

Κύριες διεργασίες σε ένα διυλιστήριο
Από το αργό πετρέλαιο στα τελικά προϊόντα



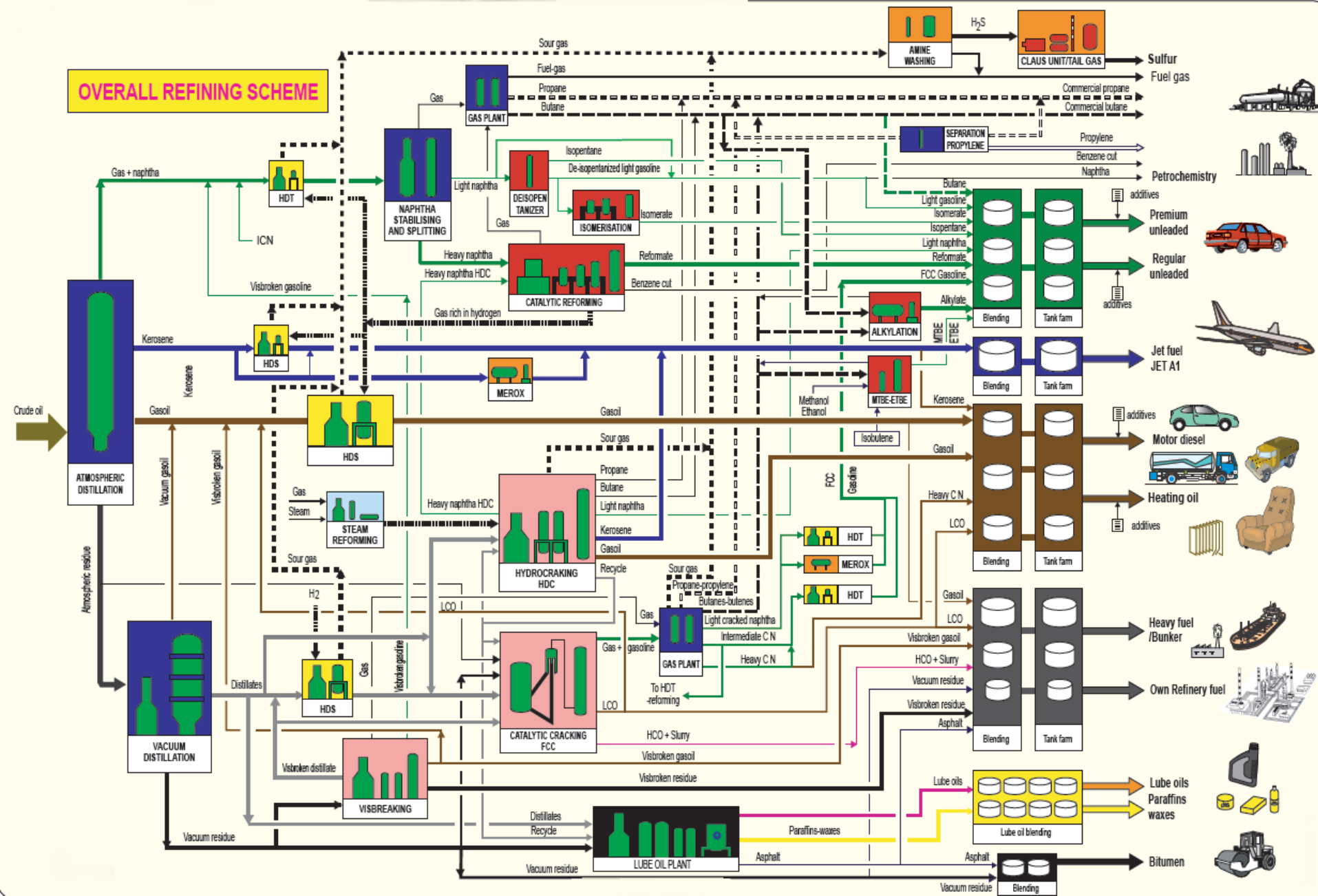
PETROCHEM DAY
POWERED BY CHEMCON

PetroChem Day 2018,
Ίδρυμα Μιχάλη Κακογιάννη 4/5/2018

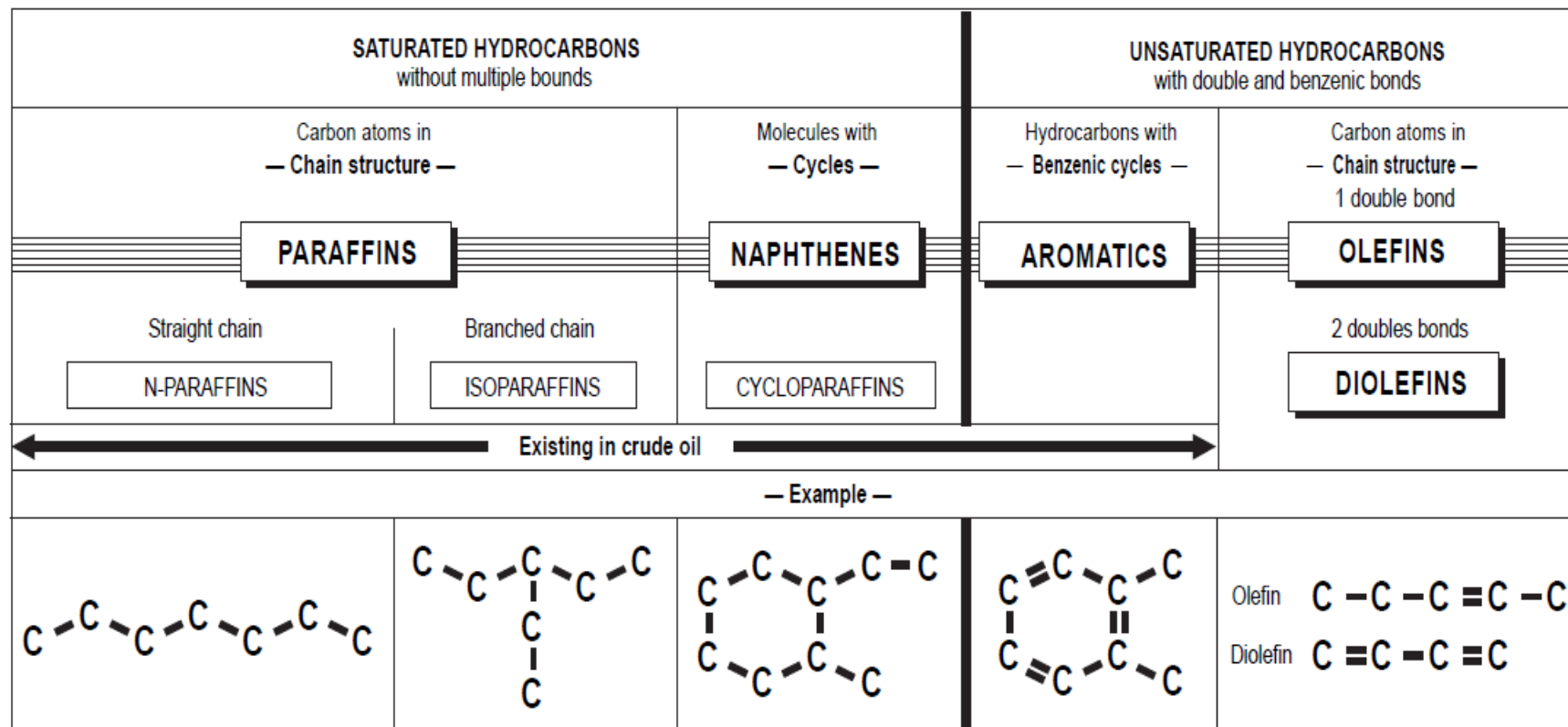
Παρουσίαση: Πετούσης Βασίλειος
Refinery Planning and Process Optimization Engineer,
Motor Oil Hellas



