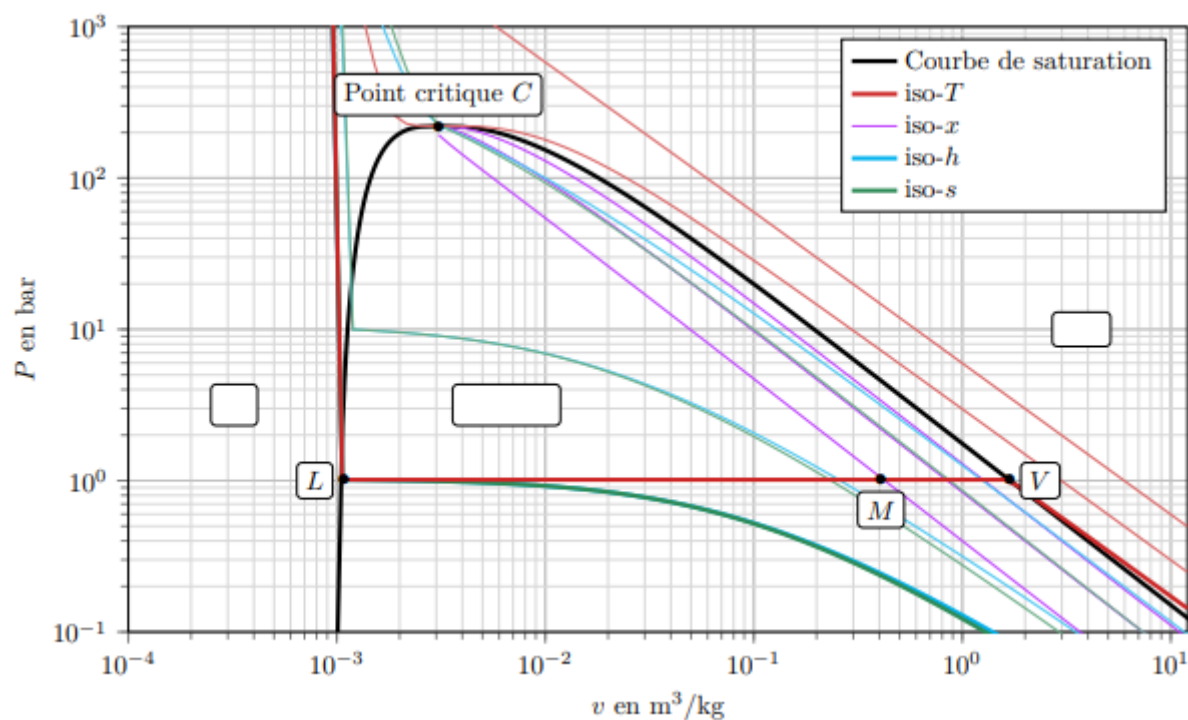
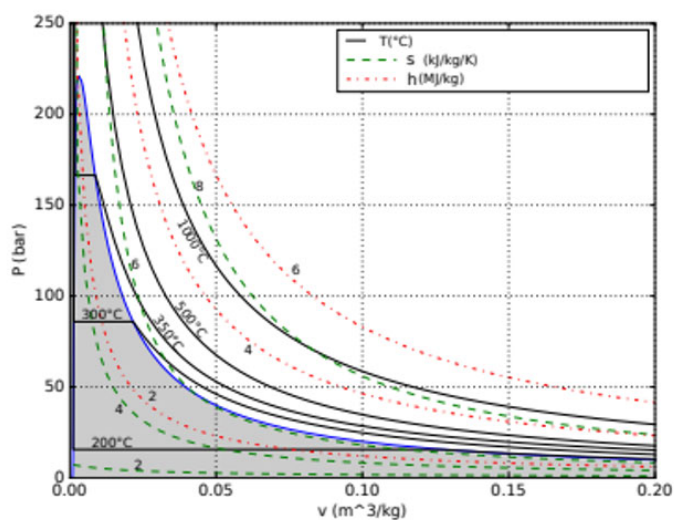
