PLAN VIEW (AT VARIOUS LEVELS LEFT TO RIGHT: WATERLINE, FIRST PAD SUPPORT, TOP PAD, CABINET TOP, & END WATER DISTRIBUTION LINE.)

COOPERATIVE Extension Work IN AGRICULTURE AND HOME ECONOMICS

UNIVERSITY OF ARIZONA, TUCSON, ARIZONA

WATER PUMP
1/4" X 1" X 0.125 GAGE ST. MESH
SPLASH GUARD
CABINET TOP
CABINET LINING
3/4 TO 1/2 FT² ASPENWOOD EXCELSIOR PAD
STUD & STRINGER
PVC PIPE
HOSE BIBB AT LINE END
CABINET LINING
2 X 2 STRIPPERS
PAD SUPPORT
1" X 1" X 0.125 GAGE ST. FABRIC OVER 2 X 2 STRINGERS
STORAGE LINING
WATER SUPPLY
FLOAT ASSY
FILTER
WATERLINE
PUMP
NOTE: SLOPE DRAIN STORAGE FLOOR TO SUMP

PAD CABINET & FAN SYSTEM

PAD CABINET DESIGN - EXAMPLE

ASSUME:
1) ONE AIR CHANGE PER MINUTE.
2) E.L. BLDG. W/L = 1000, W = 50, H = 5'

CALCULATE:
1. FAN CAPACITY = 200 X 50 X 75 = 75,000 CFM.
2. PAD AREA = 75,000 CFM X 5 FT X 500 CFM = 375 FT²
3. LEVELS = 2.5 WIDE X 50 LONG = 125 FT X 50 FT
4. INLET VELOCITY = 75,000 CFM / 3,750 = 20 FT X 500 CFM = 600 CFM
5. NOZZLE PATTERN = 30 GPM / 30 X 60 PPM / FT
SELECT: HALF CIRCLE, FLAT SPRAY NOZZLES AT 3.03 PPM @ 15 PSI, 6 O.C.

A) USE 1/4" OR 3/8" CEMENT ASPEROS BD. FOR CABINET, SPLASH & DRAIN STORAGE LININGS.
B) WATERPROOF W/1/2 NYLON MESH TAPE TO CORNERS.
C) SEAMS, COAT W/EULSIFIED ASPEROS. ALTERNATE: USE FIBERGLASS TAPE, COAT W/1/2 NYLON MESH. RESIN.
D) VENTILATE OR USE GAS MASK, CLEAN BRUSH W/ACETATE.

TYPICAL SECTION

SCALE: 1" = 1'-0"

WATER SUPPLY
USE PLASTIC SCREEN TO COVER INLET

TOTAL PAD AREA
1/2" PVC
1/2" HOSE BIBB
FROM HORIZONTAL TO MAXIMUM SLOPE OF 1:3
SPLASH GUARD
WATER PUMP (1.4 GPM/1000 CFM)
GLOBE VALVE
H. BIBB BLEED-OFF (0.05 GPM/1000 CFM)
H. BIBB BLEED-OFF (0.05 GPM/1000 CFM)

6 PUMP HP = 0.2/2000 = 30 GPM X 60/2000 = 0.09
7. BLEED-OFF = 75,000 CFM X 50 PPM/1000 CFM = 3.75 PPM

BASED ON: UNIV. OF ARIZ. PLAN NO. A-186

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATIVE
EVAPORATIVE COOLING
PAD CABINET
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