



# EN-MME Activities

(20 min)

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# MME Design Office workload

Source JMT, situation 11/10/2016

Number of jobs	Date fin	Estimated workload (h)	Work in Progress (h)
38	≤ 2015	16 800	5 100
31	S1 2016	9 100	2 000
100	S2 2016	66 400	15 200
11	S1 2017	7 100	3 300
13	S2 2017	15 000	10 300
1	≥ 2018	100	100
$\Sigma$ 194		$\Sigma$ 114 500	$\Sigma$ 36 000
<i>cf LS2 Days 2015</i> $\Sigma$ 169		$\Sigma$ 88 200	$\Sigma$ 30 400

# MME Design Office issues

- ❑ Workload: increasing (again... and trend for many years)
- ❑ Capacity
  - Increased (again...) from 44 to 50 MME Designers on-site (15 staff, 33 Industrial Support, 2 Temp)
  - **This is maximum capacity that we will not exceed** (re. staff/non-staff ratio of 1:2) in order to allow follow-up and control (cf other Design Offices 1:1)
  - ~72 000 job hours / year in 2016 (~76 000 h planned for 2017)
  - Missing resources !!! support request to **recruit additional staff designers** (note: 1 staff designer generates ~ 1 MCHF spending)
- ❑ **Hence a bottleneck and an existing Work in Progress (WIP) workload of ~6 months**
- ❑ **~ 5% capacity will be absorbed by CAD2020** (CDD/Smarteam synchronization and cleanup of data) either supported centrally **or by Users/Projects**

# MME Fabrication issues

- ❑ Workload capacity
  - Known **bottlenecks**:
    - Electron beam welding for long components
    - Milling for large components
    - Vacuum brazing
    - Job preparation & subcontracting
- ❑ **Raw materials availability**:
  - 316 LN / 304 L vacuum use, copper
  - Store items (sheets, bars, flanges) and special forgings
  - CERN-wide issue: Stores, Purchasing, MME (specifications), Users. Discussed in MAP (MME Advisory Panel), long-term actions but need short-term flexibility.
- ❑ **Also an existing Work in Progress (WIP) workload of ~6 months**

# Recommendations

## □ Design & fabrication requests

- **Think ahead in time:**
  - consider one Semester (or more) for new MME design requests
  - Consider a 2<sup>nd</sup> Semester (or more) for MME fabrication requests
- Include in PLAN
- In launching a design job do not assume that MME fabrication automatically follows
- Integration = ACE and Design = MME
- In following-up an MME design&fabrication job, **balance the necessary time** for both activities
  - When design is 80% ready start fabrication contacts (too early = ignored, too late = wasted time ...)
  - **Special supplies** can take several months (3 to 12 months), e.g. special raw materials, forgings, bellows, ceramics

# PLAN for MME

- MME uses JMT to manage its workload: PLAN and JMT are not synchronised
- **Users can help:**
  - Consistency between PLAN and JMT in Username and title
  - **Link to JMT Job if existing**
- Be clear with “request-by date”
  - Specify date for “job finished by MME” (not installation date)
- Be clear with “Deliverables” for Design Office:
  - If fabrication will be “internal MME” or “Sub-contracting MME”, then “job finished” = fabrication drawings ready (include time to iterate with Workshop)
  - If fabrication is “responsibility of Users”, then “job finished” = Tender drawings
- **User with Design Office to discuss fabrication strategy early**
  - Avoid “responsibility of User” becoming “MME subcontracting”.

# Project/Job Priorities

- ❑ **Play this card early:**
  - **Better to discuss early at the Design stage** (working back from Installation date minus semester(s) fabrication time)
- ❑ **Message for Group/Project Leaders:**
  - Do not sign a JMT job request unless the indicated dates satisfy the “semester rule”
  - Do not assume a PLAN request is enough and the end of the story: ask “what is the JMT job number?”



# NDT radiography

- By its nature, activity outside normal working hours
- Performed by Contractor (Dekra, new contract S171) with MME support ensured on a “best effort” basis:
  - Assist with access difficulties
  - RP issues
  - Urgent technical issues (exceptionally)
- “Best effort” becoming too much, but “piquet” not justified
- Ongoing discussion to introduce (small) changes to make better use of existing piquets (CCC, CSA, Fire Brigade/RP)



# RP workshop in Bldg. 109

- The only general purpose RP workshop
- But need GS (→SMB)-consolidation support to finish renovation in 2017.

# Thank-you for your attention