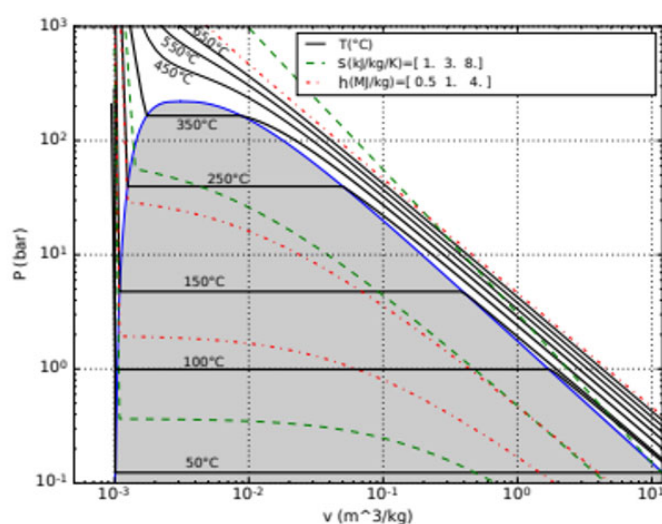
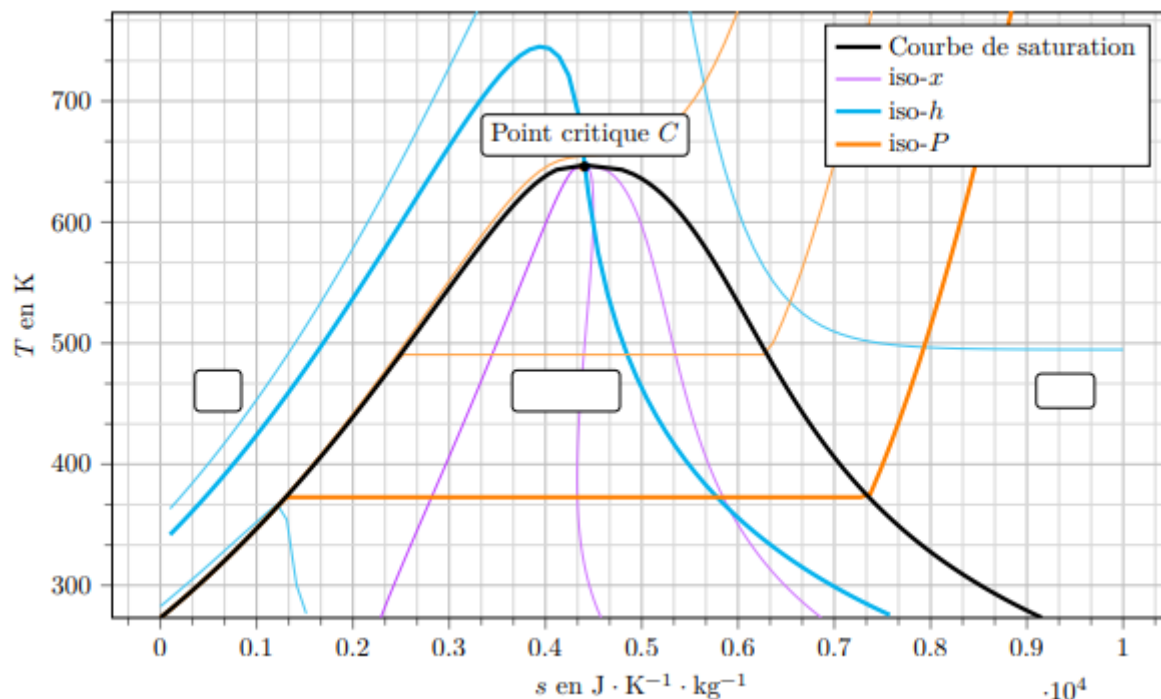
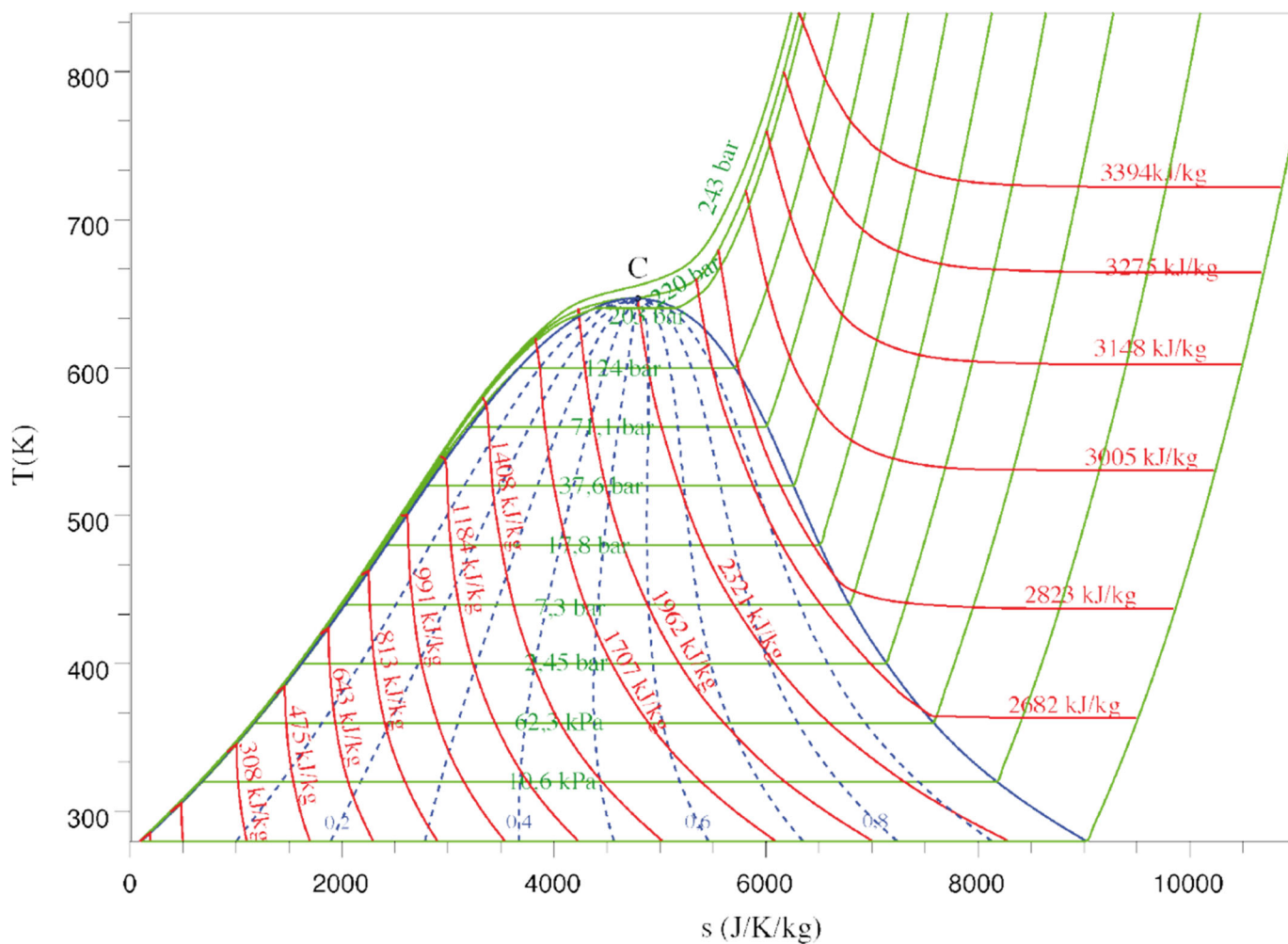


