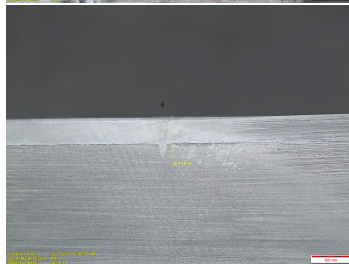
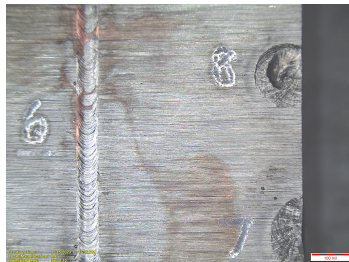
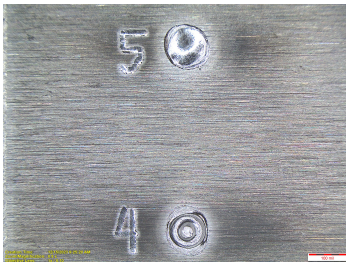
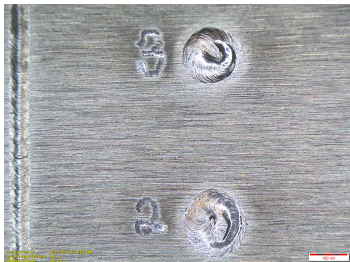


# **Mechanics update**

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**December 20, 2023**

**Friederike Bock & Elliott Fountain**



# Update on Welding tests



(a)



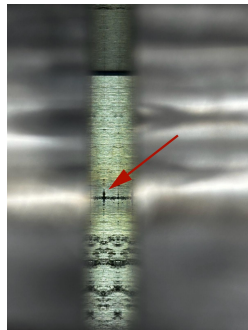
(b)



(c)



(d)



(e)

- Weld #6 chosen as default weld now
- 4 plate assembly produced for tests out of previously ordered material
- Short side welded in addition with weld running accross multiple plates as test (d) → unsuccessful would yield weld beams on inside (e)

# Update on Welding tests



(a)



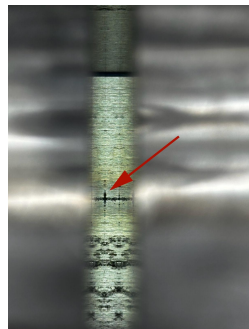
(b)



(c)



(d)



(e)

- Weld #6 chosen as default weld now
- 4 plate assembly produced for tests out of previously ordered material w/o rig
- Short side welded in addition with weld running across multiple plates as test (d)  
→ unsuccessful would yield weld beams on inside (e)
- Will do further qualification with vendor on dimensions

# Next steps for proto-type production

- Another discussion with welding company scheduled for today (lessons learned from 1st test)
- Slotted for module production 3rd, 5th, 7th, 9th Jan (depending on material availability)
- Rig/frame needed for keeping plates in place → out of aluminium or copper  
→ Elliott working on first version in communication with welders  
⇒ Probably prefer to have that for full length weld test
- All other (pre-existing) LFHCal plates on the way to CA (Geneva → Torrance) ETA 1st week Jan.
- Newly ordered material (leading edge metals) on the way too, ETA 1st-2nd week Jan
- Upcoming model modifications & Simulations (Elliott):
  - ▶ Adapt model for 8M with new 0.02" wide welds  
→ perform lifting simulation with strong back
  - ▶ Equivalent force analysis for seismic loads (z & x)  
→ focus on possible pin size adjustment if front plate not taken into account (original pins only meant for alignment)  
→ hand calculations of equivalent pin shear loads