

Figure 1

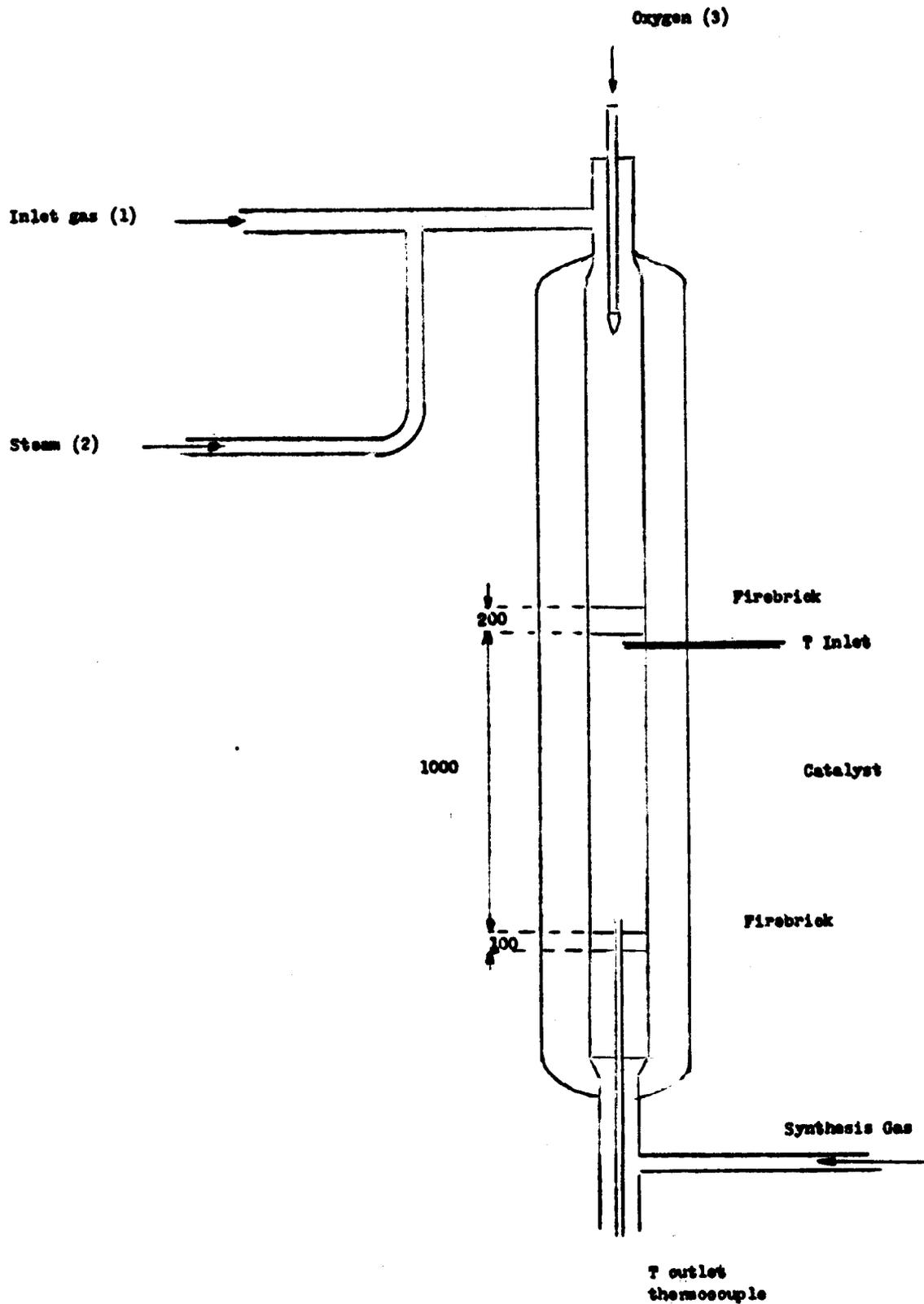