Diagrammes thermodynamiques

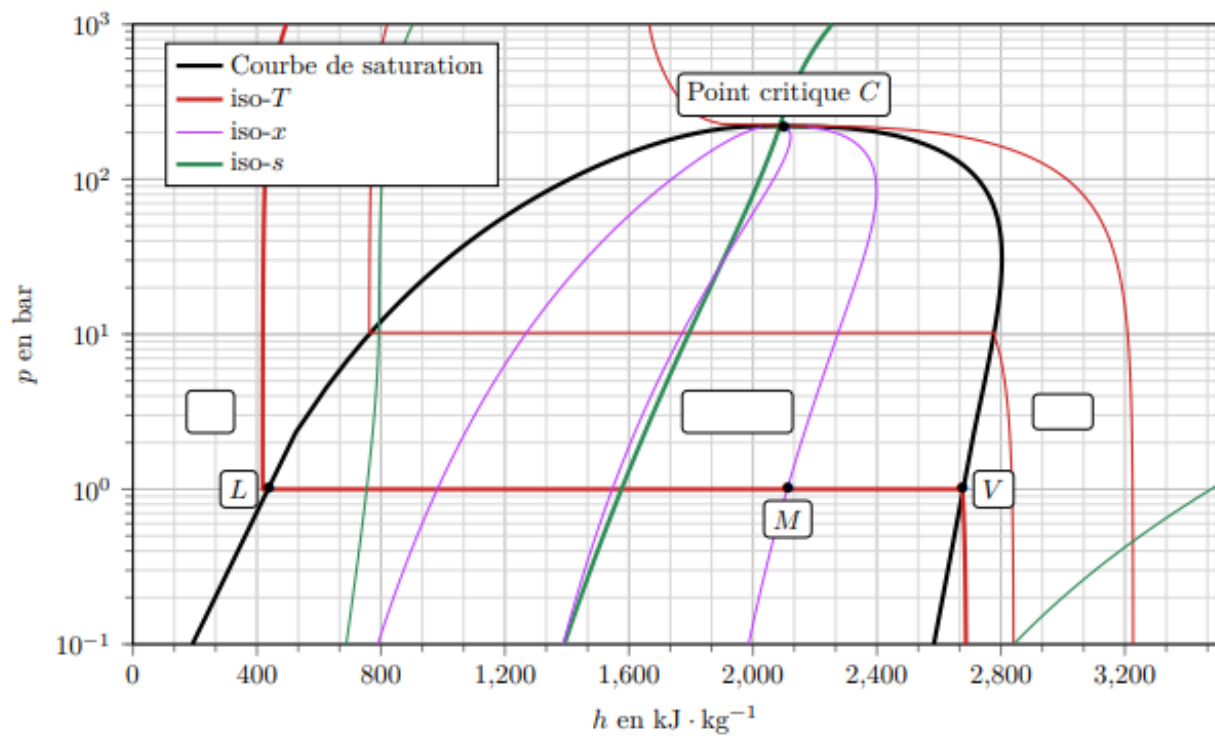
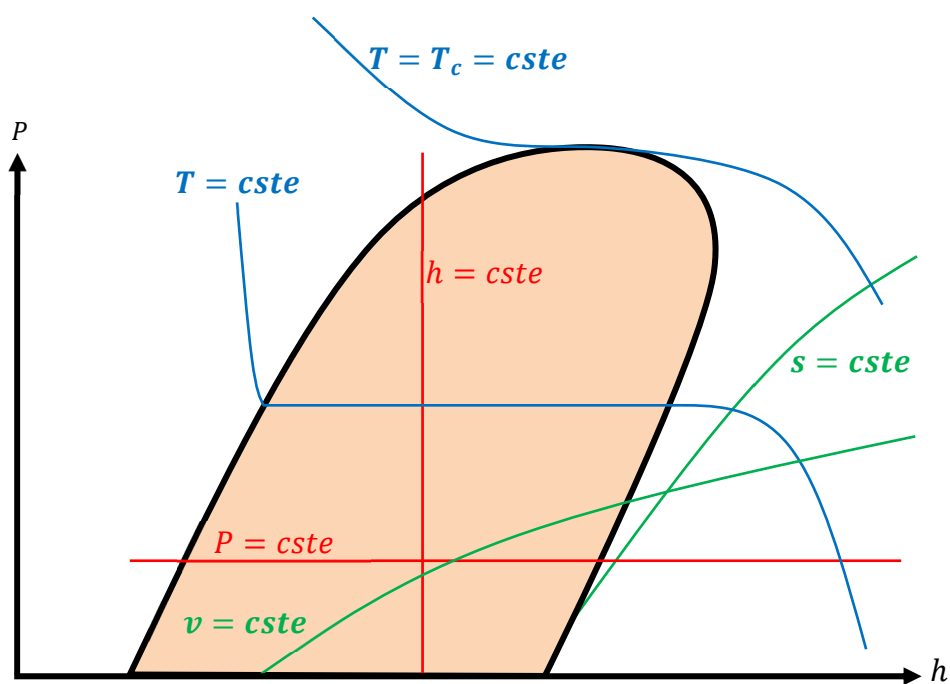
I. DIAGRAMME (P,v)

