Experience with the new Oxford-Danfysik cryo-pump

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Motivation: Rev C > Rev D

Simplify design (reduce production cost).

Reduce no. of second market components.

Move to pure PLC design.

Incorporate user experience:

J. Gonczy's (SERC) Input:

Re-design of LN2 input system:

- reduce turbulence and pressure perturbation associated with onset of vessle fill.

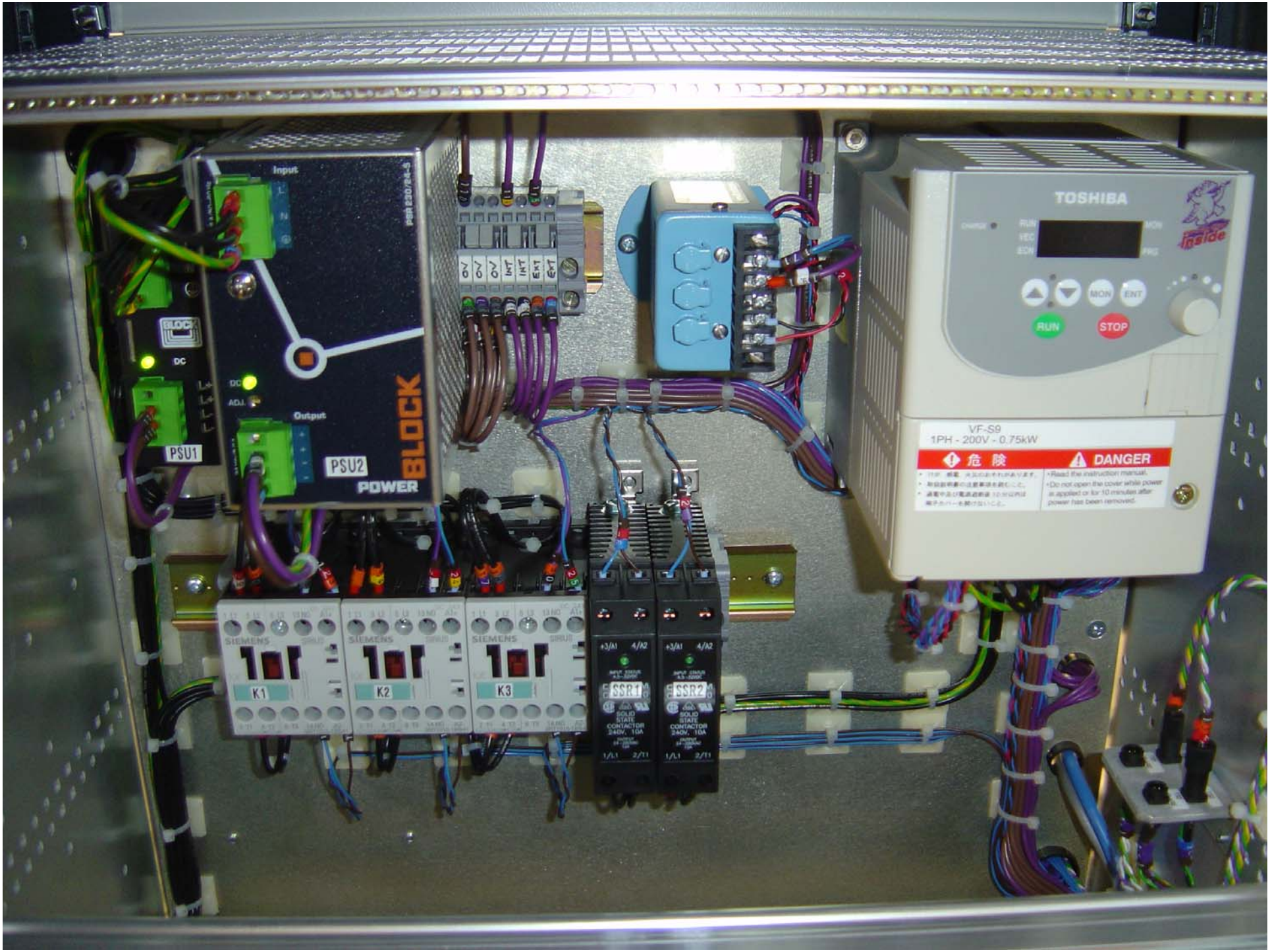
Improve thermal isolation of pump buffer chamber.

External loop shunt.

