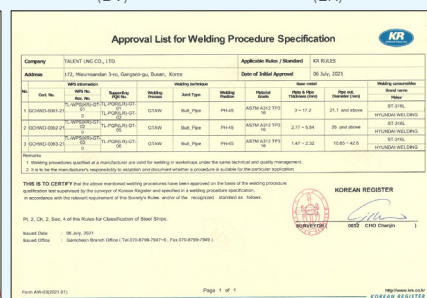
WPS-Procedure Qualification Record (NK)



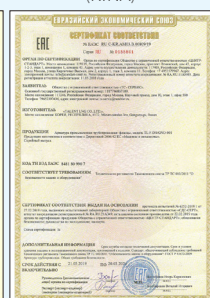
Certificate of Attendance (Welding Supervision) (GL)



WPS(CSS)



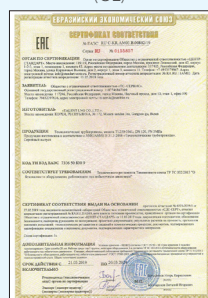
WPS(KR)



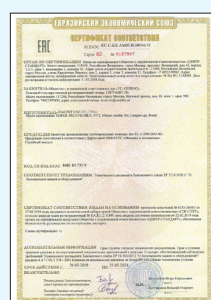
TRCU(EAC) - Flange



TRCU(EAC) - Tube



TRCU(EAC) - Pipeline/Vessel



TRCU(EAC) - Valve



Vacuum Insulated Piping



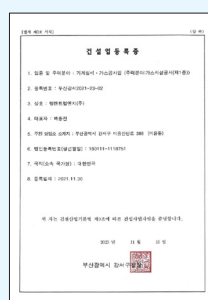
Vacuum insulated double pipe



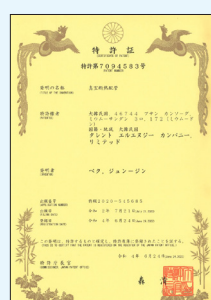
Gas feeding system of ship engine



Smart air heating system for feeding fuel of ship engine



1st Grade of Gas Construction Business Registration Certificate.



Vacuum insulated pipes (Japan)



Vacuum insulated pipes (China)



388, Mieumsandan-ro,
Gangseo-gu, Busan, Korea
TEL. +82-51-715-1290
FAX. +82-51-715-1298
E-Mail. sales@talent-tl.com
greer@talent-tl.com
rider@talent-tl.com