Γενικό Διάγραμμα Ροής Διυλιστηρίου



Τύποι Υδρογονανθράκων στο αργό πετρέλαιο



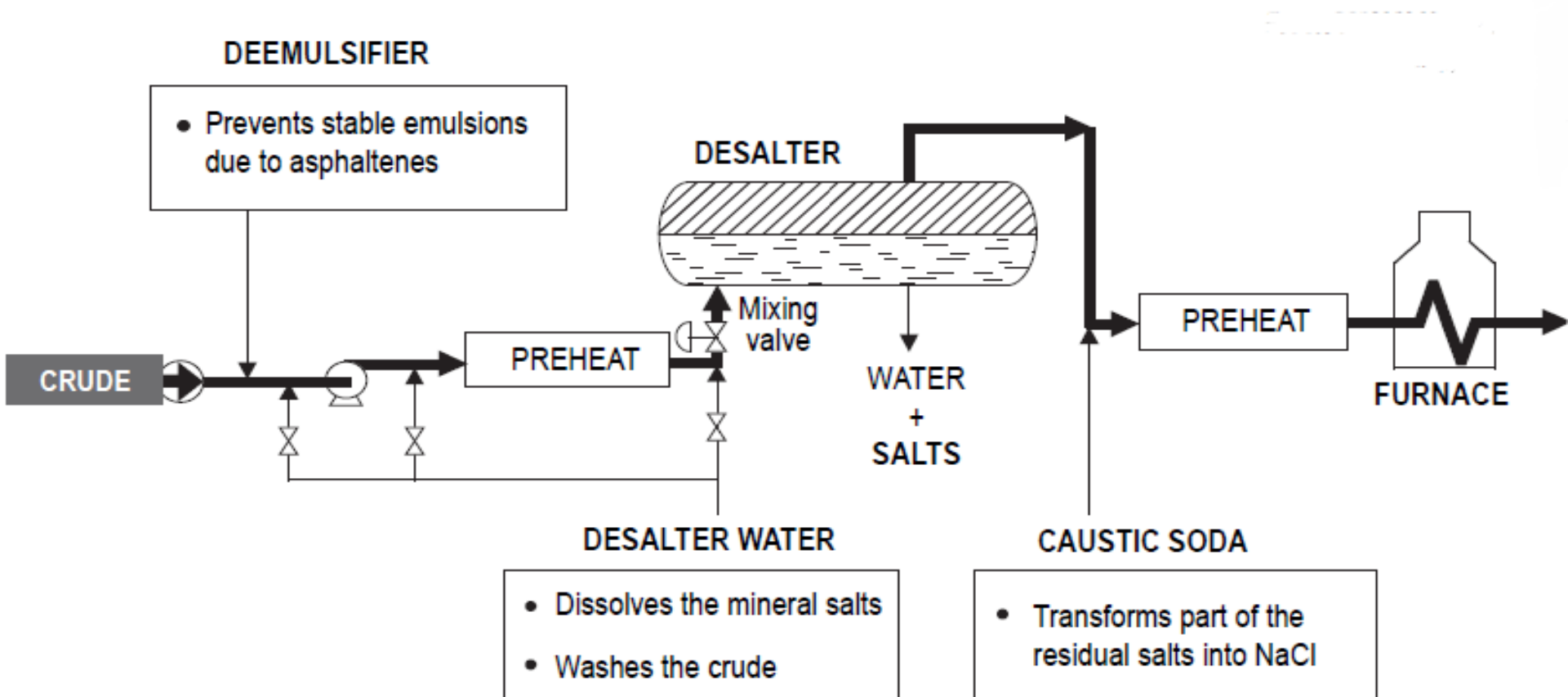
Liquid density		low	low	medium	high	low
Cold flow prop.		weak	generally good enough	generally good	generally good	—
Combustion	Gasoline engine	weak	good	medium	very good	good enough
	Diesel engine	very good	weak	medium	very weak	weak
Hydrogen content or H/C ratio		high	high	medium	low	medium
Storage stability		good	good	good	good	very weak

Inlet crude oil characteristics

Mineral salt content: 20 to 300 g/t
Water content: 0.1 to 0.6% volume

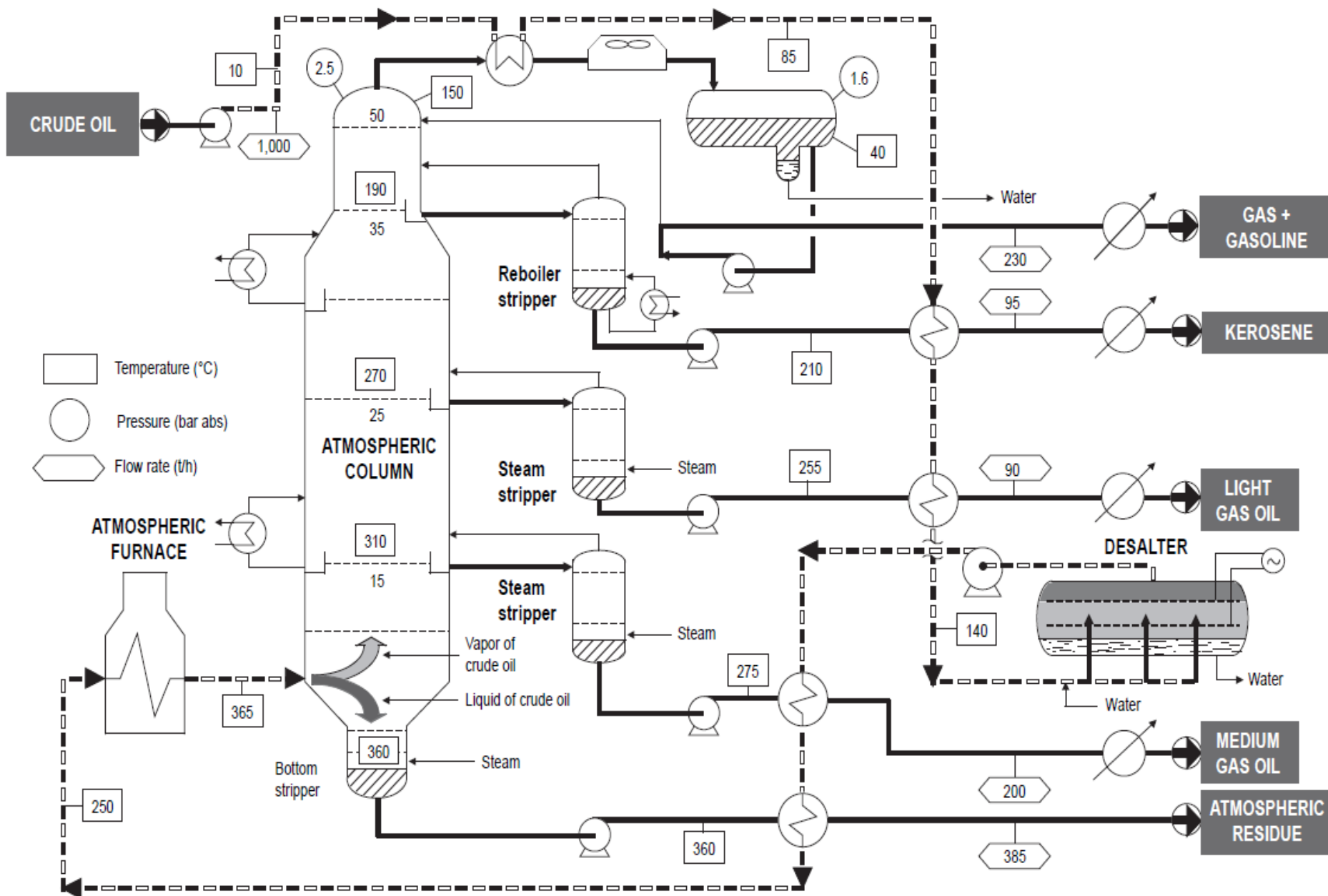
Desalting conditions

Temperature: 100 to 150°C
Water flooding ratio: 3 to 8% volume/crude
Residence time: 20 to 30 minutes
Desalting efficiency: about 95%