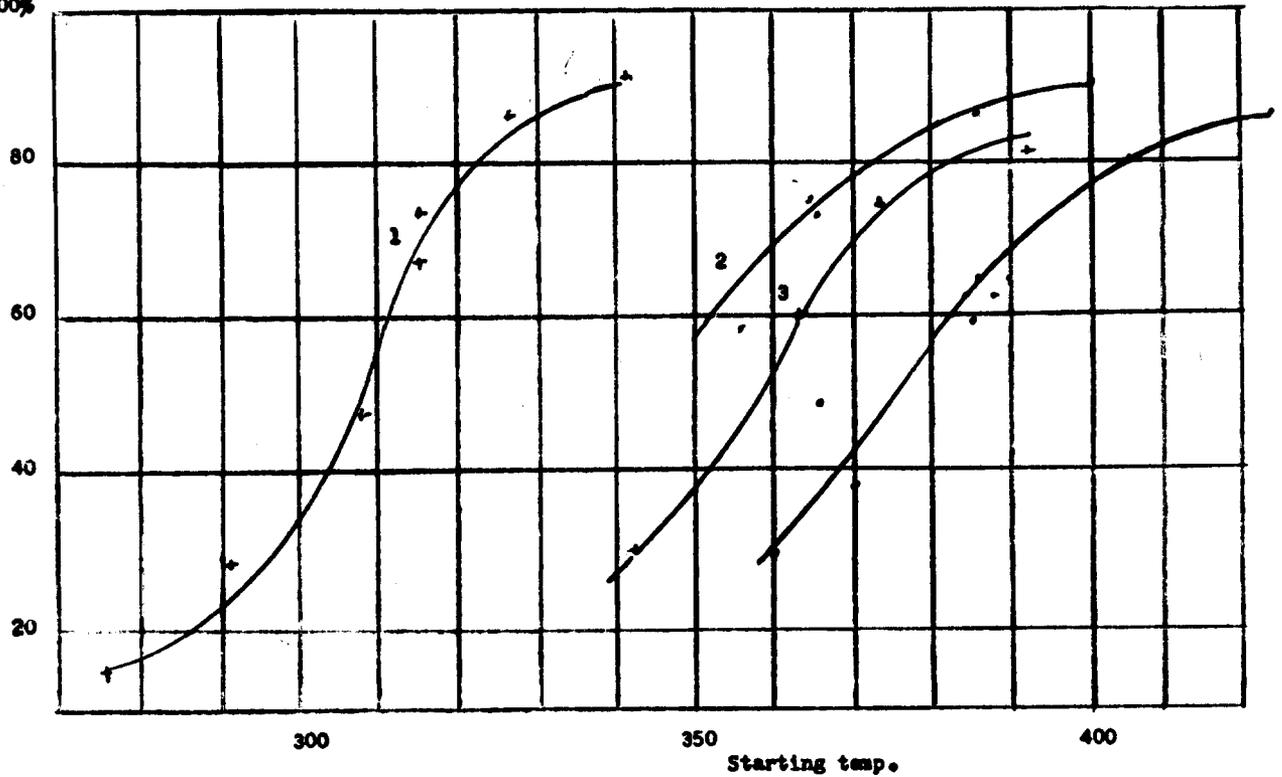


