

Trial of Manfies Patent Circulating tubes for Marine Boilers as fitted to the S. S. Tnaplin Hall May 10th 1877

Dec 28/5/77

Time	Temp-taken from a cock fitted to Boiler Bottom	Temp-taken at test cock fitted at back of boiler above furnace	Pressure of Steam in lbs	Remarks
3.45 PM	50°	210°	0	Safety valves closed. tube down
4. 5"	50°	210°	20	shut & dampers open -
" 20"	50°	210°	44	Bottom shell plate cold,
" 30"	50°	210°	55	Safety Valves closed to usual supply
" 40"	57°	210°	55	to boiler mis- furnace dampers closed,
" 40"	51°	210°	55	
" 45"	52°	210°	54	furnace dampers opened
" 55"	64°	210°	52	
" 59"	94°	210°	52	
5. 2"	124°	210°	52	Bottom shell plates cold,
" 4"	132°	210°	50	Bottom shell plate slightly warm
" 9"	140°	210°	50	
" 11"	210°	210°	50	Water at bottom equal temp. to that at test cock above furnace Bottom shell sensibly warm below tubes - Bottom shell hot from front to back of boiler. Bottom shell hot all over.
5. 30"				
6. 0"				

Time taken from closing Safety Valve till Water at bottom of Boiler was heated to same temp as Water above furnace. All over

Some of opinion that these tubes do assist the more complete circulation of Water in the Boiler, but in order to try the comparative merit Value of these tubes, recommend Dr Manfies to have them fitted in a vessel with two Boilers, one with his tubes and the other without and that a careful Log be kept of the state of these Boilers, means being fitted for that purpose, from the time of lighting fires every 1/4 hour till steam is raised, from that time till the Bottoms of Boilers are heated to same as at furnace tops every 5 Minutes. and trial a day for four days -
G. W. Mammul north Shields

This boiler is not fitted with a Hydro-pneumatic.

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