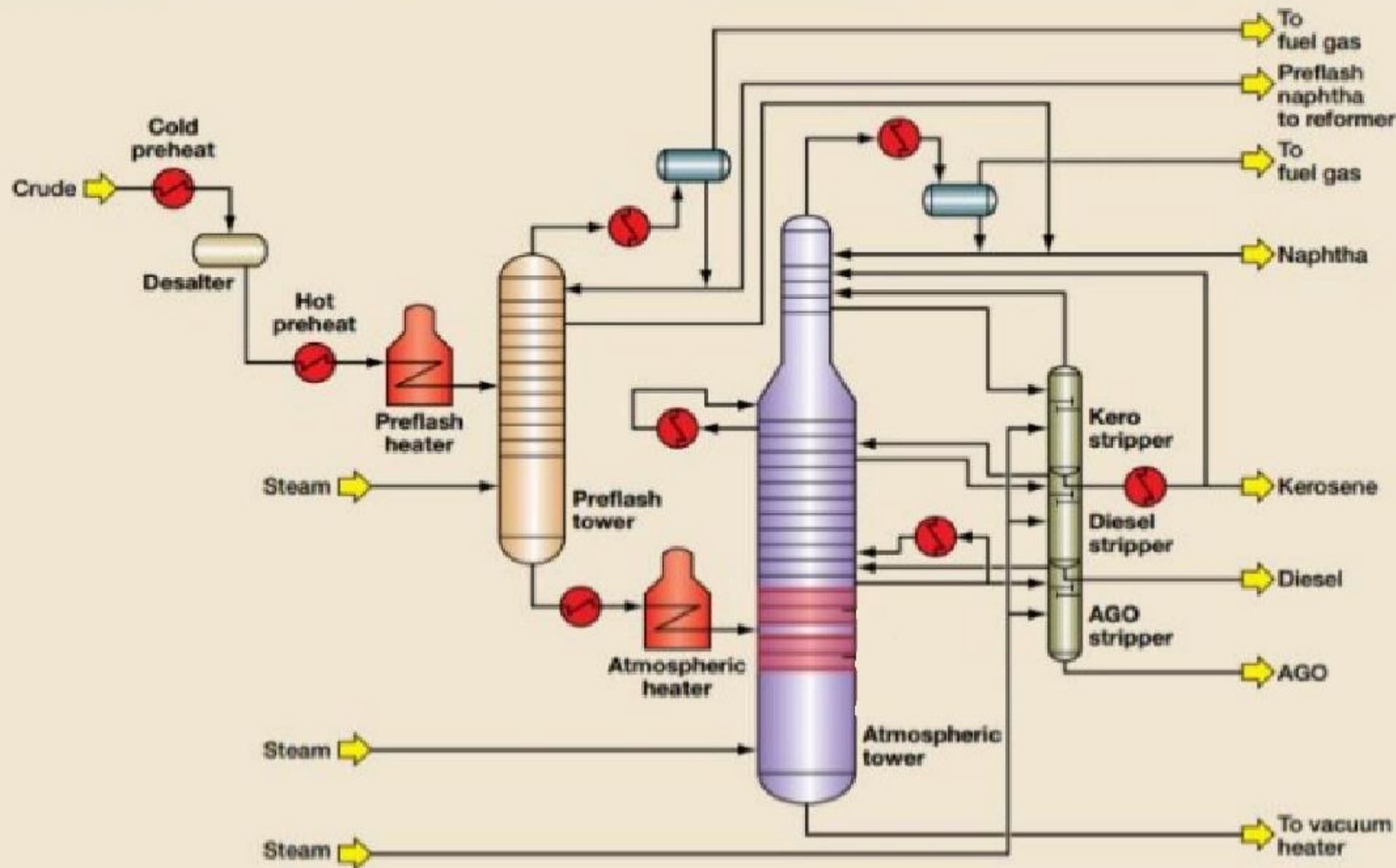




Ατμοσφαιρική Αποστακτική Στήλη

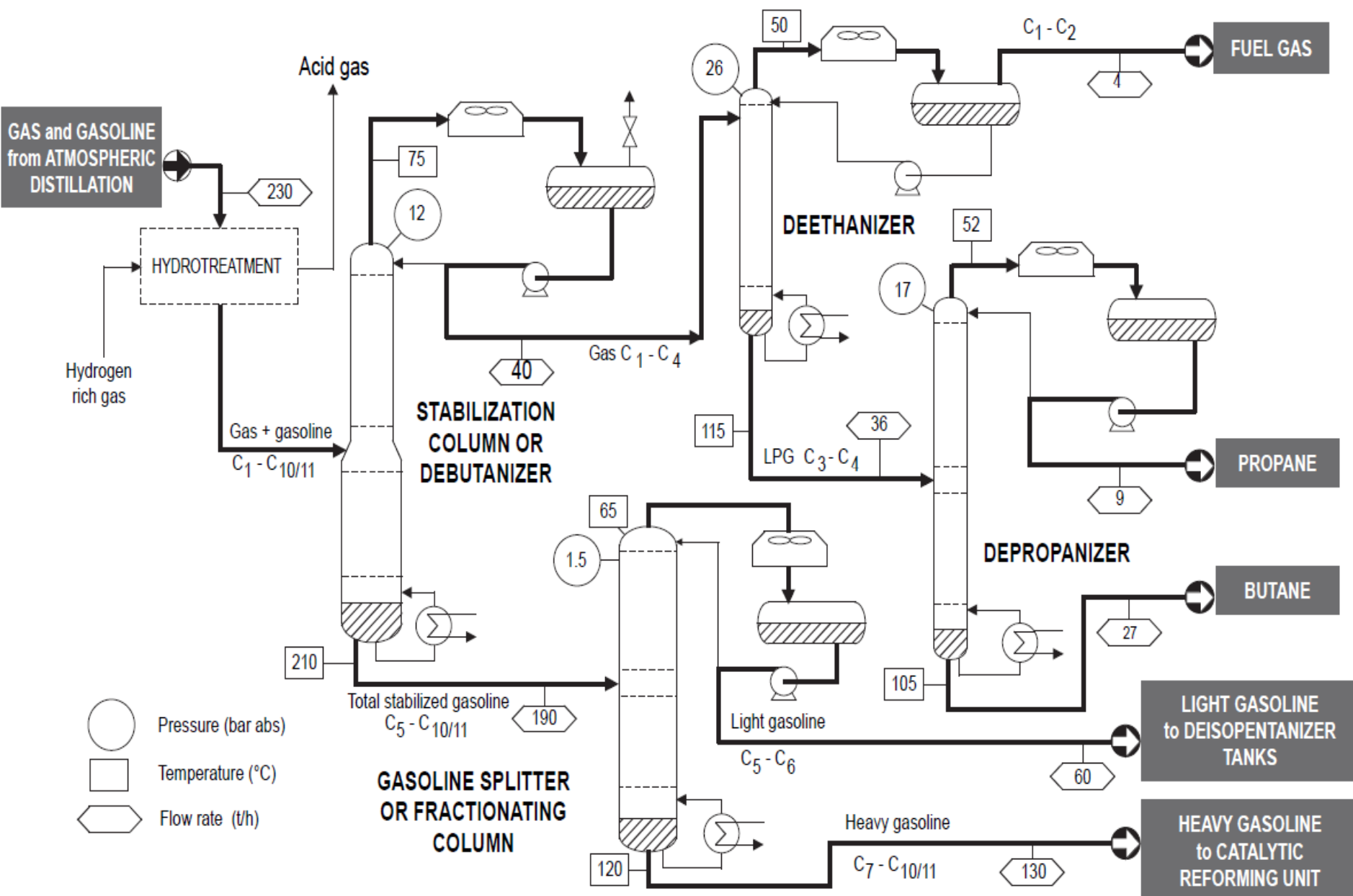


Ατμοσφαιρική Αποστακτική Στήλη με Preflash Tower