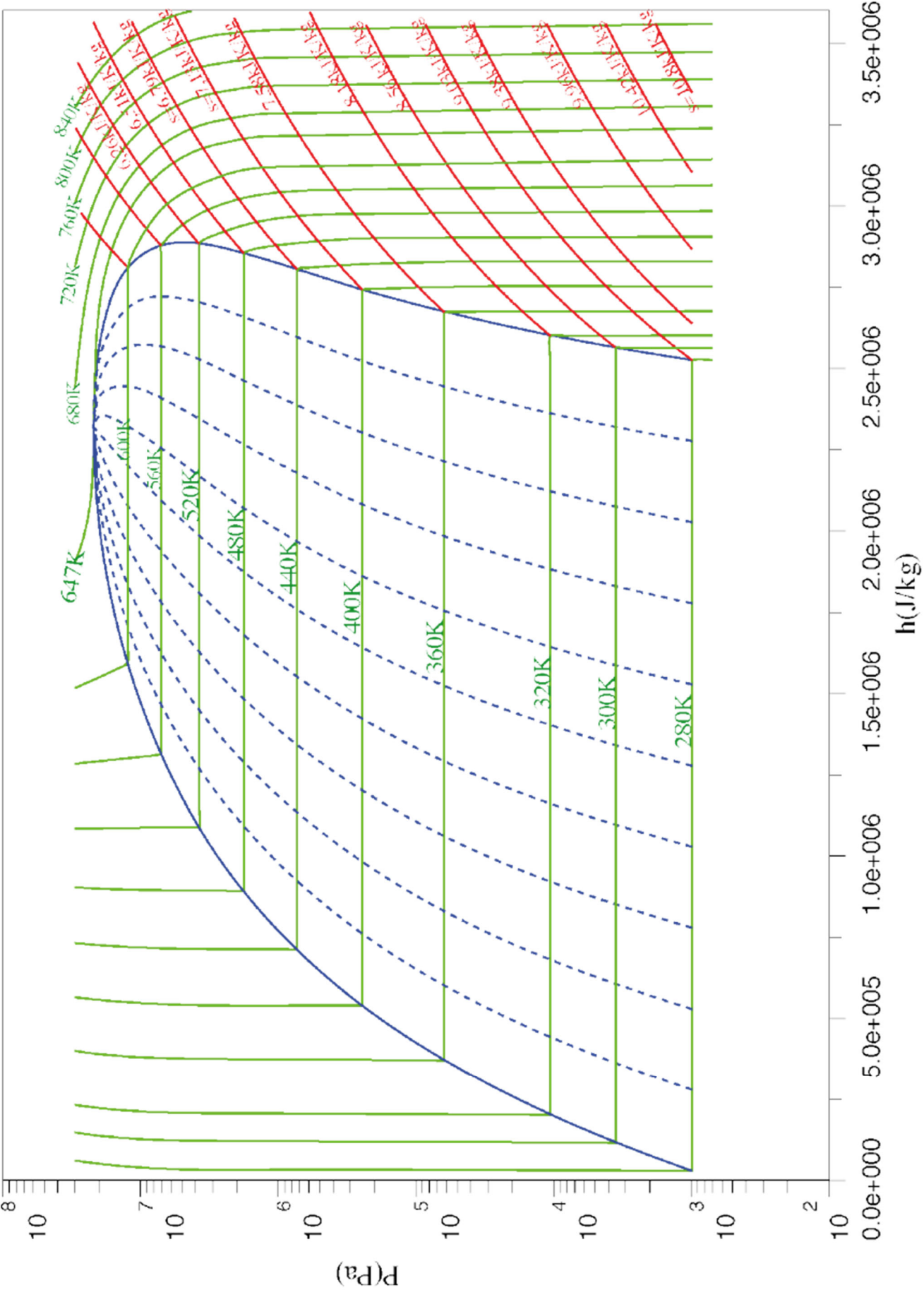


II. DIAGRAMME (T,s)

