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Homework on Heat Exchanger methods, Ch. 11 of Incropera 7<sup>th</sup> edition textbook

Problem	Modifications	Remarks	Answers
11.7	Change the mass flow rate of water from 400 kg/s to <b>500 kg/s</b>	Fouling effect	
11.13	Change U from 2000 W/m <sup>2</sup> K to <b>1800 W/m<sup>2</sup>.K. Calculate the heat exchanger effectiveness for each case</b>	Heat transfer area for different heat exchanger types	
11.53a,b	Change the water flow rate from 6.5 kg/s to <b>7 kg/s</b> and U from 200 W/m <sup>2</sup> K to <b>180 W/m<sup>2</sup>.K</b>	Shell and tube HX. Find outlet hot and cold temperatures	
11.81 Incropera, 6 <sup>th</sup> edition	Change the hot gases flow rate from 1.25 kg/s to <b>1.6 kg/s.</b>	Compact gas-liquid heat exchanger. Continuous fins	
11.83 Incropera, 6 <sup>th</sup> edition	Change the gas flow rate from 1.5 kg/s to <b>1.2 kg/s</b>	Gas-liquid compact heat exchanger	