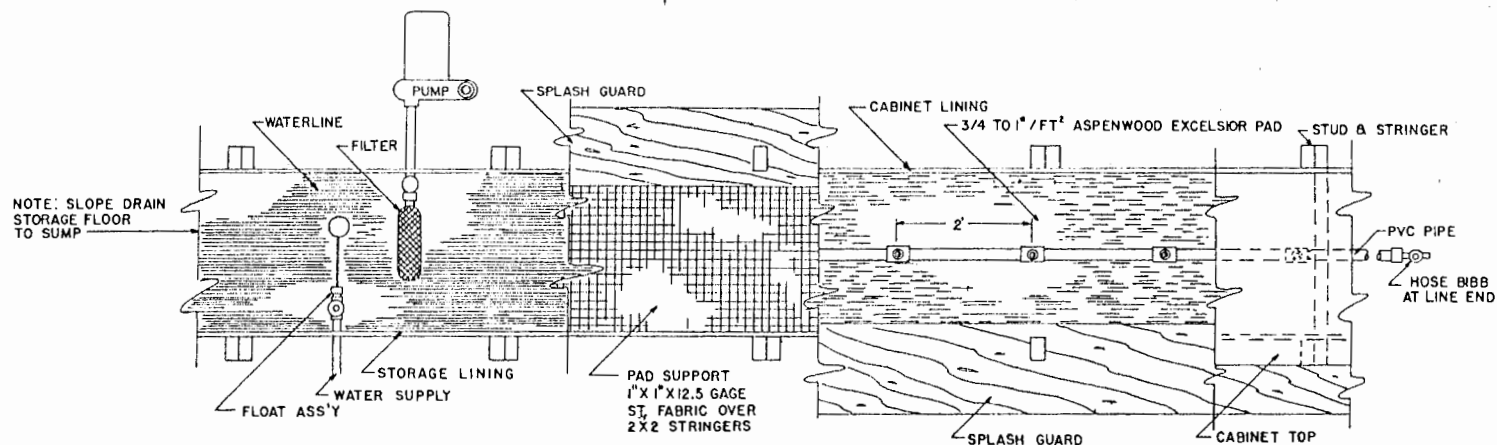


PLAN VIEW-(AT VARIOUS LEVELS LEFT TO RIGHT: WATERLINE, FIRST PAD SUPPORT, TOP PAD, CABINET TOP, & END WATER DISTRIBUTION LINE.)

PAD CABINET DESIGN - EXAMPLE

ASSUME:

- 1) ONE AIR CHANGE PER MINUTE.
- 2) I.E. BLDG. W/L=200, W=50, H=7.5'

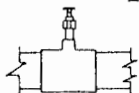
CALCULATE:

1. FAN CAPACITY = $200 \times 50 \times 7.5 = 75,000$ CFM.
2. PAD AREA = $75,000 \text{ CFM} \times 5 \text{ FT}^2/1000 \text{ CFM} = 375 \text{ FT}^2$
3. LEVELS @ 2.5' WIDE & 50' LONG = 375 FT² (OK)
3. INLET VELOCITY = $75,000 \text{ CFM} \div 3 \times 50 = 500 \text{ FPM} < 600$ (OK)
4. PAD WATER FLOW = $75,000 \text{ CFM} \times 4 \text{ GPM}/1000 \text{ CFM} = 30 \text{ GPM}$.
5. NOZZLE PATTERN = 30 GPM $\div$ 50' = 6 GPM/FT.
- SELECT: HALF CIRCLE FLAT SPRAY NOZZLES AT .3 $\pm$.03 GPM @ 15 PSI, 6" O.C.



- A) USE $\frac{3}{16}$ " DRILL & 10-32 MACHINE TAP INTO PVC.
- B) HAND TIGHTEN 3 OR 4 TURNS.

ALTERNATE: ADJUSTABLE FULL OR HALF CIRCLE SHRUB HEADS AT .6 $\pm$.1 GPM @ 15 PSI, 1' O.C.

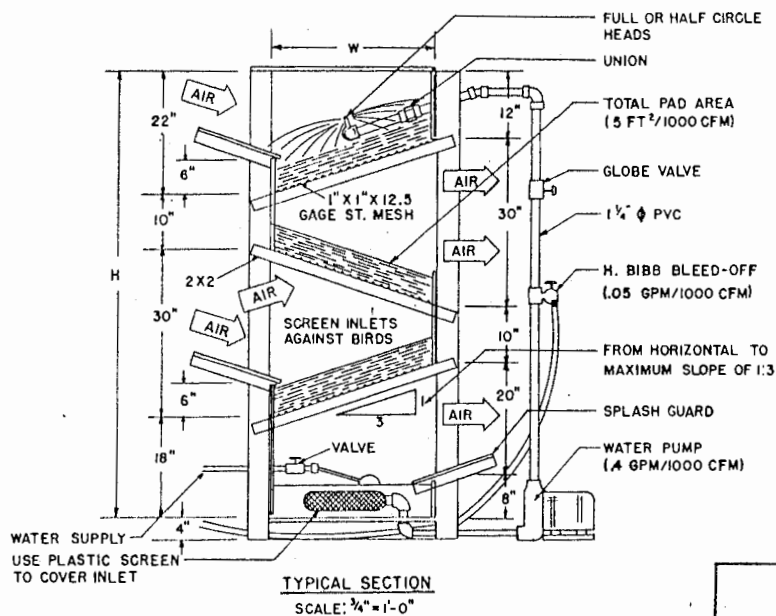


- A) SPACE NOZZLES TO AT LEAST A DOUBLE OVER LAP PATTERN.
- B) DIRECT SPRAY DOWNLINE.

6. PUMP H.P. = $Q \times H / 2000 = 30 \text{ GPM} \times 59' / 2000 = .89$
7. BLEED-OFF = $75,000 \text{ CFM} \times .05 \text{ GPM}/1000 \text{ CFM} = 4 \text{ GPM}$

CABINET LINING SUGGESTIONS

- 1) USE $\frac{3}{4}$ " OR $\frac{1}{4}$ " CEMENT ASBESTOS BD. FOR CABINET, SPLASH & DRAIN STORAGE LININGS.
- 2) WATERPROOF W/2" NYLON MESH TAPE TO CORNERS & SEAMS. COAT W/EMULSIFIED ASPHALT. ALTERNATE: USE FIBERGLASS TAPE. COAT W/175 FT² POLYETHYLENE RESIN. VENTILATE OR USE GAS MASK. CLEAN BRUSH W/ACETATE.



TYPICAL SECTION
SCALE: $\frac{3}{4}$ " = 1'-0"



EVAPORATIVE COOLING
PAD CABINET

AZ. '74 6208 SHEET 1 OF 1

Disclaimer

This site makes available conceptual plans that can be helpful in developing building layouts and selecting equipment for various agricultural applications. These plans do not necessarily represent the most current technology or construction codes. They are not construction plans and do not replace the need for competent design assistance in developing safe, legal and well-functioning agricultural building system. The LSU Agriculture Center, the Mid-West Plan Service, the United States Department of Agriculture and none of the cooperating land-grant universities warranty these plans.