Figure 2

Conversion

100%



1. 1 atm. abs. 580 m³ gas/m³ cat.,hr.; H₂O:CO = 3.3:1
2. 7 atm. abs. 400 m³ gas/m³ cat.,hr.; H₂O:CO = 2.4:1
3. 11 atm. abs. 540 m³ gas/m³ cat.,hr.; H₂O:CO = 1.8:1
4. 16 atm. abs. 540 m³ gas/m³ cat.,hr.; H₂O:CO = 1.3:1

Figure 3. - Catalyst activity, variation with pressure percent of the theoretically possible CO conversion in relation to inlet temperature.

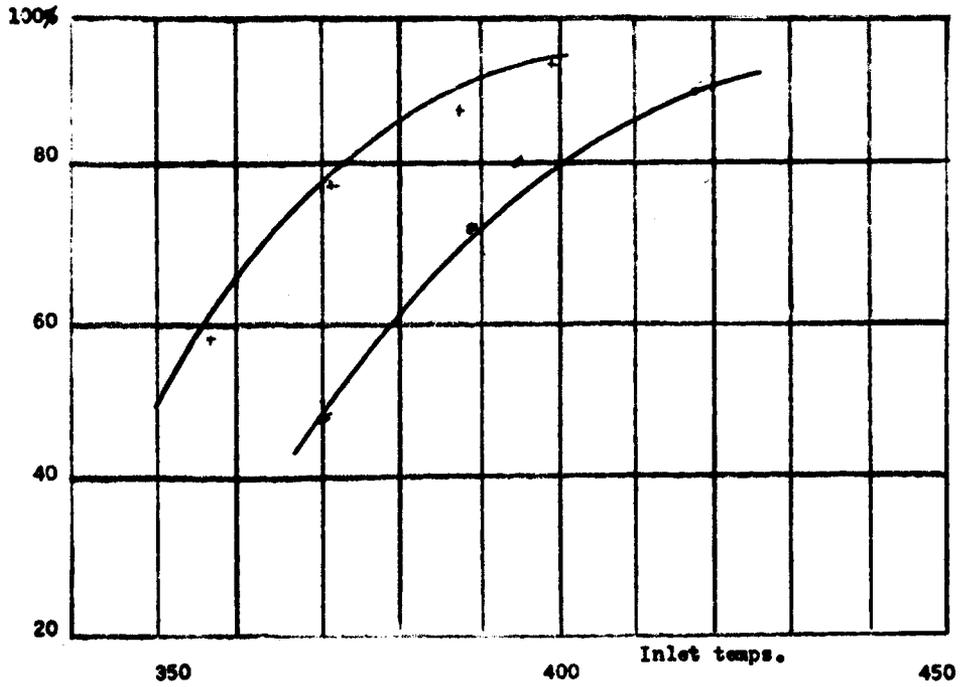


Figure 4. - CO-conversion with different inlet temperatures and residence time - 7 atm.

