

FB call on Sept 13, 2023

Yi Wang

Gd-PMMA IHEP funds

- R&D cost:
 - 114,403.9 EUR spent so far
 - Anticipate another 15,000 EUR to get everything ready for preproduction
- Pre-production:
 - 7,555.03 EUR spent (15 kg ShinEtsu Gd₂O₃)
 - 27,400 EUR quoted for pre-production (funded)
- IHEP remaining funds:
 - ~250k EUR for Gd(MAA)₃ production (relocation not allowed)
 - ~90k EUR for Gd₂O₃ procurement and panel production

Quote for panel production

- Gd₂O₃: 102.3k USD + shipping + tax;
- Gd(MAA)₃ production at Yangzhou U: 250k EUR;
- Panel production at Donchamp: ~886k EUR, excluding:
 - Possible extra cleaning cost, since the production line will be contaminated by Gadolinium;
 - Cost of facility to measure the residual stress;
 - Any additional panels (e.g. a spare full thickness panel for barrel machining)
- Shipping to Alberta, Canada: ~40k USD estimation based on the cost in March 2023, excluding tax.

Quote for precise machining

- Drawings received from Luca on Aug 22, forwarded to Donchamp on Aug 23, 2023;
- Aug 25~ Sept 11, Yi was travelling;
- Donchamp will try to assemble a team and meet with Yi in the week start from Sept 18 for questions and concerns.
- Since the mock-up barrel was not able to be machined at Donchamp, for the DS-20k barrel, Donchamp is considering to machine one additional barrel as a practice, not decided yet with pure acrylic or Gd-PMMA.

Schedule

- See email from Alessio on July 15, 2023
- **Oct 2023~Jan 2024** Gd2O3 procurement, for IHEP, the process has to be started no later than the mid-Oct 2023, according to the previous purchasing experience, ~6 weeks are needed to get the contract signed, ~4 weeks lead time, ~1 week is needed for customs clearance.
- **End of Jan ~ mid of Feb 2024**, Chinese new year break, none of the people from Yangzhou U and Donchamp would like to work during this period.
- **March ~ June 2024**, Gd(MAA)3 production
- **July~Aug 2024**, Doping, Gd-PMMA panel production, lamination:

Point to be addressed urgently

- Practical criteria for material acceptance: there was a discussion about QA/QC at Donchamp during Cristian's visit. Subsequently, Donchamp would like to establish clear criteria before starting pre-production so that they can assess whether their current products meet our requirements. Then, they can use the pre-production to validate the entire process.
- Strategy to purchase Gd₂O₃: Yi will also need this information to negotiate with Chinese customs.