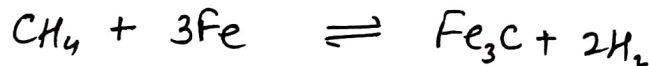
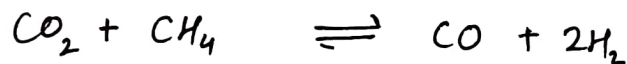
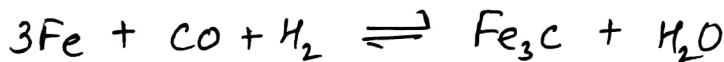
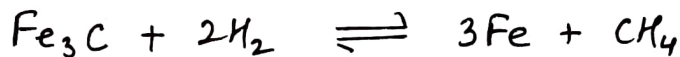


## Gas Carburizing

- Applied in mass production
- Either batch or continuous operation
- Heated at about 900°C for 3-4 hrs.
- Atmosphere (20% CO + 40% H<sub>2</sub> + 40% N<sub>2</sub>)
- Atmosphere - source of carbon from CO
- Atmosphere - carrier gas to dilute hydrocarbon gas
- Hydrocarbon gas - source of carbon & to control surface chemical reaction
- Hydrocarbon gas - methane or propane

## Major reactions



Time, temperature & gas composition can be adjusted for desired case depth

Case depth	0.25 mm	for light work
	0.5 - 1.0 mm	for automobile work
	0.37	for roller bearing & ball

## Advantages

- accurate control of case depth
- less labour cost
- Rapid & uniform heating
- less time required
- cleaner surroundings
- closer quality control
- flexibility of operation

Dis Adv. - Higher skilled person is required