Provided that when a pipe connection through which the inside of the receiver can be sighted is fitted on the end opposite to that to which a handhole is fitted, one handhole only will be required.

Receivers 36 in. diameter and over—one manhole.

Manholes shall not be less in dimension than 11 in. by 15 in., or 10 in. by 16 in., or 15 in. diameter if circular.

All vessels below 16 in. diameter will not be required to have handholes provided that there are at least two pipe connections or other openings through which the inside of the receivers can be sighted. Elliptical openings in cylindrical shells must have their shorter axes arranged longitudinally.

Compensation Rings to Openings.—Where the cylindrical shell, or a dished end, is cut for a manhole or opening greater than $2\frac{1}{2}$ times the thickness of the plating plus $2\frac{3}{4}$ in., compensation must be provided, and must be such that the strength in way of the hole is not less than that of the shell plate in way of the longitudinal seam. The thickness of the compensating-plate shall not be less than that of the plate to which it is attached. Openings with a major axis exceeding 5 in. cut in flat plates shall be similarly compensated.

In cases where a plate is flanged at an inspection opening the depth of the flange is to be as required for flanged manholes of dished ends.

The doors and cross-bars of inspection openings shall be of wrought iron, mild steel, or cast steel, and of substantial proportions.

30. *Pipe Connections.*—Where pipes are screwed into plates they shall have at least five complete threads in the plate for sizes up to and including 2 in. diameter, and ten threads for sizes up to and including 4 in. diameter. Where the thickness of the plate is not sufficient to permit of the required number of threads, the plate shall be reinforced with a plate or flange riveted or welded on, and both plates shall be threaded.

When the working-pressure exceeds 125 lb. per square inch, pipes over 3 in. diameter shall be secured to flanges riveted to the receiver.

31. *Safety-valves.*—Every air-compressor plant shall be fitted with a safety-valve, which shall be so arranged as to protect both the air-receiver and the air-compressor against an increase of the working-pressure. There must be no valve of any description fitted between a safety-valve and a compressor or receiver, and in cases where, owing to the interposition of valves, one safety-valve cannot be considered as a protection to both compressor and receivers, separate safety-valves to compressors and receivers shall be fitted.

Safety-valves of the direct-spring-loaded type shall have a lifting-device whereby the valve can be lifted from its seat and its working tested. The valve and seat shall be of non-ferrous metal. As a general rule the diameter of the valve shall not be less than that of the internal diameter of the air inlet-pipe to the receiver, but, in all cases the discharge-capacity shall be sufficient to prevent a rise of pressure in the air-receiver of more than 10 per cent. of the working-pressure when the air-compressor is working at its full capacity and all outlets from the air-receiver are shut off.

Every safety-valve which is exposed to a temperature of 32° F. or less shall have a drain-hole at the lowest point where water can collect.

32. *Pressure-gauge.*—Every air-receiver shall be fitted with an approved pressure-gauge.

33. *Drains.*—Every air-receiver shall have a drainpipe not less than $\frac{1}{2}$ in. diameter, for receivers under 10 cubic feet capacity, and not less than $\frac{3}{4}$ in. diameter, for larger receivers. The drainpipe shall be fitted with a cock and not a valve.

Air-receivers shall be thoroughly drained at least once each working-day.

34. *Autogenous Welding.*—Autogenous welding shall be done with proper materials by an experienced welder. The Department reserves the right to refuse to issue a certificate for an autogenous welded receiver where the Chief Inspector of Machinery has any good reason to doubt the skill or reliability of the welder or the suitability of the welding-material.

Longitudinal seams shall not be lap-welded. The welds shall be reinforced at the centre of the weld, and so built up that the weld metal gradually increases in thickness from the surface of the plate to the centre of the weld.

End plates, excepting dished ends convex to pressure, shall have a flange not less than 1 in. long. Dished ends convex to pressure shall have a flange not less than $1\frac{1}{2}$ in. long which shall be a driving fit in the shell. The ends of the shell shall then be turned over to a diameter not less than 1 in. smaller than the original diameter, and afterwards welded.

35. *Brazing.*—Longitudinal seams shall have the edges of the plates lapped a distance of not less than eight times the thickness of the metal.