

Department of Aerospace Engineering
University of Kansas
AE 510 Aerospace Materials and Processes
Design Problem: High Performance Aircraft Wing Torque Box
Fall, 2003

Oral Report (20 pts)

- Identification of preferred concepts and rationale for these concepts (5)
- Identification of final preferred concept and rationale (5)
- Individual contribution (5)
- Format and unity of presentation (5)

4
4
5
5

Team Written Report (70 pts)

- Executive summary (5)
- Explanation of choice for three concepts from original ten (10)
- Detailed process descriptions for alternative processes on the preferred concepts, including cost, weight and technical risk assessment (25)
- Identification of preferred concept(s), and rationale for choice (10)
- Integration of choices (10)
- Design choices and documentation (5)
- Appendices (time estimates to make fixtures ...) (5)

5
6
19
7
7
4

ALL WEIGHTS !! (EXCEPT IN DETAILED SECTION)

- UNNECESSARY Duplic. of process and weight with little benefit

- INCONSISTENT CHOICES FOR SIMILAR PROCESSES.

- DESCRIBE RANKINGS: 1-1000 NOT JUST CATEGORIES.

- YOU TALKED TO SOME ISSUES, BUT DIDN'T REALLY ASSESS THEM.

(INCOMPLETE COMPLETION) →

Team Effectiveness (10 pts)

- Team effectiveness and communication (5)
- Notes from team meetings (2.5)
- Schedule (2.5)

4
2.5
2.5
~~7.5~~
7.9

Individual Effort (100 pts)

All but integrator:

- Organization and flow (15)
- Manufacturing processes (50) NO REAL INDICATION OF MAINTENANCE OF EQUIPMENT INVAIVE.
detailed process description; time, cost and risk estimation
- Tooling design (25)
detailed drawings; time, cost and risk estimation
- Schedule (10)
accomplishment of tasks on time

STUDENT 1	STUDENT 2	STUDENT 3	STUDENT 4
AVG.	AVG.	AVG.	AVG.
15	15	15	15
43	43	39	39
20	22	20	20
10	10	9	9
<u>90</u>	<u>88</u>	<u>83</u>	<u>83</u>

Integrator:

- Organization and flow (25)
- Introduction (10)
- Summary (40)
 - Manufacturing facility diagram (20)
 - Parts flow diagram (10)
 - Time, cost and risk summary by production rate (10)
- Minutes of meetings (25)
 - notes from team meetings; deliverables and accomplishments, by member

25	9	16	9	8	23
<u>90</u>	<u>90</u>	<u>83</u>	<u>83</u>	<u>83</u>	<u>83</u>

(COMMUN. W/ TEAM BEFORE THEY GO TO CATAPULT) - RECORDED IN REPORT

TALKING; TRACKING