

2. Shut down and drain pump housing; note if suction and discharge valves are holding.
3. Remove gland.
4. Examine shaft sleeve for wear; replace as necessary.
5. Adjust gland evenly, finger tight.
6. On pumps with oil ring lubrication, drain oil, flush, then fill to proper oil level with new oil.
7. Perform lubrication in accordance with manufacturer's instructions.
8. Clean strainers.
9. Put pump into operation. Stop and start pump, noting undue vibration noise, pressure, and action of check valve.
10. If test is satisfactory, start pump again, and adjust to slight leakage through gland.
11. When pump reaches normal operating temperatures, check alignment between pump and drive.

GUIDE NUMBER P-19**RADIATORS, HEATING**

Frequency: Once Every 5 Years
(Prior to heating season).

Checkpoints:

1. Remove and inspect seat of trap. Clean out trap.
 2. Replace thermal element with new or tested unit.
- NOTE: Replace defective seats in traps fitted with removable type.
3. Check radiator valve for free turning and seating at same time. Check packing.
 4. If radiator has automatic temperature regulating valve, remove valve cover and remove dirt by vacuuming.
 5. For hot water radiators, check bleed valve.
 6. Check for sediment - clean if necessary.

GUIDE NUMBER P-20**ROOF, BUILT-UP**

Frequency: Semiannual

Workhours per Frequency: Calculate annual workhours by using the standard times for building/components and checkpoints listed below.

<u>Check-point</u>	<u>Item</u>	<u>Time</u>
-	Review inspection materials	30 minutes per inspection
-	Assemble equipment and tools	10 minutes per inspection
1	Outside building walls	2 minutes per 100 lineal ft.
2	Inside ceilings and walls (top floor)	2 minutes per 1000 sq. ft. ceiling area (office)
		1 minute per 1000 sq. ft. ceiling area (workroom)
3	Roof Perimeter	1 minute per 20 lineal ft.
4	Gutter	15 minutes per 100 lineal ft.
5	Expansion/control joints	1 minute per 20 lineal ft.
6	Roof penetrations	.5 minutes each
7	Roof drains	.5 minutes each
8	Roof Mat	5 minutes per 1000 sq. ft.

Application: This provides for the visual inspection of builtup roofing system and correction of minor defects that can be repaired in fifteen minutes or less (per defect) with small tools and cold process material. Cleaning roof drains and gutters is also included.

Safety: Comply with all safety rules for working on roof top. Check all tools and equipment for safe condition (ladders, rope safety lines, etc.). Review HBK EL-801, Supervisor's Safety Handbook.

Special Instructions: Review material on roof inspection and maintenance (see Chapter 2 of HBK MS-6, Repair and Alteration Surveys). Use reduced size copy of roof plan to mark major defects and required repairs beyond the scope of this maintenance. If inspection indicates that water is entering the roof or if you have reason to believe the roof insulation is wet, request a roof moisture survey.

Checkpoints:

1. Observe condition of outside building walls for evidence of moisture penetration.
2. Observe condition of ceilings, walls, etc., on all top floors. Look for indications of leaks, damage, paint peeling, etc.
3. Walk entire outer edge of roof. Check roof edges, parapet wall, flashings, etc., for bad caulking, open joints, expansion cracks, and damage. Make minor corrections as needed.
4. Clean all trash and debris from gutters.
5. Walk entire length of expansion and control joints. Check each side closely for damage, making minor corrections as needed.
6. Check all roof penetrations for damage or problems. (Air ducts,

fans, support steel, pitch pockets, etc.)

7. Clean all trash and debris from drains and check each drain for proper drainage, tightness, gravel stop, etc. Carefully inspect roof mat around each drain.
8. Walk roof in not more than 20' wide paths removing all trash and debris. Check roof condition for 10' on either side. Note any damage, exposed roof felts, blisters, loss of flood coat or aggregate, soft spots, boils, blisters, alligatoring of bitumen, etc.
9. All locations requiring large repair will be marked by spray paint, noted on roof print, and identified by location and number. Prepare a report on condition of roof and recommended repairs.

GUIDE NUMBER P-21

DRAINS, AREAWAY, DRIVEWAY, STORM

Frequency: Semiannual

Special Instructions: Perform work in autumn after leaves have fallen, and in spring.

Checkpoints:

1. Clean drain and area leading to drain.
2. Remove debris and trash.
3. Test drain for free water flow by flushing with hose.

GUIDE NUMBER P-22

EXPANSION JOINTS IN PIPING

Frequency: Annual

Application: Slip-type joints only. (Bellows-type joints to be replaced when a leak occurs.)