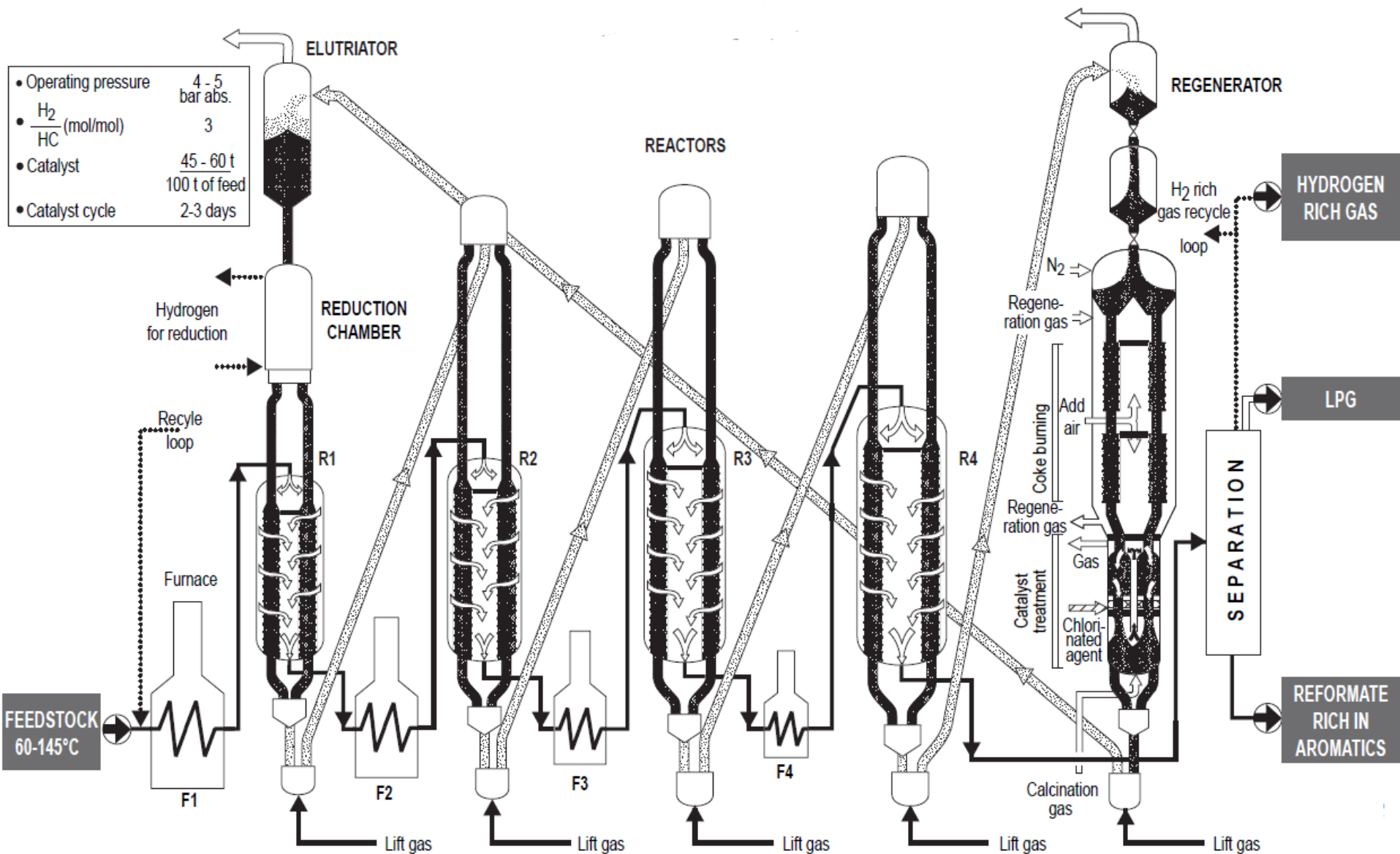


Ατμοσφαιρική Αποστακτική Στήλη - Δίσκοι



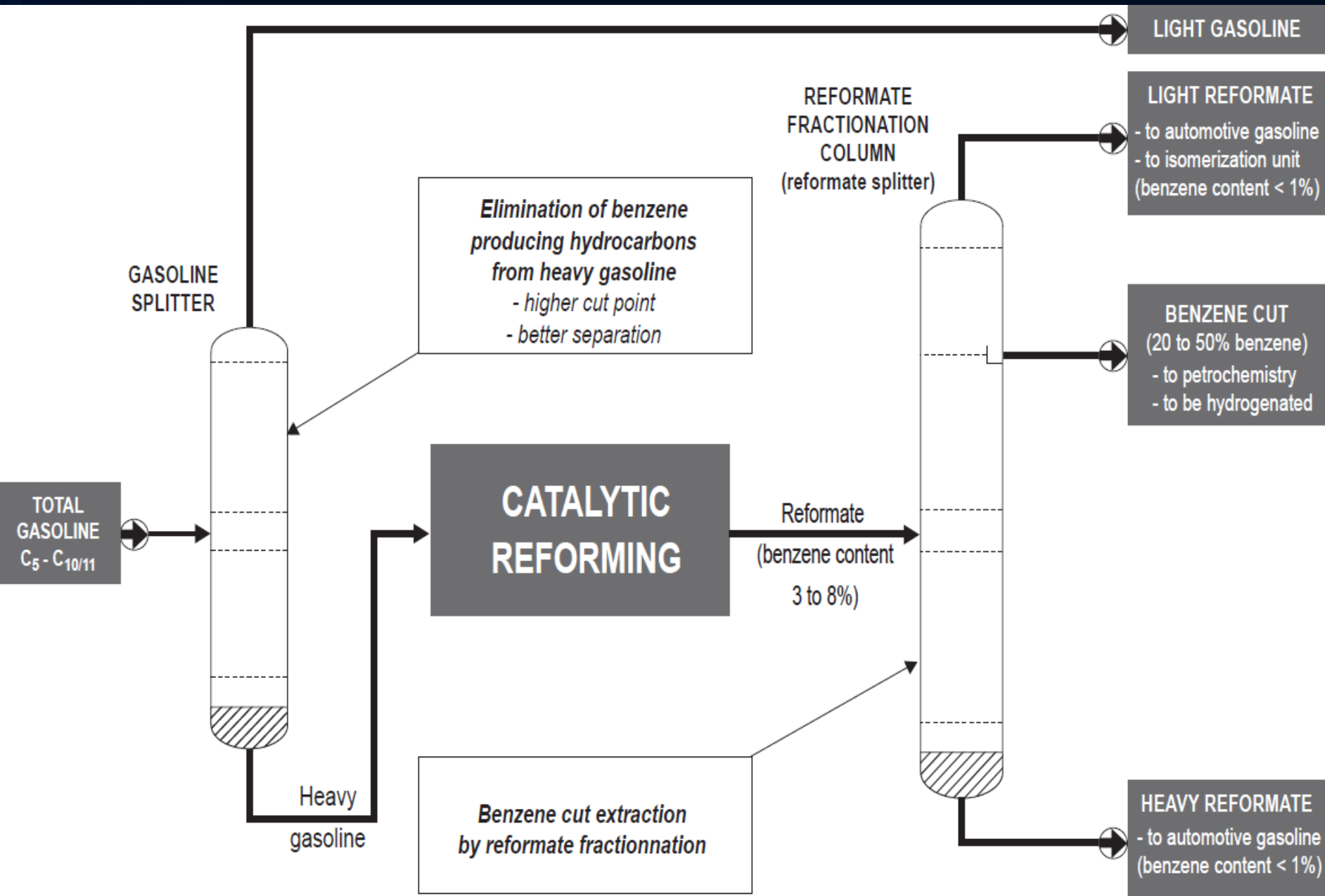


Μονάδα Καταλυτικής Αναμόρφωσης (CCR)