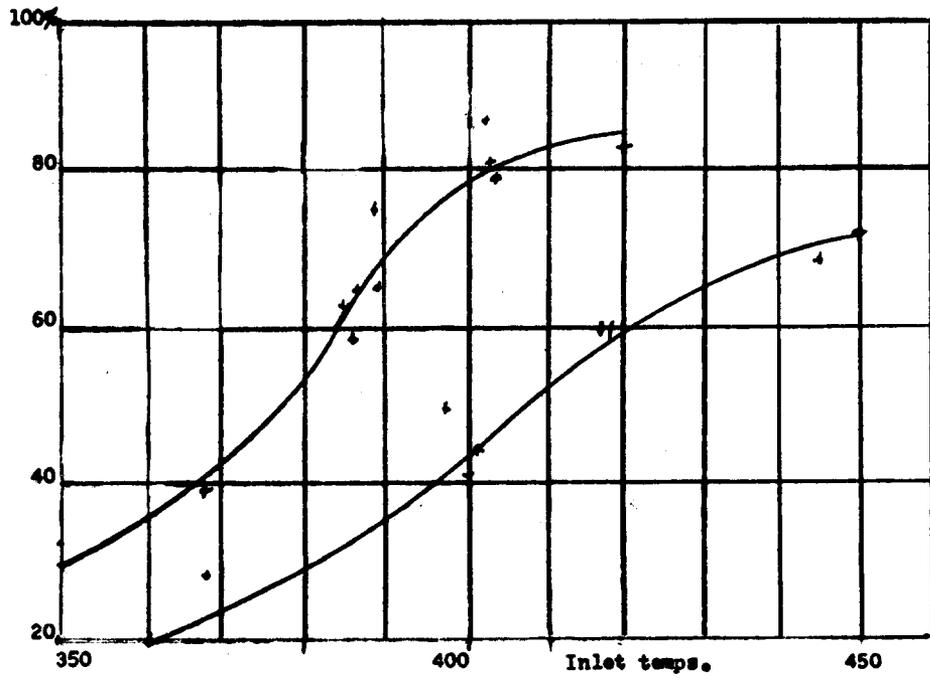
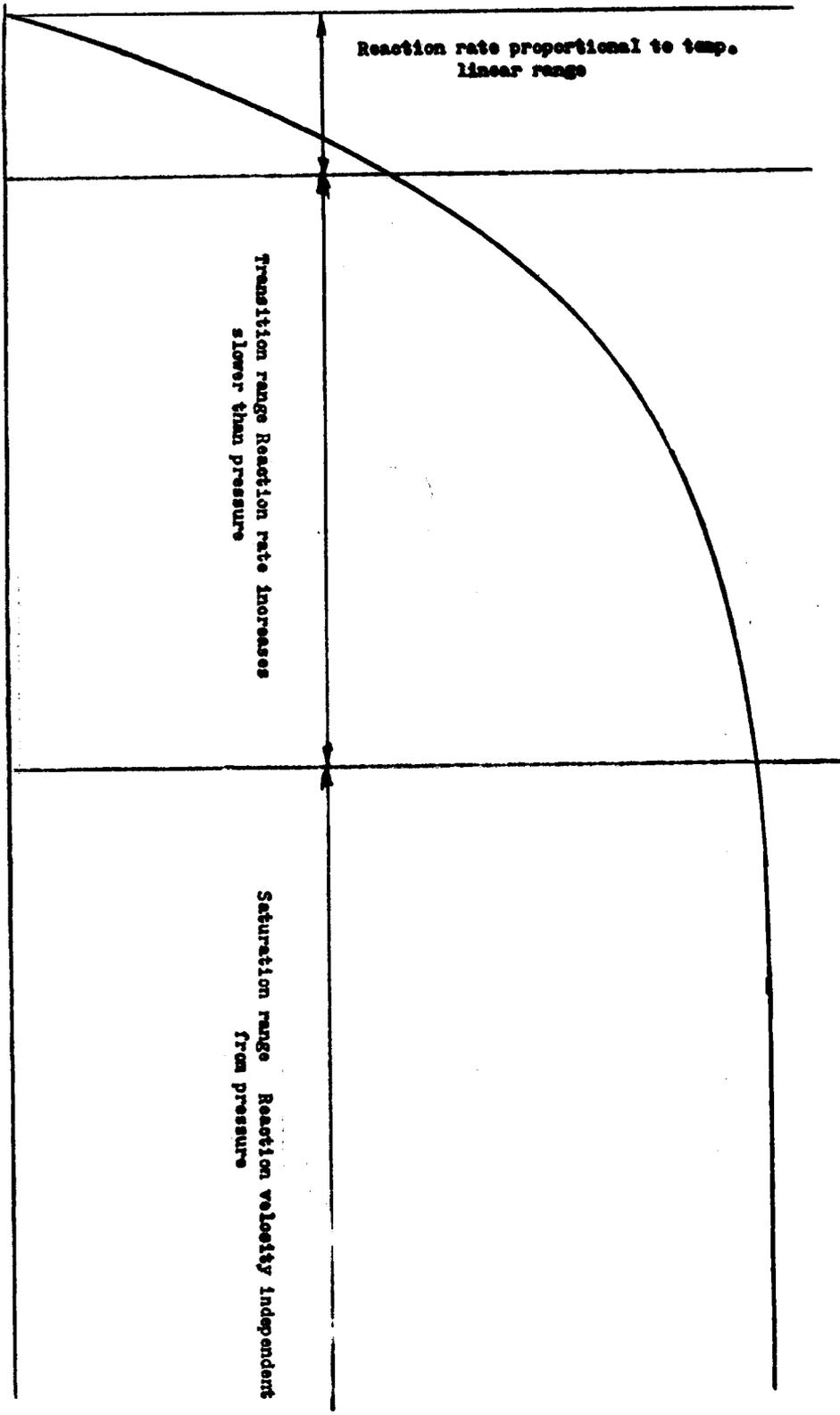


Figure 5. - CO-conversion with different inlet temperatures and residence time - 16 atm.



Reaction rate proportional to temp.
linear range

Transition range Reaction rate increases
slower than pressure

Saturation range Reaction velocity independent
from pressure

Adsorption Isotherm
Relation between amount adsorbed upon the catalyst and the partial pressure in the gas space
Figure 6

