

Throttle Valve

Figure 1 shows the Throttle Valve or Main Valve which controls the flow of steam to the turbine. It is a simple arrangement commonly called the "Plug Type".

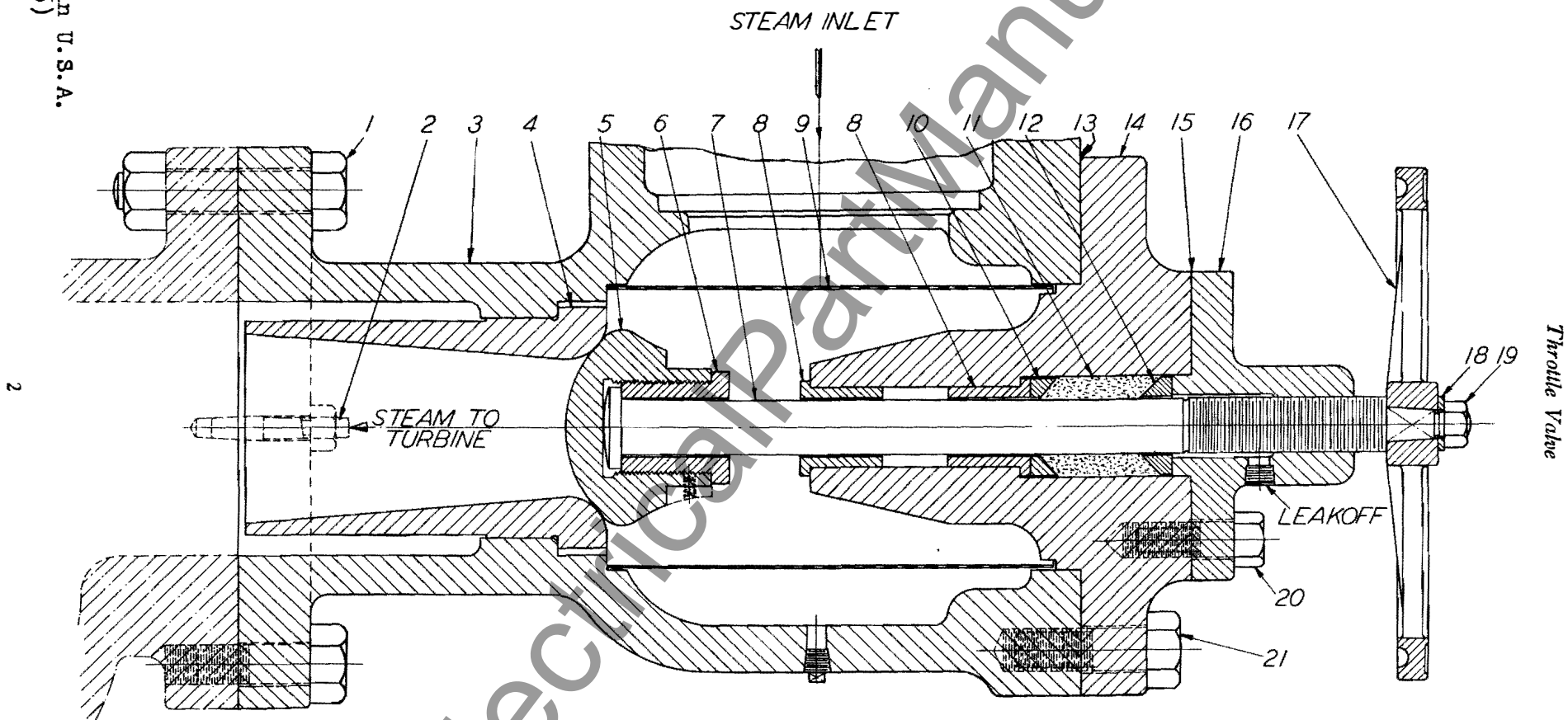
Movement of the valve is controlled by the handwheel "17" and guided by the stem bushings "8". Leakage of steam is kept to a minimum by the packing composed of items "10", "11", and "12" which is commercial Q.P. packing.

The following points should be noted in connection with reseating this valve. The seating surfaces of the main valve "5" and the seat "4" are machined spherically and then lapped a very small amount which gives a narrow, continuous surface of contact. If the valve and seat are in good condition but leaking slightly, they can be made tight by additional lapping provided the width of these contacting surfaces does not exceed 1/16 inch. If the width of these contacting surfaces exceeds 1/16 inch, both the valve and seat must be remachined, using the same radii as on the original pieces. When machining the seat "4", after finding the correct radius, the center should be moved toward the left (as viewed in the illustration) in a line parallel with the axis of the seat so as to take the cut off the end and not increase the diameter of the opening through the seat. After this machining, the parts should be lapped just enough to make them tight. It should also be noted that there is no gasket between the seat "4" and the valve body. These surfaces must be ground to a steam tight joint.

The strainer "9" is placed around the main valve "5" and is easily removed for cleaning by removing the valve bonnet "14". It acts not only as a strainer, but serves also to direct the steam properly into the valve.

The following list has been compiled to facilitate ordering spare or renewal parts by name and number together with the serial number of the turbine:

<u>Item No.</u>	<u>Name</u>
1	Thru Bolt
2	Taper Dowel
3	Throttle Valve Body
4	Valve Seat
5	Valve
6	Valve Stem Coupling Nut
7	Valve Stem
8	Valve Stem Bushing
9	Steam Strainer
10	Valve Stem Packing Ring (inner)
11	Valve Stem Packing
12	Valve Stem Packing Ring (outer)
13	Gasket
14	Valve Bonnet
15	Gasket
16	Valve Stem Nut
17	Handwheel
18	Handwheel Washer
19	Handwheel Nut
20	Valve Stem Nut Tap Bolt
21	Valve Stem Bonnet Tap Bolt



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Fig. 1 - Throttle Valve Assembly