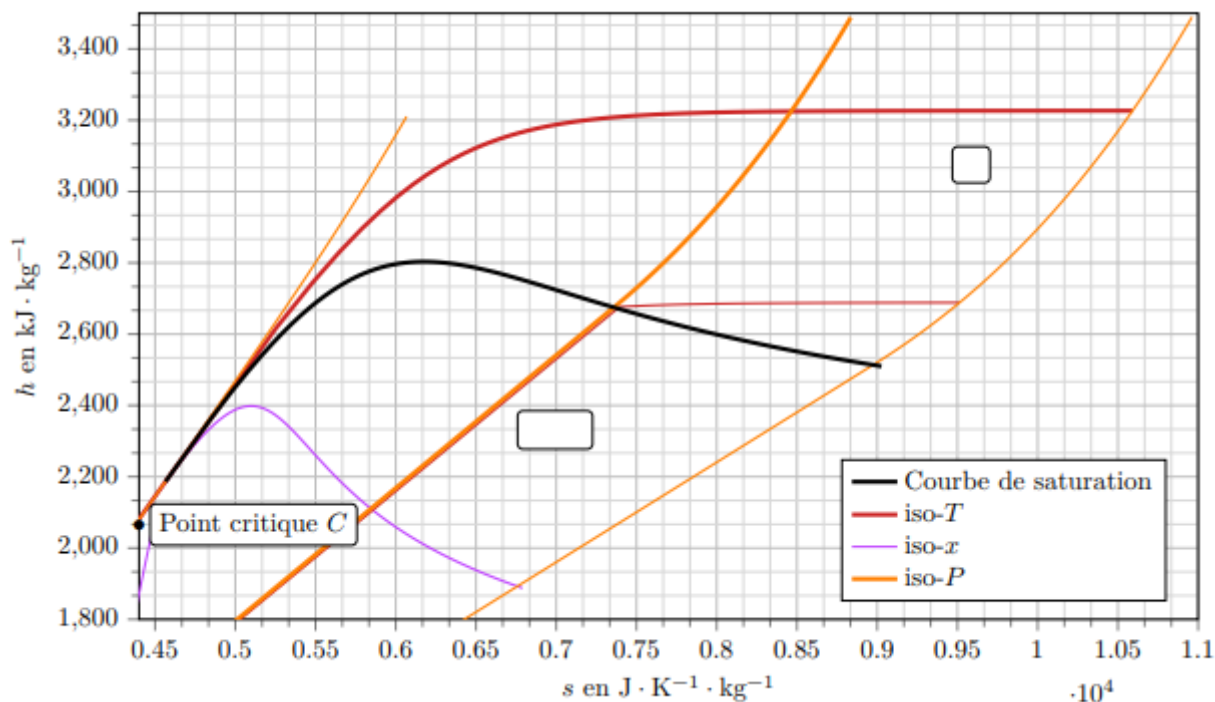
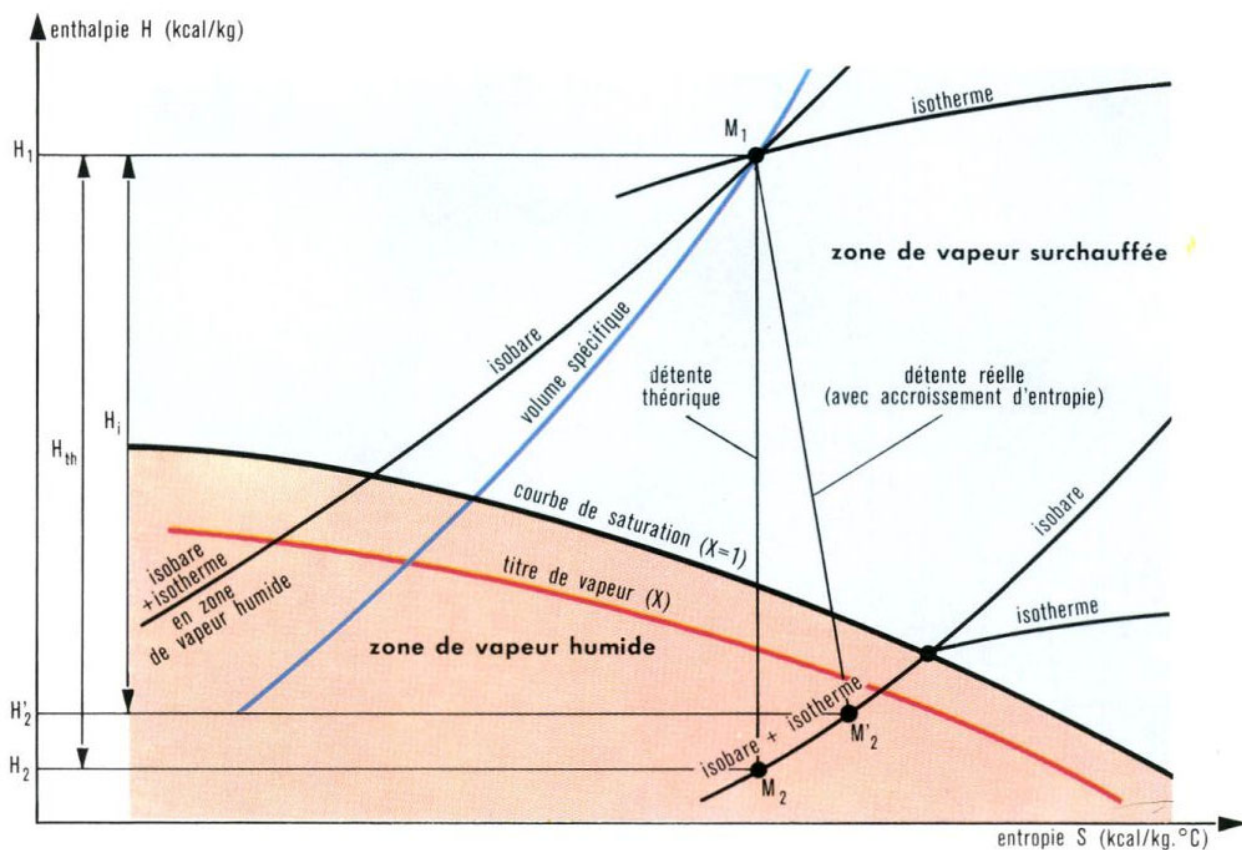


