

DataTrace Applications

Subject: Stainless Steel Pressure Cooker

Temperature: 240-250°F

Pressure: 28 to 29 PSIA

Product: Live Blue Crabs

Facility: Seafood Processing Facility

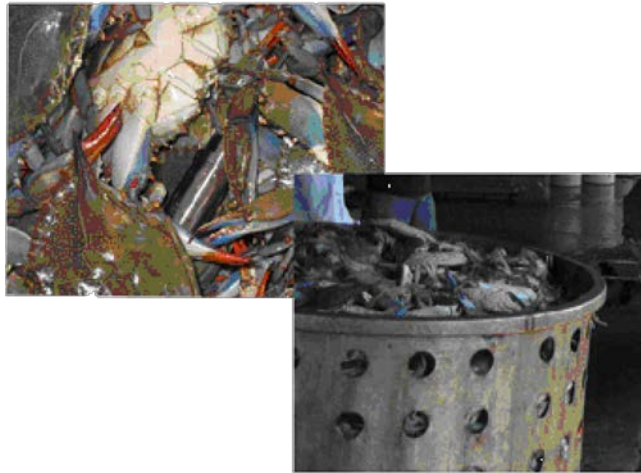


Equipment:

- 3 – MPIII 1" Taper Tip programmed at 1 second intervals
- 1 – MPIII 12" HI Temp needle tip programmed at 1 second intervals
- 1 – MPIII Pressure logger programmed at 1 second intervals
- 3 – MPRF Temperature logger programmed at 5 second intervals

Evaluation Procedure:

Loggers were programmed and placed loosely among crabs in the stainless steel basket. The MPIII 12" HI Temp logger's needle tip was placed inside one crab for a temperature penetration study.



Once the RF loggers were buried inside of the crab, communication was lost using the standard antenna from about 20 feet away. The standard antenna was switched for a Hawking 7dBi antenna and communication resumed.

The stainless steel basket with the loggers was first placed into the vessel and another stainless steel basket was placed on top of it. Communication was maintained using the 7dBi antenna until the lid was closed. Once the lid was closed the signal being received was sporadic.

Data Trace Technical Note



Once the high pressure steam was introduced, communication was lost using the 7dBi antenna. The 7dBi antenna was switched to a TRENDnet 19dBi panel antenna about 4 feet from the top seal of the cooker. Data was able to be received every 30 to 40 seconds.

Result:

The data being received was more than enough to verify the temperature of the cooker during the process.