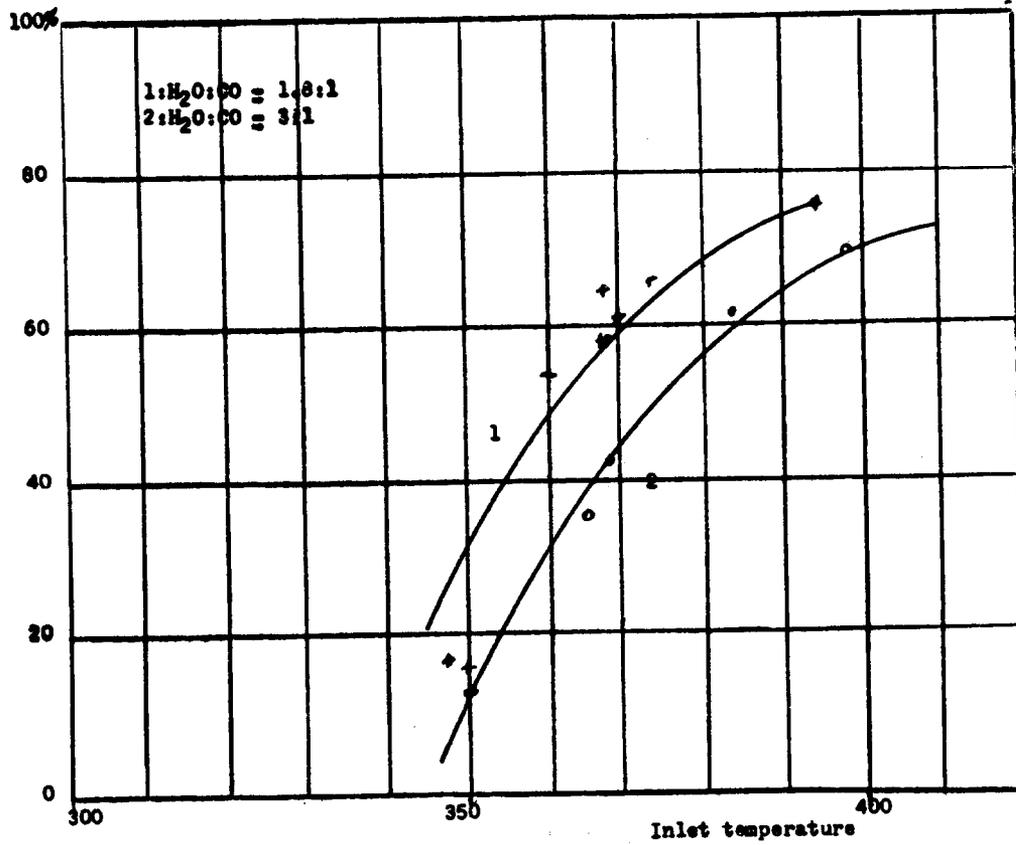


Figure 7. - CO conversion at different inlet temps. and excess steam

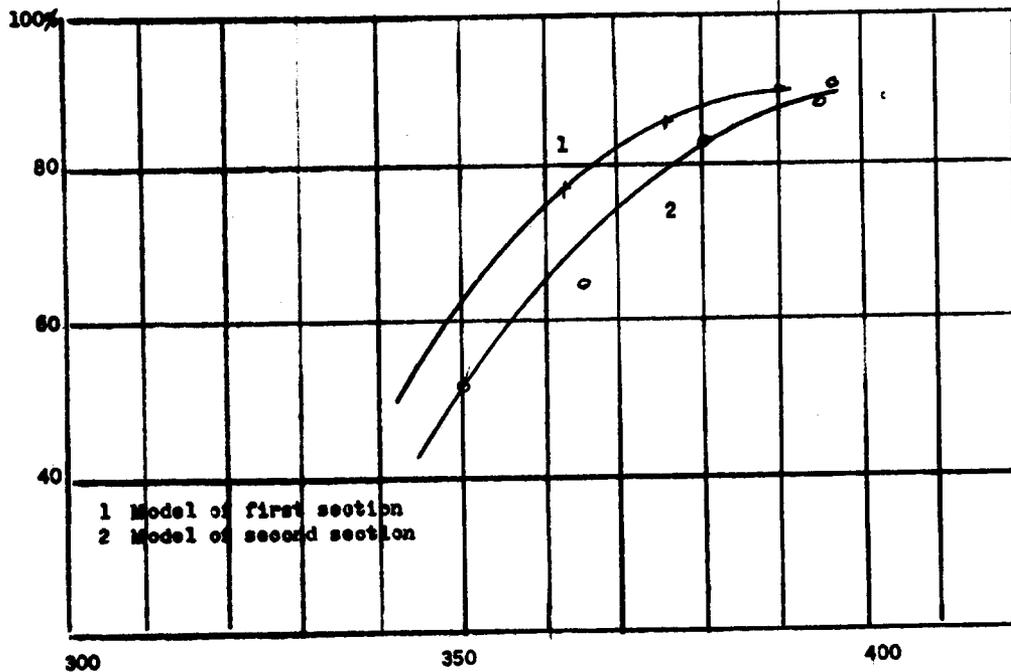


Figure 8. - Comparison of catalyst activity in the first and second sections variations of CO conversion with the inlet temperatures