

## APPLICATIONS

- Flowlines
- Process systems
- Gas lines
- Chemical lines
- Service supply system
- Dump lines, drains, sewage
- Risers, well heads, annulus & production tubing
- BOP's
- Pig launchers
- Fire mains and water mains
- Cooling systems

## FEATURES

- Light weight jacket construction
- Controlled temperature freezing
- High differential pressure testing capability
- Ability to freeze most pipeline contents
- Plug is 100% guaranteed to release when complete

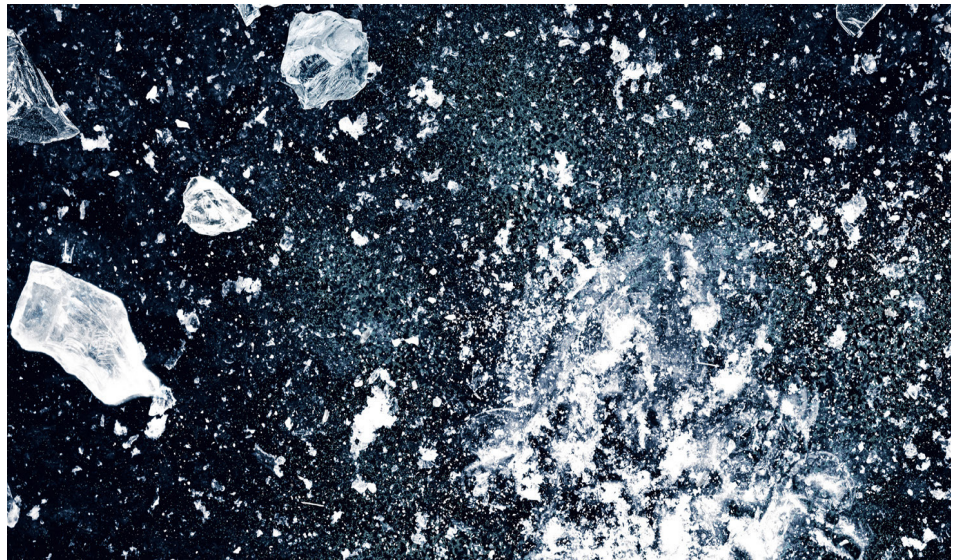
## BENEFITS

- Saves valuable time normally lost draining and refilling a system
- Avoids complete shutdown of systems and equipment
- Cost effective
- Significantly reduces downtime
- The structural integrity of the system is maintained
- Systems can remain LIVE
- Minimum disruption
- Environmentally friendly

## PIPELINE SERVICES | ISOLATION

# Pipe freezing

Specialty services addressing the challenge of demanding isolations



## Overview

Pipe freezing is used during maintenance as an isolation method to carry out repair work, modifications, tie ins and hydro-testing; during the construction phase pipe freezing is used as an isolation method to drain system fluids where other methods may be too costly, time consuming, dangerous or difficult to drain fluid down a system.

The ice plug is accomplished by externally installing an insulated jacket at a preferred horizontal point of the pipe, the jacket annulus is filled with liquid nitrogen for an engineered duration and the contact between the jacket and liquid filled pipe allows for the isolation plug to form in a controlled manner. Pipe freeze equipment jackets are of light weight construction and are available for pipework up to 36" diameter.

Once the ice plug is formed the line can be safely broken into and work carried out. With constant circulation of  $LN_2$  the ice plug can be maintained for an indefinite period until the required maintenance is complete, the temporary isolation can then be removed and the pipe work made safe for normal operating.

## DATA SHEET

N.B OF PIPE (INCHES)	TIME OF FREEZE TO -20°C (MINUTES)	ESTIMATED TIME FOR NORMAL SITE CONDITIONS TO MAKE A POSITIVE ISOLATION (MINUTES)	
		DIRECT FREEZE	SECONDARY FREEZE
0.5"	1	5	30
2"	8	30	60
6"	40	70	420
12"	160	210	1080
18"	360	450	1800
24"	630	1185	2880
36"	1425	1660	4320

**For more information, contact your local Halliburton representative or visit us on the web at [www.halliburton.com](http://www.halliburton.com)**

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

H014316 09/24 © 2024 Halliburton. All Rights Reserved.

**[halliburton.com](http://halliburton.com)**

**HALLIBURTON**