

BCE APPLICATION NOTE

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ELECTRIC HEATING
ELEMENTS

VACUUM
FEEDTHROUGHS

CUSTOM THERMAL
SYSTEMS

BACKGROUND

Deionized water application requiring the recirculation of 3 gallons per minute to reach 100°C in 2 hours. NEMA 4 moisture resistant housing was required.

SCOPE:

MCF – Large D Water Heater:

Temperature from 100°C to 100°C in 2 hours

316 Stainless Steel All wetted parts

Pressure tested to 100 PS

NEMA 4 Housing

RTD, 3-wire 100 ohm process sensor built in near outlet

An additional TC for bottom temperature read

1 KW 100, 20 Volt, 3-phase

Mounting threads on the bottom of the assembly

Medium being heated: Deionized Water / D Water

Recirculate at 3gpm

OUTCOME

The heater zones were individually heated at lower voltage then pressure tested up to 100 PS at 200°C - 250°C. The typical ramp temperature for a burst test prior to shipping is 1000°C. The response time in an air medium environment was immediate as the temperature was achieved in under 20 minutes. Also passed the recommended 700 VDC for 5 seconds on the Hi-Pot test prior to shipping. The heater was cleaned packaged then sent out for delivery.



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