

SECTION 98-TOOLS AND PLANT

Specialized plant

2244. Bituminous plant in common use is listed in Table 22.18.

2245. `Safety precautions: - Cut back bitumen's and road tars are highly inflammable. Special care is needed: -

- a. To avoid building up vapor pressure. Transporting and heating tanks should be vented.
- b. To minimize fire risk near openings in the top of storage tanks and distributors.
- c. To exclude water from binder while being heated, as moisture may cause it to boil over like milk. provide adequate covers for heaters and sheet them down when not in use.

Miscellaneous plant, equipment, and hand tools

2246. Sweepers: - The rotary sweeper, with a rotating brush set at an angle of 45°, is ideal for cleaning the surface before spraying. an improvised sweeper can be made by fixing broom heads to underside of a light road drag.

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TABLE 22.18-PLANT FOR BITUMINOUS SURFACING

Serial No	Machine	Type or capacity	Materials	Output per 8-hour shift
(a)	(b)	(c)	(d)	(e)
1.	Binder heater	80 gals	Straight-run bitumen or tar	160 gals
	ditto	250 gals	Cut-back bitumen or road tar	400 gals
	ditto	320 gals	Straight-run bitumen or tar	500 gals
	Binder sprayer		Cut-back bitumen or road tar	1250 gals
	ditto	80 gals	Straight-run bitumen or tar	640 gals
	Binder distributor	250 gals	Cut-back bitumen or road tar	1600 gals
	Mobile bituminous mixing plant	1000 gals	All bitumen's or tars	500 gals
		5 cu ft	All bitumen's or tars	1250 gals
	ditto		All bitumen's or tars	8000 gals
	ditto	7-9 cu ft	All bitumen's or tars	30 cu yds
	ditto	10 cu ft	Aggregate, binder, and filler to produce pre-coated chippings tar macadam, rolled asphalt, or dense tar surfacing.	
	Mobile bituminous mixing plant	Continuous mixer		
	ditto	20-30 tph batch plant		
Layers and finishers		30-50 tph batch plant		50 cu yds
		Various wade patterns	ditto	60 cu yds
			ditto	80 to 100 tons per hour

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			<p>ditto</p> <p>All types of mix as above Lay tamp and finish premixed materials in widths of 8 to 12 ft and thickness of $\frac{1}{4}$ in to 6-in</p>	<p>160-240 tons</p> <p>240-400 tons</p> <p>400-1000 tons</p>
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*Spraying only# Self-contained plant comprising drying and heating unit, mixer and binder heater \$ Crawler mounted and self-propelled. Fed by tipping-truck without stopping

2247. Graters. -Specially designed equipment is in the form of a curved steel baffle, under which the stone flows to fall as a continuous curtain. Some from of restricted tail-gate opening at the rear of a tipping truck is readily improvised.

2248. Pouring Pots and cans.-Distribution of binder by hand labor is improved by using suitably designed containers or spouts. Examples are shown in Figure 22.3.

2249. Hand tools. -The following may be required for hand laying and for minor repairs:-

- a. Metal dump plates
- b. Measuring buckets and dipsticks
- c. Gauge boxes
- d. Wooden or metal forms
- e. Hand barrows (preferably pneumatic tired)
- f. Timber or metal strip for barrow runs
- g. Brooms
- h. Shovels
- i. Forks
- j. Rakes
- k. Hand tampers (preferably iron)
- l. Screening boards
- m. Straight-edge
- n. Boning rods, lines and level pegs.