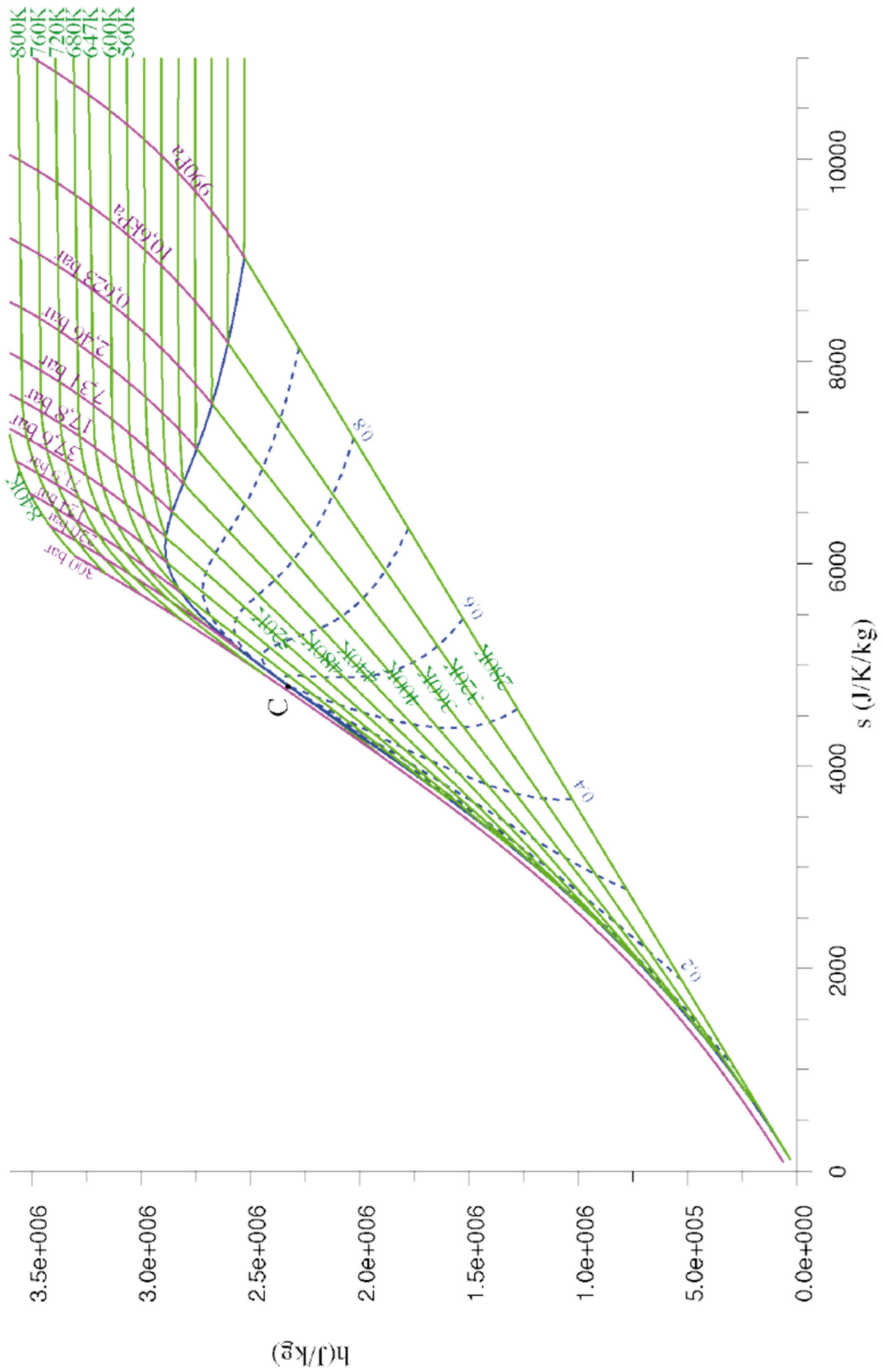
III. DIAGRAMME (P,h)