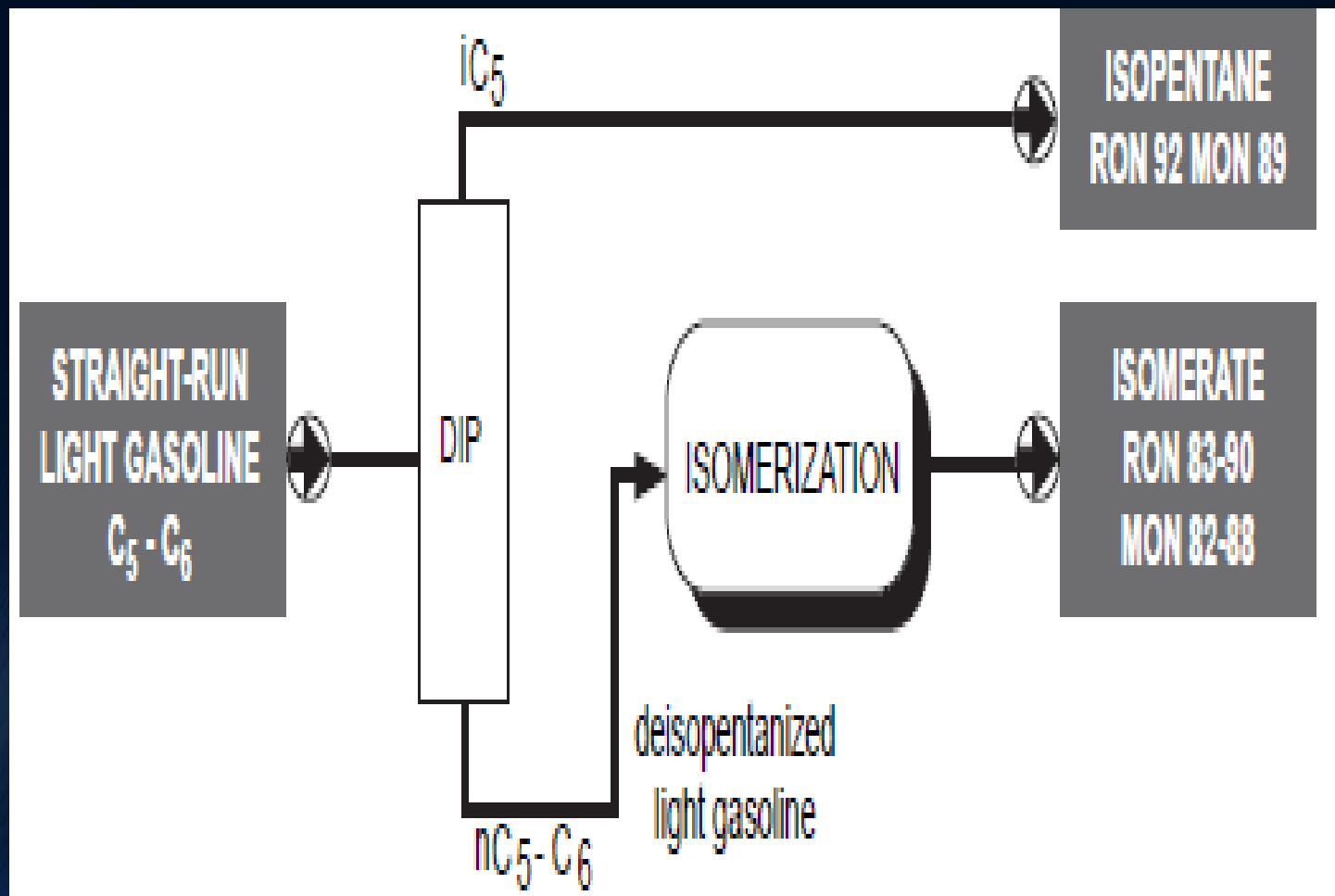




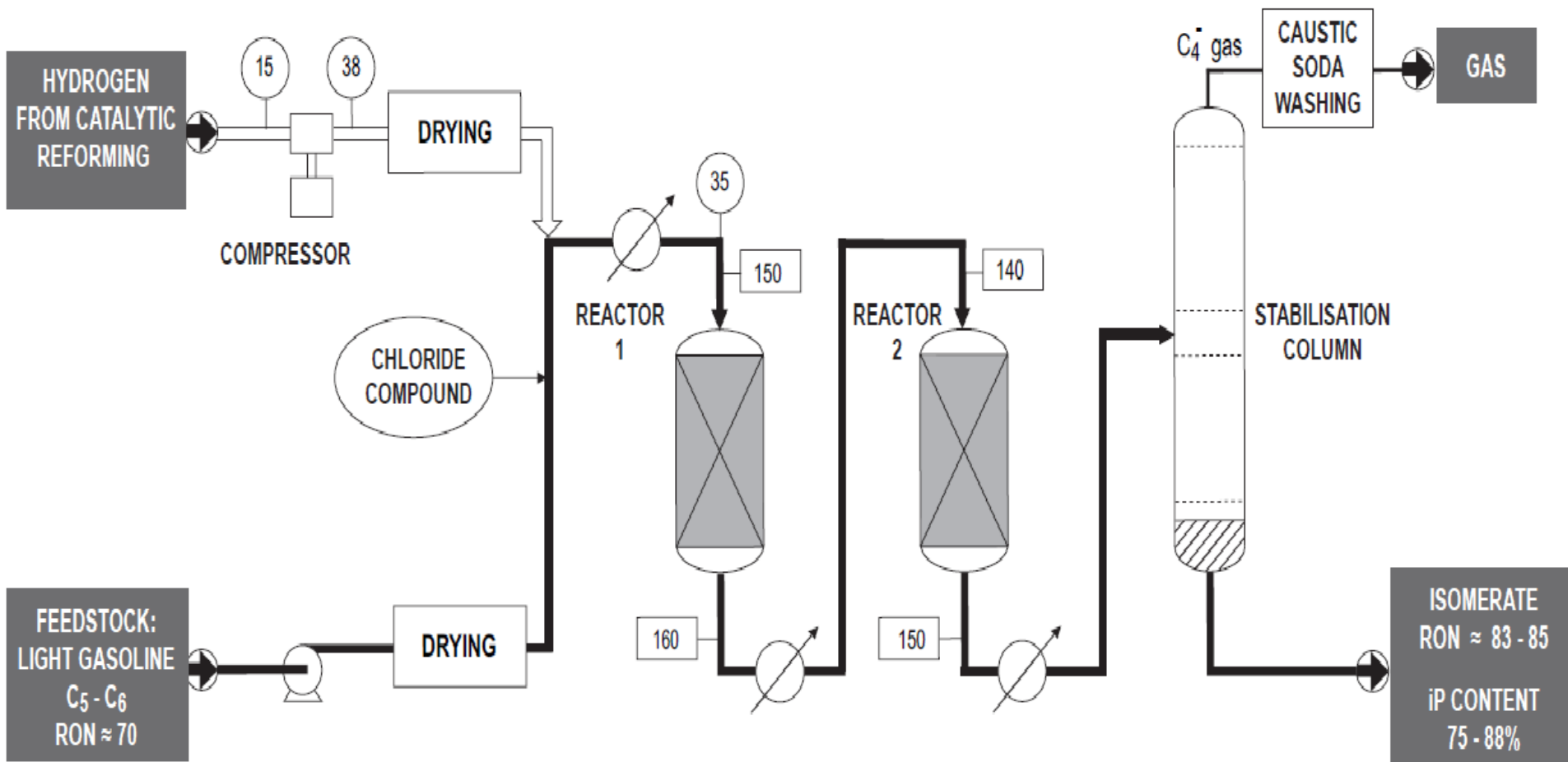
Μονάδα διαχωρισμού Βενζολίου



Μονάδα διαχωρισμού πεντανίων



Μονάδα Ισομερισμού



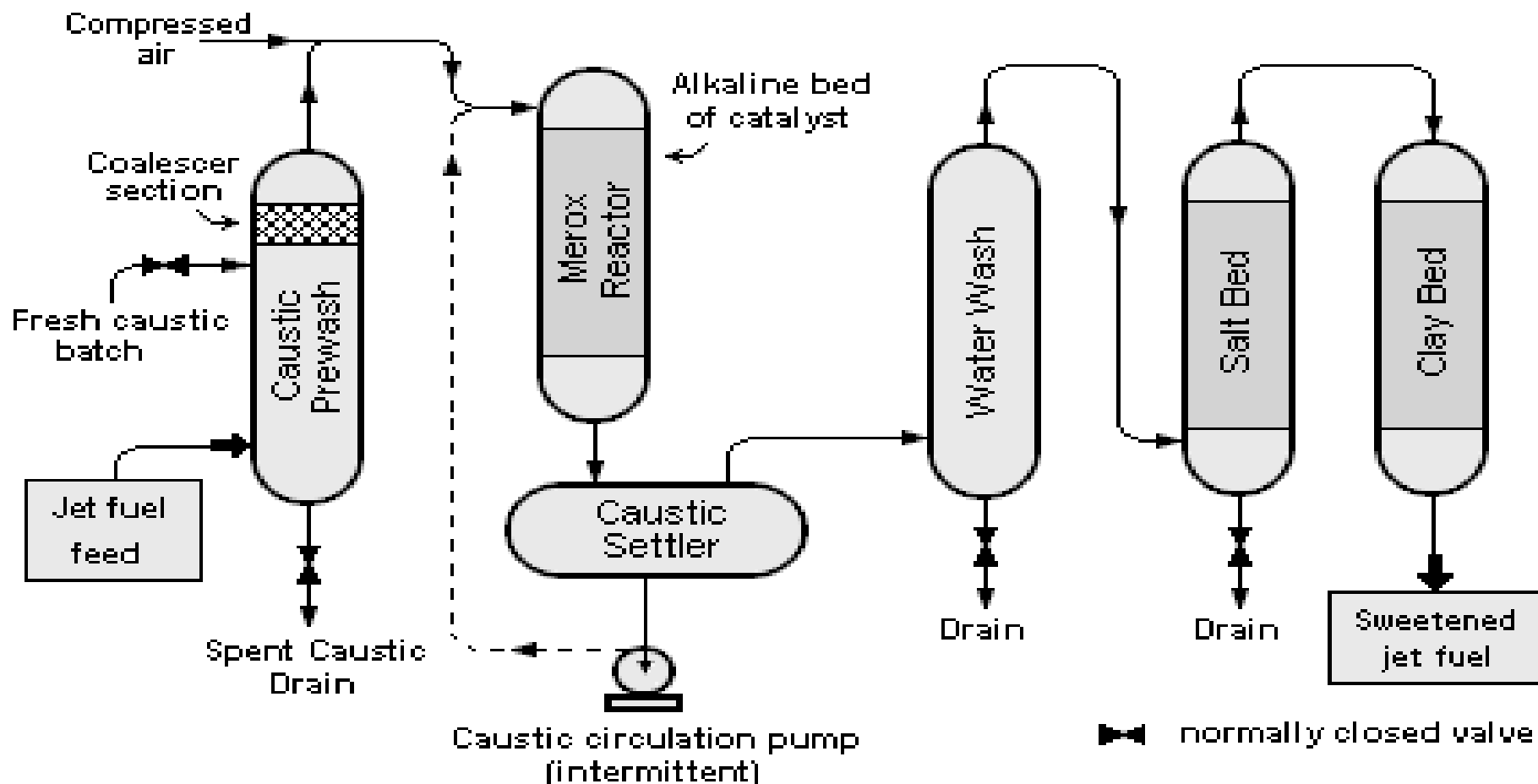
Isomerization catalysts

- Chlorinated alumina + Platinum
(8 wt to 15% wt of chlorine) (0.3 to 0.5% wt)
