Production Planning Workshop Agenda for Fibre Mats

(A management meeting, not a Technical How-to-make-a-mat Workshop)

Should focus on mat production. Module production will be discussed at another later workshop.

1. EDR recap
2. Current Status of Winding and Casting
3. Foil casting or glue casting? Foil casting is baseline now.
4. Production bible
    a. Version 1 = Cut and paste from EDR
    b. Version 2 = m. Wlochal and A. Shultz van Dratzing
5. Quality Assurance
    a. Light yield
    b. Optical scan
    c. Geometry
    d. i.e. in Aachen 2 Students
    e. Production bible; recipes must be followed. Otherwise technique quality must be proven by institute
6. Identify production manager and site managers. Identify tasks for them
    a. Site preparation
    b. QA checks
    c. Schedule management
    d. Supply management
7. Have production rooms been identified/prepared? Required space and infrastructure.
8. What technicians/labour will be available at each institute? Students?
9. Ordering supplies in bulk via CERN or single institute purchases?
    a. Save the tax with CERN
    b. Tooling bought this way must return to CERN
    c. Larger order have more bureaucracy
    d. Beware of expiry dates on the epoxy
10. Design changes: Expand the endpiece by 2mm to accommodate any new SiPM design
    a. Requires changes to drawings and remaking most of the EDR tooling
11. How do we deal with bottlenecks?
    a. Kuraray is slow to deliver, has problems, quits. Sole sourcing is a problem.
    b. A site is having problems i.e. months delay
        i. Maintenance contract with Stiebert. Response time? Spare parts in stock.
        ii. Can we recover time at the existing sites? Double shifts at other sites
        iii. How much of production capacity can be moved or recovered? 50%?
    c. Other supplier problems. Epoxy limited lifetime? Non-stick agent tests.

    d. Other sources?

12. What happens if we lose another wheel? Figure out why. Can be remachined 4 times. \
    a. >50 mats per wheel. No machining foreseen
13. Storage of the fibres and finished mats
    a. Climate controlled room
    b. Separate locked cabinets (don't put the eggs in one basket)
    c. Sealed, gas filled (reasonable effort), black bags (schlauch)
14. Shipping logistics
    a. Fibres to CERN, scanned, shipped bi-weekly
    b. Finished mats. hold and ship monthly. Sealed.
    c. Crates. 8 mats per box. 5 modules per box.
    d. Insurance?
    e. Monitoring. Temp and Humidity.
    f. We rent a van and drive them ourselves or trust a shipping company.
15. Database features
    a. Items and processes can be created on the fly
    b. Web-based interface; Task-based views (Admin, Management, Technician)
    c. Working on a way to pull the information out for management reporting
16. Safety concerns and management.
    a. Electrical fires
    b. Large volumes of plastic materials
    c. Alcohols for cleaning
    d. Fumes from non-stick agents
    e. Plastic shield for turning wheel.
    f. Emergency stops
    g. UV shielding of scintillating fibres