Table for Planning/Design of Clean Room

 1. Name and layout for clean room: Names for various areas, process equipments layout, space and dimensions of construction area shall be specified in the drawings.

 2. Cleanliness class for clean room: Required cleanliness class shall be specified (in case of regulatory requirement, design verification shall be made in parallel):

3. Detailed height of clean room shall include floor height above ground and locations of beam column, ceiling height of clean room, height under beam, height between tubing and room volume.

4. Establishing requirement table for clean room equipments and cyclone equipments from proprietor, such as:

1. Power consumption： KW

 2. Power supply type： Phase Volt Hz

3. Air exhaust： CFM

4. Ice water flow： LPM

5. Conditions for constant temperature-humidity (with areas specified):

T= ± ℃

RH= ± %

6. Outside air condition (with areas specified):

□ Summer 35℃, 85%RH; Winter 6℃、50%RH.

 □ Summer ℃, RH; Winter ℃, RH.

7. Heat production from process equipment/machinery:

Kcal/hr×\_\_\_\_ unit, KW×\_\_\_\_ unit, HP×\_\_\_\_unit

Kcal/hr×\_\_\_\_ unit, KW×\_\_\_\_ unit, HP×\_\_\_\_unit

Kcal/hr×\_\_\_\_ unit, KW×\_\_\_\_ unit, HP×\_\_\_\_ unit

8. Required exhaust (with gas type specified):

 CFM, CMM, CFM, CMM,
 CFM, CMM, CFM, CMM.

9. Number of workers (maximum): persons.

10. Required illuminance (with type of light source specified) Lux (70 cm above ground).

11. Positive pressure (airflow direction of each area specified)：
Cleanest area: mmAQ, Second cleanest area: mmAQ, Buffer area: mmAQ。

12. Noise value (with noise value before construction specified)：less than dB.

13. Vibration(with vibration value before construction specified)：vertical UM, lateral UM, side alternating UM.

14. Floor(with water content tested before construction), for example:
 □ Epoxy Resin □ Raised floor
 □ Anti-static seamless PVC floor

□ Anti-static seamless PVC tile
 □ Conductive seamless PVC tile

□ Others

15. Insulation partition (with anti-erosion/salinization or anti-static materials for low humidity area ), for example:
　 □ Nonflammable honeycomb metal plate （incombustible grade Ⅰ and grade II）

□ Fire-retardant PF foam metal plate（one hour fire-retardant）

□ Mineral wool metal partition board（one hour fire-retardant）

□ PU metal plate（incombustible grade Ⅰ and grade Ⅱ）

16. Ceiling (with or without heat insulation slab):
□ Ceiling Grid

□ Calcium Silicate ceiling with hinted grid

□ Metal plate identical to material of partition
□ General light steel frame

□ Others

17. Personnel flow chart(with flow and shift number specified)：
□ Gowning room layout

□ Layout and size of Air Shower
□ Location of emergency exit

□ Layout of shoes cabinet
□ Layout of clothes cabinet

□ Others

18. Material flow chart (with volume and size for pass objects specified):
□ Layout for Buffer room

□ Layout and size for Air Lock
□ Layout and size for PASS BOX

□ Others

19.Location and layout for control room (with floor height in building and construction area specified)：
A. Location for cooling tower

B. Water chiller
C. AHU

D. Gas scrubber tower
E. Air compressor

F. De-ionized water room
G. Acid/alkali liquid storage tank

H. Gas cabinet
I. Vacuum pump

J. Switch box
K. Central control panel

L. VOC
M. Socket

N. Others

20. Type of sterile clean room (with industrial regulations specified):
□ Operation room（○Heart ○Brain ○Ophthalmology ○Embryonic transplant ○General）
□ Burn ward（○Hydrotherapy ○Operation room ○Hyperbaric oxygen ○Ward）
□ TPN laboratory

□ Embryonic culture room

□ Chemotherapy room

□ Isolation room for respiratory (GI) infection

□ Negative pressure isolation ward
□ TB laboratory
□ Bone marrow transplantation ward
□ Sterile animal care room
□ P1~P4 laboratory (USA NIH standard)
□ SPF animal laboratory
□ Non-SPF animal laboratory
□ Food GMP or HACCP
□ Drinks □ Instant food □ Retort pouch food □ Low-temperature sterile food
□ Frozen food □ Chilled prepared food □ Dairy

□ High-temperature sterile food
 □ Food supplements □ Bottled water
 □ Drug GMP or CGMP
 □ Dosage form specified for western medicine

□ Dosage form specified for traditional Chinese medicine

□ Dosage form specified for veterinary medicine
 □ Reagent
 □ Medical device GMP（□ Invasive □ Non-invasive）
 □ Manufacturing procedures for purification, dispersion and etching of semiconductor wafer

□ Lead frame itching and cut foot
□ Surface treatment and metal evaporation

□ Assembly of lithium iron battery
□ BONDING Bezel bonding □ SMT
□ PCB □ LCD
□ Gas/Solid state laser □ Sputtering process
□ Backlight plate, light guide plate □ Precise printing
□ Optical lens

□ Calibration and measurement laboratory (Secondary laboratory)
□ Biochip □ CD, VCD, tape
□ Cementing room □ LCM
□ Precise coating □ Seed storage
□ Culture room (seed/tissue culture)

□ Capsule formation
□ Coating room □ Drying room
□ Clean oven

□ Packing and storage room for missile and gun powder室

□ Aging Room (Burning Room)

21. Equipments to be provided by customer:
□ Water chiller RT
□ Vapor ℃, kg, Flow LPM
□ Cooling tower RT
□ Water pump HP × unit
□ Other equipments