- About 70 t to process 100 t/h of feed

Chemical reactions

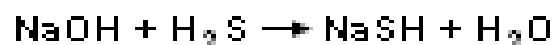
- nP isomerization into IP
- Benzene hydrogenation
- Hydrocracking

Μονάδα Jet/Kero MEROX



CHEMICAL REACTIONS IN JET FUEL MEROX TREATING

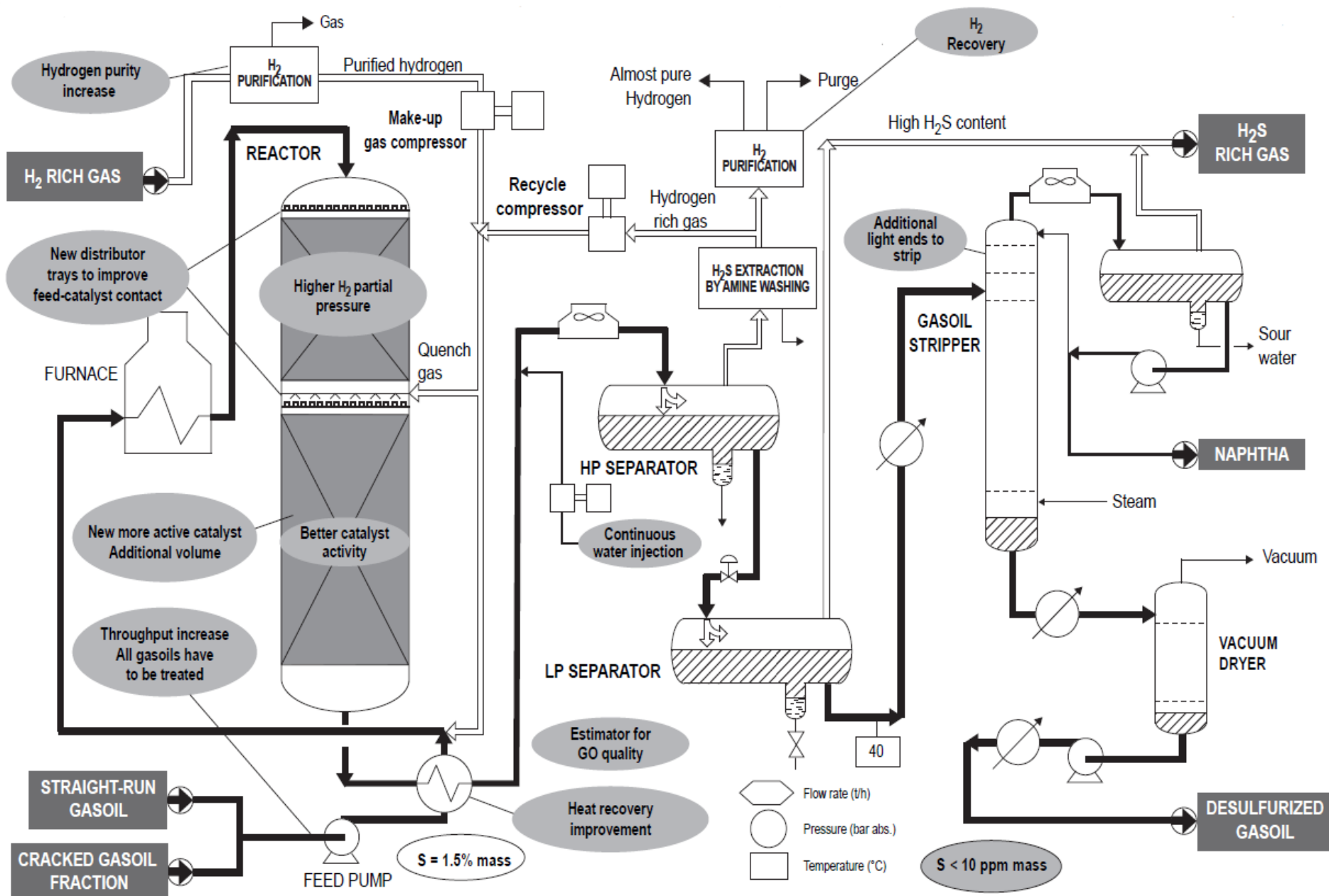
Caustic Prewash:



Mercox Reaction:



