

All units assembled on the baseplate with the driven apparatus at our factory are carefully lined up and doweled before shipment with $\frac{1}{8}$ " shim pads under the turbine. If the baseplate could be depended upon to stay absolutely rigid, the unit could be set over the foundation, the baseplate leveled up properly and the unit would be in perfect alignment. This cannot be depended upon, however, as the strongest baseplates are to some degree subject to deflections. It is always advisable to thoroughly check alignment.

Should the unit be found out of line, place shims or chock blocks under the baseplate edges alongside of the foundation bolts (being sure to leave the required space between the top of foundation and bottom of baseplate for grouting or shimming). Refer to outline drawing furnished with the unit. Place shims or chocks also at fairly long unsupported distances between foundation bolts. Put wedges alongside of these shims or chocks and level up the baseplate by these wedges. Then shim and knock out the wedges, drawing the foundation bolts down tight. Check again for level, at the same time checking for alignment at the coupling or couplings.

If the unit is out of line sideways, it can usually be corrected by "throwing" the baseplate (if not grouted), using wedges placed as required. If grouted, the turbine and driven machine must be shifted sideways and redoweled.

If the unit is out of line up and down (coupling too high or too low), this also can be corrected by "throwing" the baseplate as described above. If grouted, the correction must be made by shimming under the supporting feet as required.

ATMOSPHERIC RELIEF VALVE

A relief valve should be installed between the turbine exhaust flange and the first shut-off valve to protect the turbine casing. This relief valve should be of ample size to pass the maximum quantity of steam flowing through the turbine without the pressure rising above the maximum allowable turbine exhaust pressure. Relief valves are furnished and installed by the purchaser.

The sentinel valve (501), furnished on the turbine casing (502), serves only as a warning that excessive pressure exists within the casing. This valve operates at a pressure above the maximum for which the atmospheric relief valve is adjusted.

The turbine should not be started unless the atmospheric relief valve has been installed and is in operating condition.

STEAM PIPING

No part of the turbine installation is more important for future successful operation, than well-designed and well-executed piping. There are two definite objectives for good piping:

1—To prevent the heated piping from imposing strains on the turbine casing and thus affecting the alignment.

2—To so connect and drain the turbine inlet and exhaust lines that dry steam is furnished to the turbine and that water accumulation in these lines is prevented.

A stop valve is recommended in the steam line, preferably at a convenient accessible location in the turbine room, between the steam header and the turbine inlet, to allow working on the turbine without shutting down the boiler.

The turbine casing must be protected from piping weight or piping expansion strains. The weight of piping should be separately carried by suitable supports. Expansion joints or bends should be provided adjacent to the turbine flanges. Connections between the piping flanges and turbine flanges are to be made without forcing the pipe line in any direction whatever in order to make a satisfactory joint. Connections may be considered entirely satisfactory if the connecting pipe lines, when heated to operating temperature, do not shift out of line with the turbine flanges when the bolting is withdrawn. Fig. 2 illustrates recommended steam and exhaust piping arrangement.

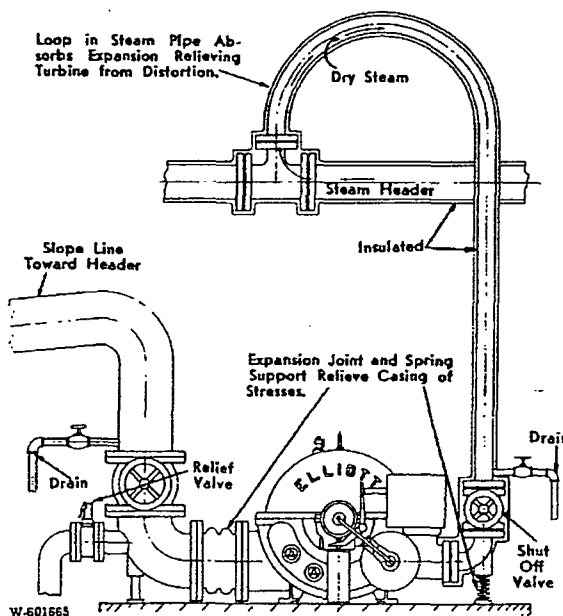


FIG. 2 RECOMMENDED STEAM AND EXHAUST PIPE ARRANGEMENT

STEAM SUPPLY

Steam should at all times be free from moisture and preferably be superheated. A receiver type separator with ample drains should be provided ahead of the stop valve to prevent slugs of water from damaging the turbine. When a separator is not provided, a blowoff valve or continuous drain should be connected to the lowest point of the steam inlet piping.

The strainer (568), furnished with the turbine, is suitable for protection against large particles of scale, welding beads, etc. This strainer does not guard against abrasive matter, boiler compound or traces of acid or alkaline substances, which may be carried over in