



## P5700 MARCET BOILER

### DESCRIPTION

Cussons P5700 Marcet Boiler has been developed for investigating the relationship between the pressure and temperature of saturated steam, in equilibrium with water, at all pressures between atmospheric and 17 bar (250 lb/in<sup>2</sup>). The measured value of the slope of the graph  $(dT/dP)_{SAT}$  obtained from the practical results can be compared with corresponding values calculated from the data in steam tables. Clausius (1822-88) the German Physicist and one of the founders of Thermodynamics was instrumental in deriving the relevant Clausius-Clapeyron relationship:

$$\frac{(dT)}{(dP)_{SAT}} = \frac{Tv}{h_{fg}}$$

where the quantities of  $v_{fg}$  and  $h_{fg}$  are obtained from the steam tables; Fig. 1 below shows a typical Pressure Temperature Curve.

### FEATURES

- ◆ Electrically heated boiler fabricated from heavy duty steel section
- ◆ Supplied complete with safety valve, pressure gauge and water cock
- ◆ Boiler lagged to permit rapid heating and arranged for bench mounting

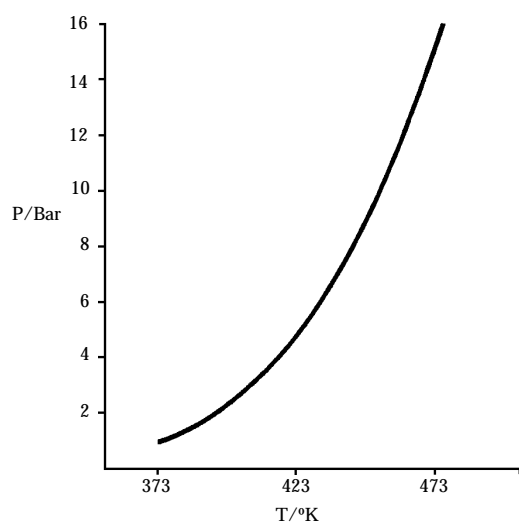


FIG. 1 PRESSURE TEMPERAURE CURVE

### TENDER SPECIFICATION

Fabricated steel boiler shell fitted with high pressure electric immersion heater and furnished with safety valve, pressure gauge, thermometer pocket and steel lagging jacket. Water quantity approximately 3 litres. Maximum working pressure 17 bar. Tested hydraulically to 29.25 bar (425 lb/in<sup>2</sup>) and tested under steam before despatch.

### SERVICES

*Electrical supply:-* 220/240 volt AC single phase 50 or 60 Hz, 2 kW

### PHYSICAL DETAILS

	Nett Weight		Length		Width		Height	
	kg	lb	m	in	m	in	m	in
P5700	65	143	0.36	14	0.36	14	1.0	39