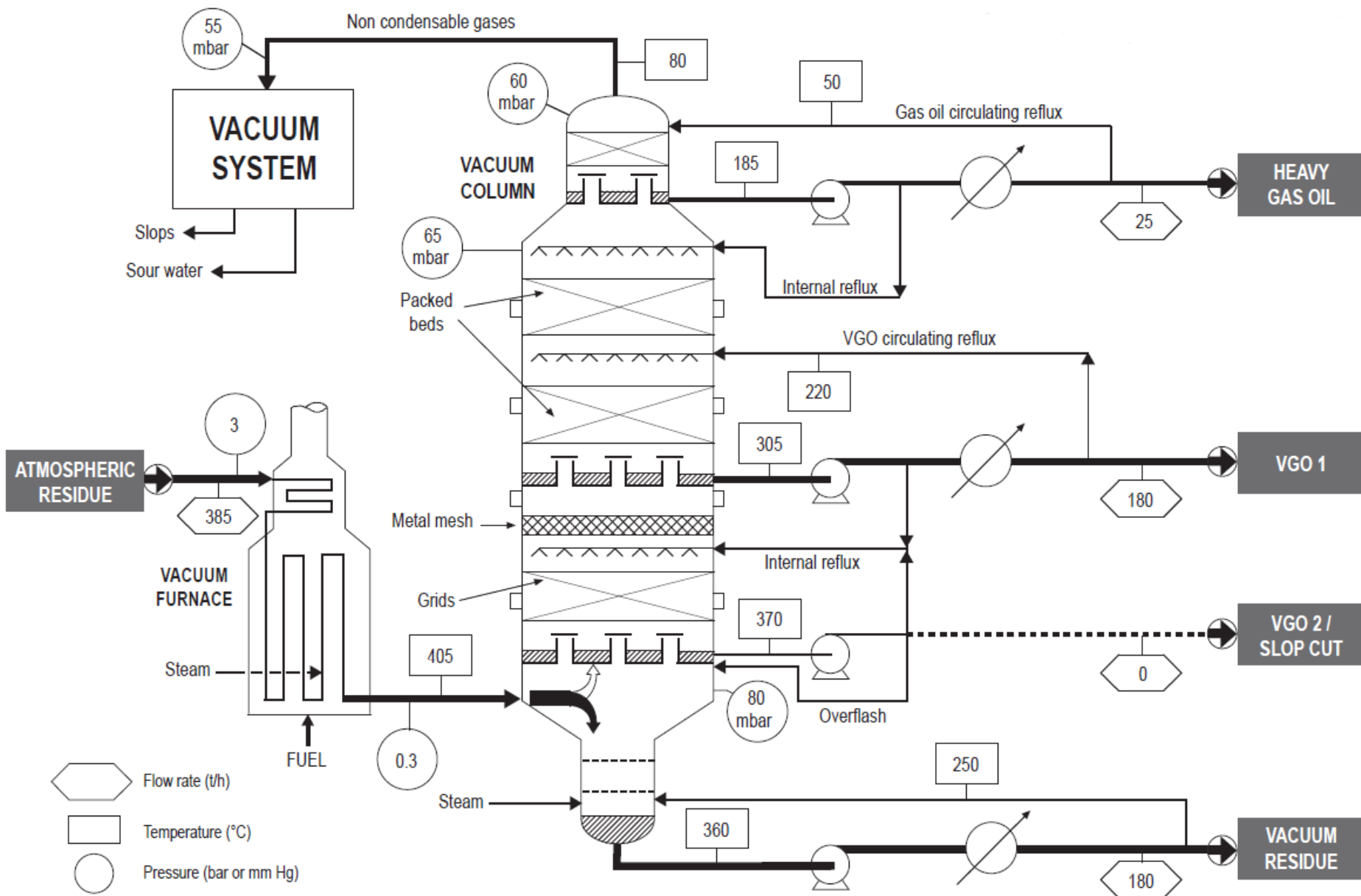
Μονάδα αποθείωσης Diesel



Μονάδα αποθείωσης Diesel

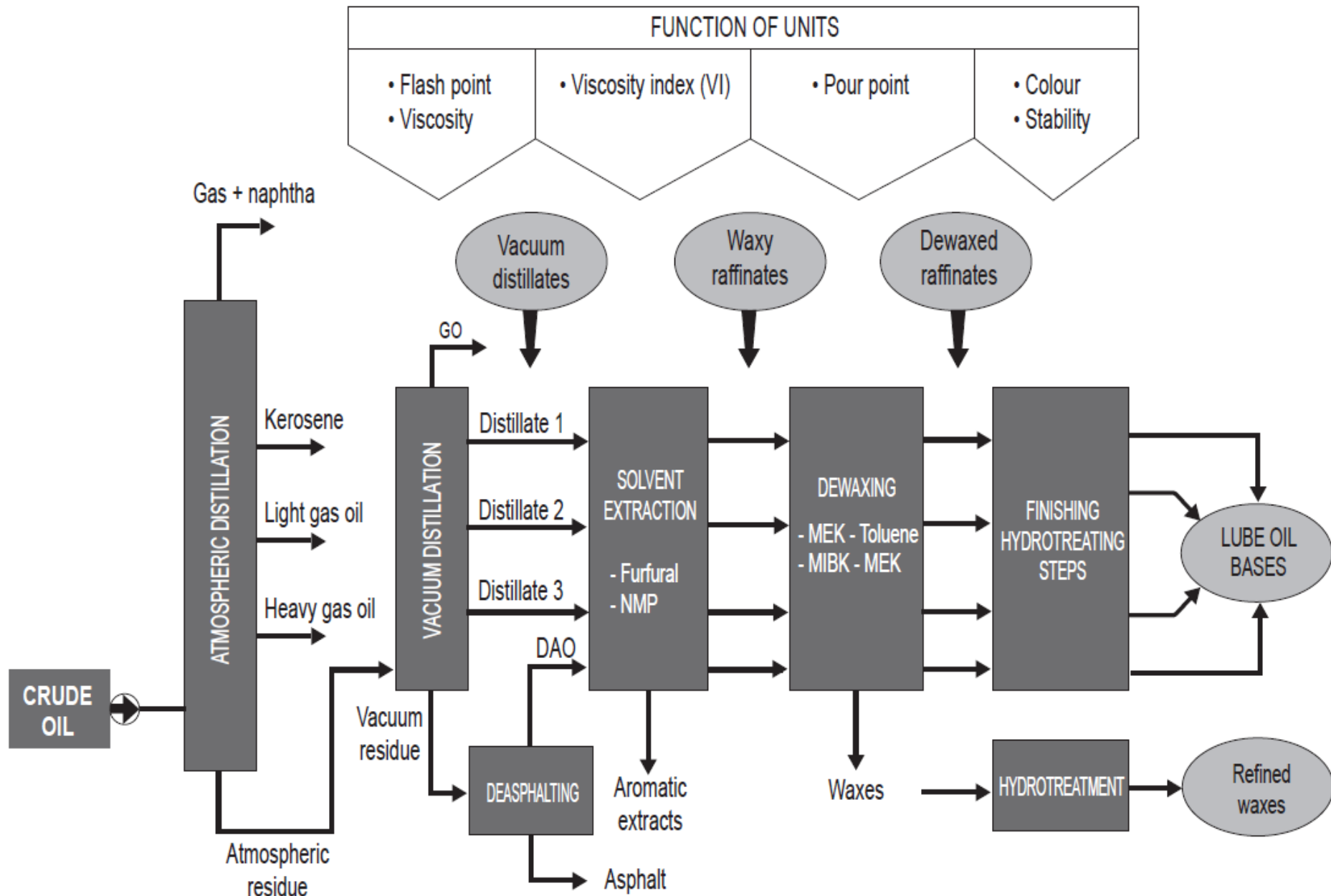


Απόσταξη υπό κενό

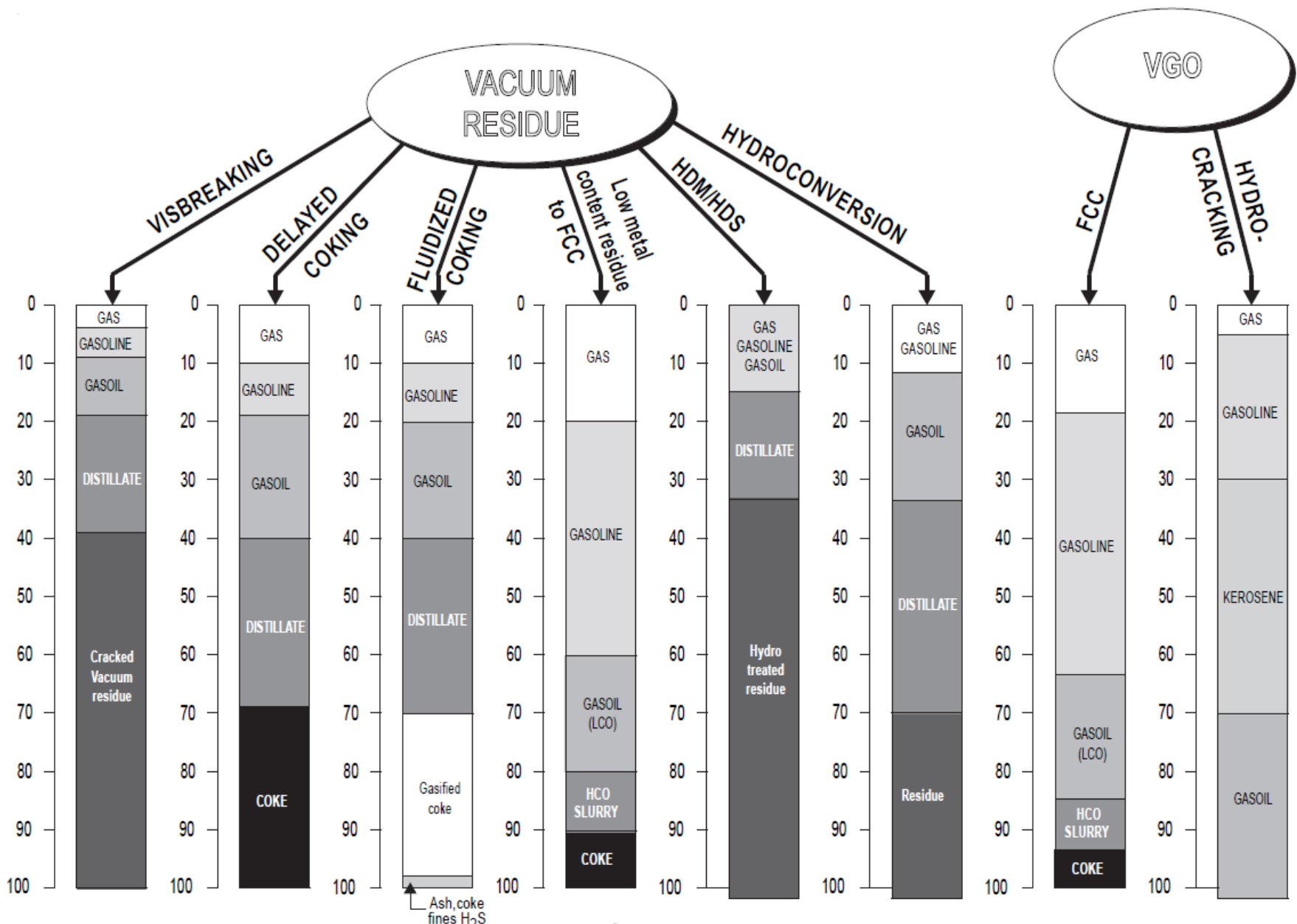