IV. DIAGRAMME (H,S)



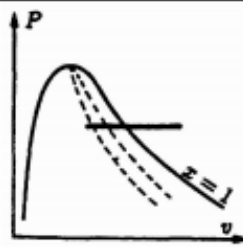
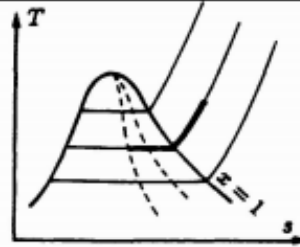
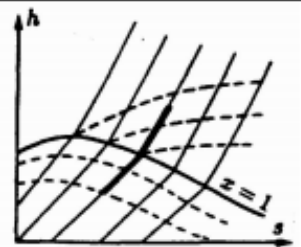


V. SYNTHÈSE.

➤ Isobare :

Pour toute machine apportant ou retirant de la chaleur au fluide, sans frottement et sans apport de travail.

En cas de frottements, il y a toujours $\searrow$ de la pression.

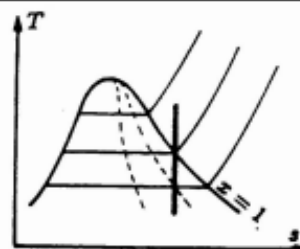
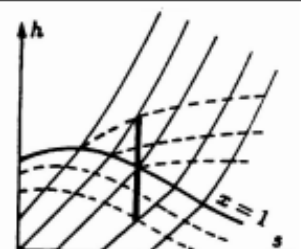


Exemples : chaudière, surchauffeur, condenseur, ...

➤ Isentropique :

Pour toute machine apportant ou retirant du travail, sans frottement et sans apport de chaleur.

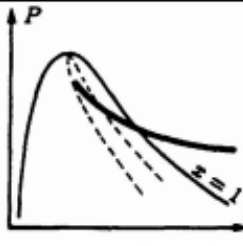
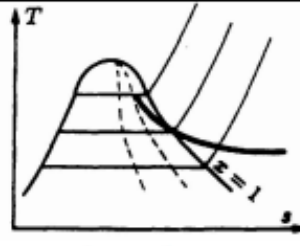
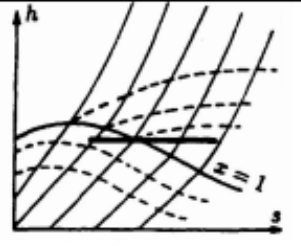
En cas de frottements, il y a toujours $\nearrow$ de l'entropie.



Exemples : pompe, turbine, tuyère, compresseur ...

➤ Isenthalpique :

Évolution avec frottement sans travail ni chaleur apportée.

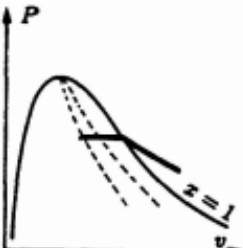
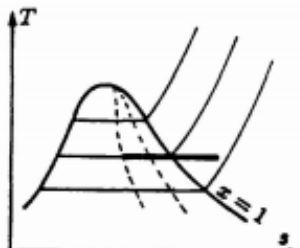
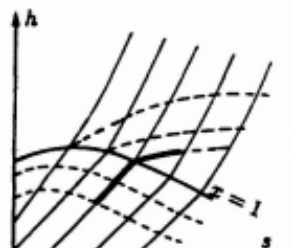


Exemples : détente Joule – Thomson, vannes de détente, ...

➤ Isotherme :

Évolution rarement rencontrée en pratique, sauf pour les isobares dans les régions biphasées sol – liq ou liq – vap.

Utilisées dans des cycles théoriques (Carnot, Stirling, ..)



➤ Isochore :

Évolution rencontrée lors de phénomènes très rapides (explosions) ou lors des transformations en vase clos (auto-cuiseur).