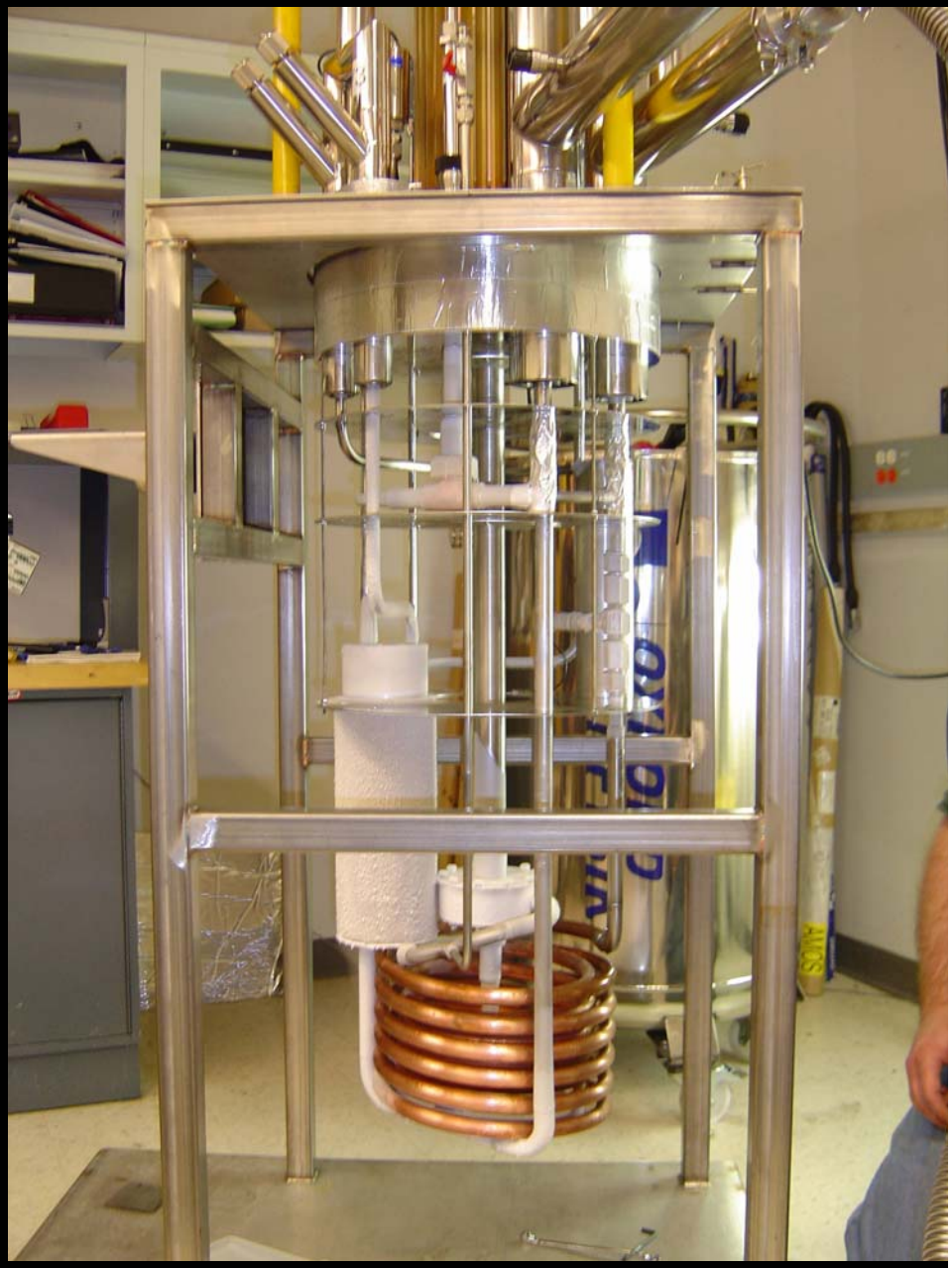
Additional over-pressure protection – avoid pressure disc ruptures.

Rev C Controller

Rev D Controller


Input
Output
PSU1
PSU2
BLOCK
POWER
DC
ADJ.
TOSHIBA
VF-S9
1PH - 200V - 0.75kW
危 険
DANGER
RUN
STOP
MON
ENT
K1
K2
K3
SSR1
SSR2
SOLID STATE CONTACTOR 240V, 10A
SIEMENS


NITROGEN




```
server_slot = socket(AF_INET, SOCK_STREAM, 0);

 server_slot.sin_family = AF_INET;                  // Address family to use
 server_slot.sin_port = htons((short)port_num);     // Port num to use (7243)
 server_slot.sin_addr.s_addr = inet_addr(ip_addr);  // IP address to use

 // connect to socket
 retcode = connect(server_slot, (struct sockaddr *)&server_slot,
                   sizeof(server_slot));
 if (retcode != 0)
  {
    sprintf(in_buf,"server_socket_put ERROR - connect() failed");
                    return -1;
  }

 retcode = setsockopt(server_slot, SOL_SOCKET, SO_RCVTIMEO, (char*)
                                          &OptVal, sizeof(int));

 // Send a GET to the server
 strcpy(out_buf, outbuf);
 byteSent = send(server_slot, outbuf, strlen(outbuf), 0);

 // Receive from opened socket
 retcode = recv(server_slot, in_buf, BUF_SIZE, 0);
 in_buf[retcode+1]=0;

 // Close open socket
 closesocket(server_slot);
```

FORM of outbuf: “Rnn” where nn = 0…32