

FEATURES

- Proprietary freezing process
- Rated working temperature of -109°F (-78°C)
- Available with various sizes of cryogenic freeze tubing
- Equipped with thermocouple digital thermometers

BENEFITS

- Use of minimal personnel and equipment
- Provides a tested mechanical barrier
- Small footprint for onshore and offshore applications



Cryogenic freeze services

Facilitate defective surface component repair or replacement with ice plug formation



Overview

In complex applications, where pressure isolation is critical, the cryogenic freeze method often serves as the only viable option. The Boots & Coots® cryogenic freeze services provide temporary ice plugs to maintain pressure control during the repair or replacement of defective surface components, both onshore and offshore. Our specialized process uses flexible cryogenic freeze tubing and liquid nitrogen to create a tested barrier. This barrier allows for the removal or addition of well control components during drilling or workover events.

The Boots & Coots cryogenic freeze services offer a quick and efficient method to establish a tested, engineered barrier. The process is ideal for the controlled freezing of wellheads, lubricators, tubulars, casing, and gate valves utilizing with minimal personnel and materials.

Extensive pre-planning precedes each application. This includes procedural evaluation, equipment/ personnel requirements, and safety measures. As a leading cryogenic freeze services provider, Boots & Coots® brings extensive experience and modern processes to set temporary ice plugs as tested barriers during workovers or well-control events.



In operation, liquid nitrogen flows in a controlled manner inside the cryogenic freeze tubing. This enables safe ice plug formation using a freezable medium inside the tubular, component, or across the interval wrapped with the cryogenic freeze tubing. Throughout the operation, digital temperature measurements manage the maintenance of the freeze.



Cryogenic freeze specifications

Description	Cryogenic freeze box
Working temperature	-80°F to -109°F / -62°C to -78°C
Wrapping material	½-in. and ¾-in. (12 mm to 19 mm) wrapping lines; ¾-in. and 1-in. supply lines flexible cryogenic freeze tubing
Freezing material	Liquid nitrogen
Monitoring system	Thermocouple digital thermometers

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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