DSG-Ecal Meeting Minutes

Date: October 14, 2021
Time: 1:00 – 1:45

Attendees:, *Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, Marc McMullen, Albert Shahiny*

1. **Super Module frame quality checks**
    1. Before Ecal Super module assembly each frame should be checked for proper assembly and any issues which will make assembly difficult or cause misalignment of the lead-glass blocks. Below is a four-step procedure of checks and preparations which will aid in the assembly process
        a. Check spacer installation and gluing – if the top edge of the spacers are grossly misaligned (canted or cut unevenly, or varying in height by greater than ~1-2mm) the set screws on the end flange may not compensate for the end surface of the lead glass blocks

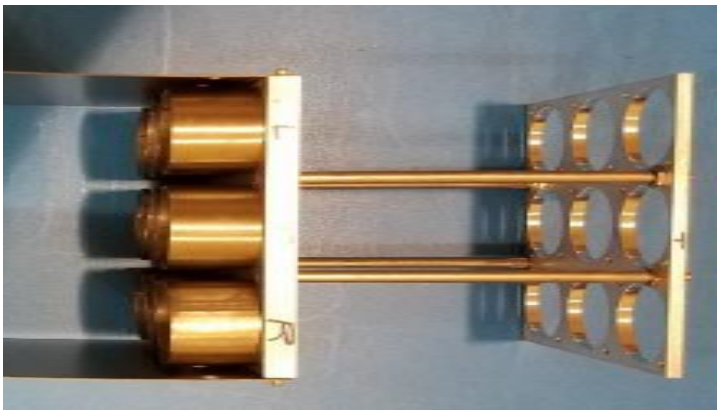

Figure 1. View of the spacers installed in flange 2, inspect overall height of all 9 tubes and check to see if they are canted from bad seating or gluing

i. DSG will develop planar tools to assist in the checking of the surface level of the spacers and their perpendicularity to the surface of flange 2

Figure 2. View of flange 1 with set screws and 4-40 allen head screws

a. The 4-40 Allen head screws which fix the right and left wall to flange-1 and flange-2 will be unscrewed to ensure they do not bind – if the screw threads are bad or the screw breaks off in the threads, assembly of the finished Super module will be difficult

b. Gluing the springs to the spring plate should be done just before assembly. The springs generally fall off while in storage or transport. Gluing with fast curing adhesive (Loctite 340) immediately before assembling the supermodule, will eliminate rework of this step

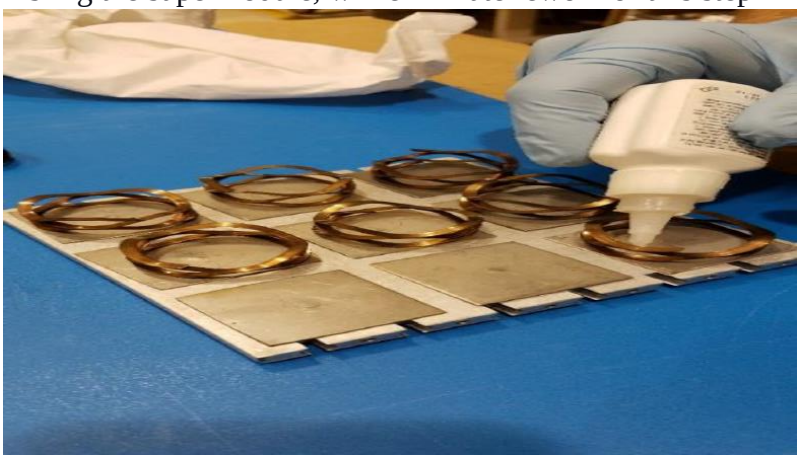

Figure 3. Flange 1 with spring plates attached and springs being glued with Loctite 340

b. Grouping lead-glass/light-guide assembly by length, in groups of 9, is needed to make the final assembly within the given tolerance (2 mm difference in lead-glass surface at the flange 1 end). The optimal length of the lead glass is 34cm but this length varies slightly

    i. DSG will print a 34cm template which will aid in the sorting of lead-glass block

Figure 4. Flange 1 end of lead-glass (9 pieces) prior to clamping