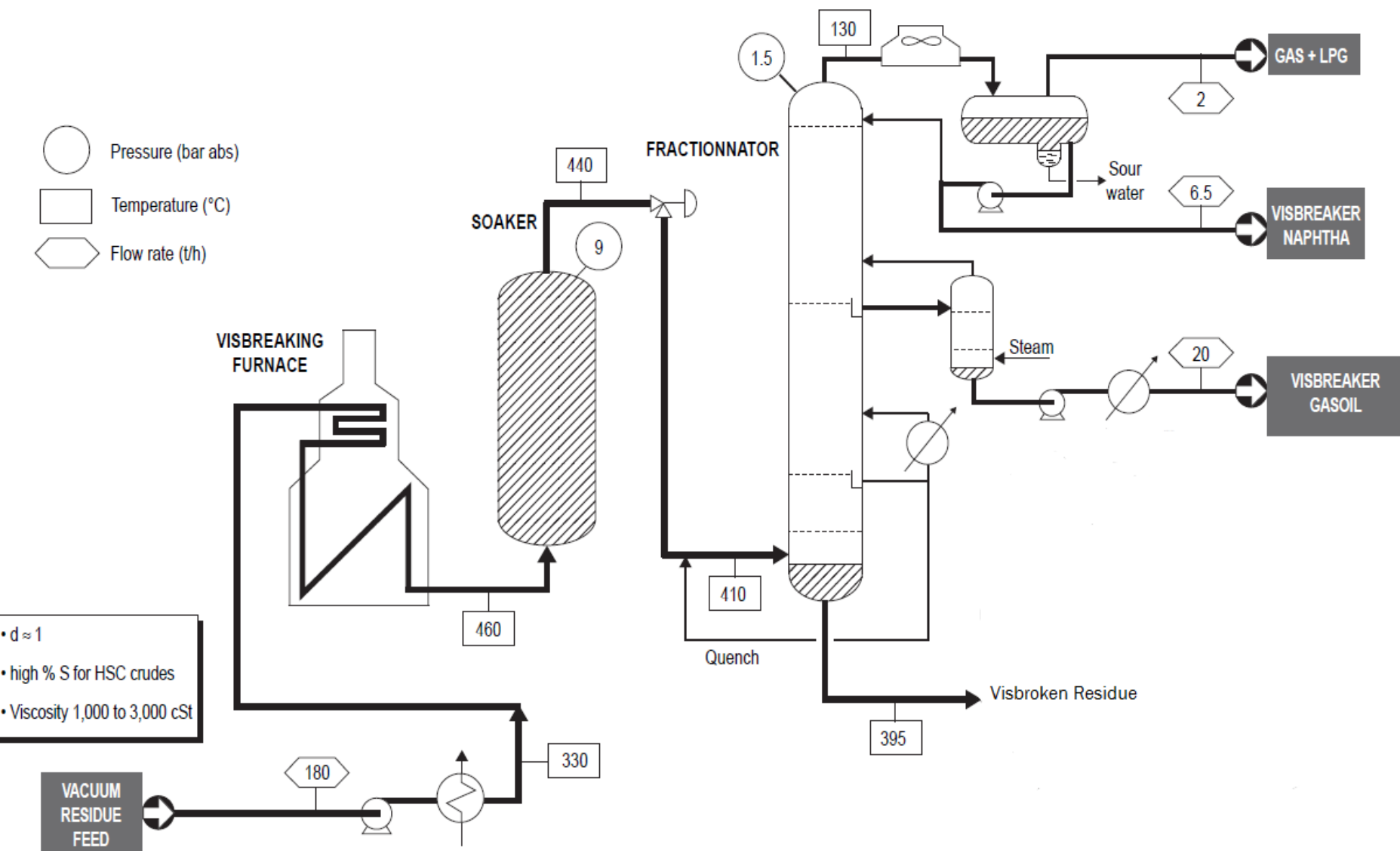
Παραγωγή Λιπαντικών



Μονάδες Μετατροπής

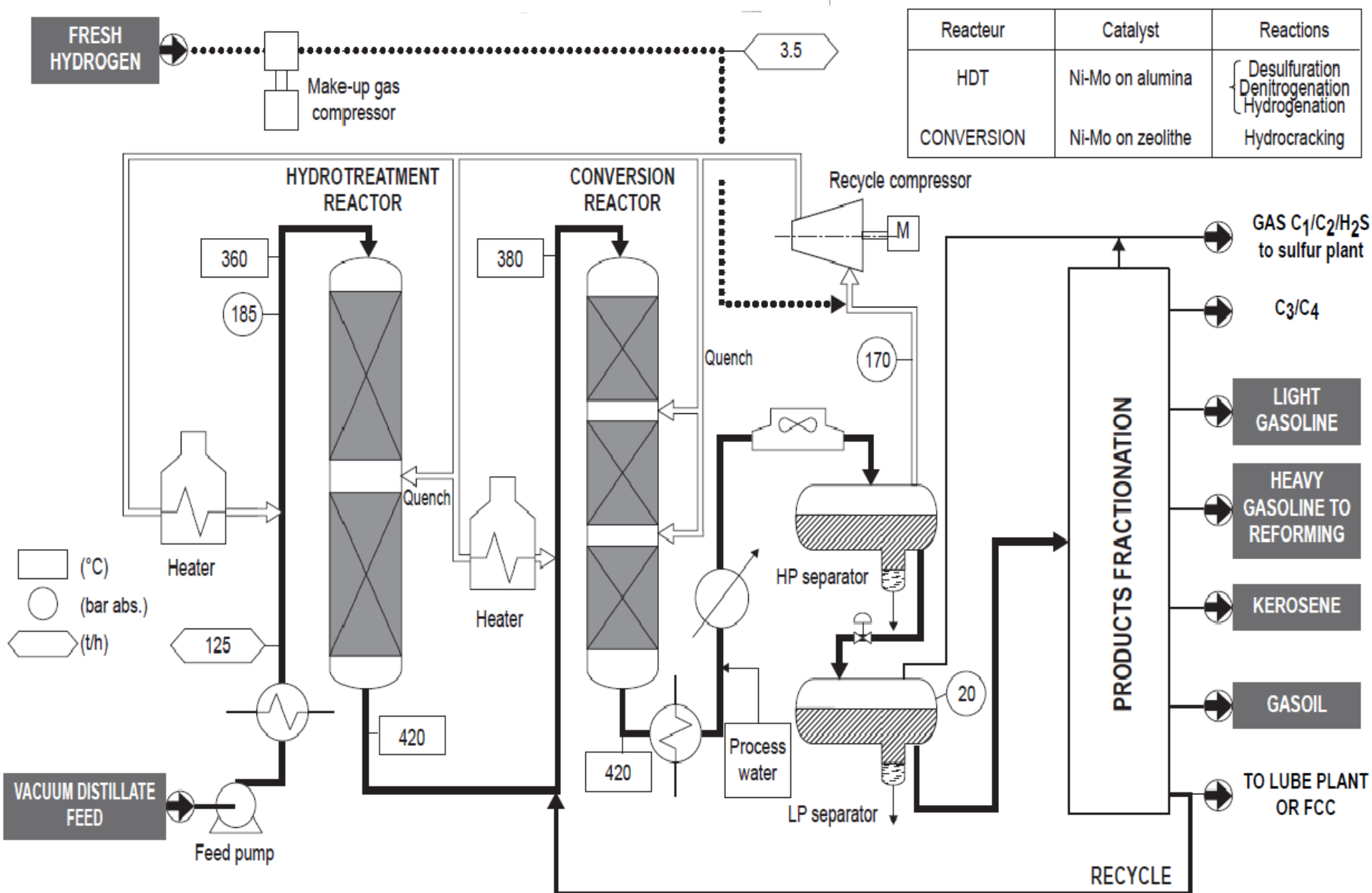


Μονάδα Θερμικής Πυρόλυσης (Visbreaker)





Μονάδα Υδρογονοδιάσπασης (Hydrocracker)

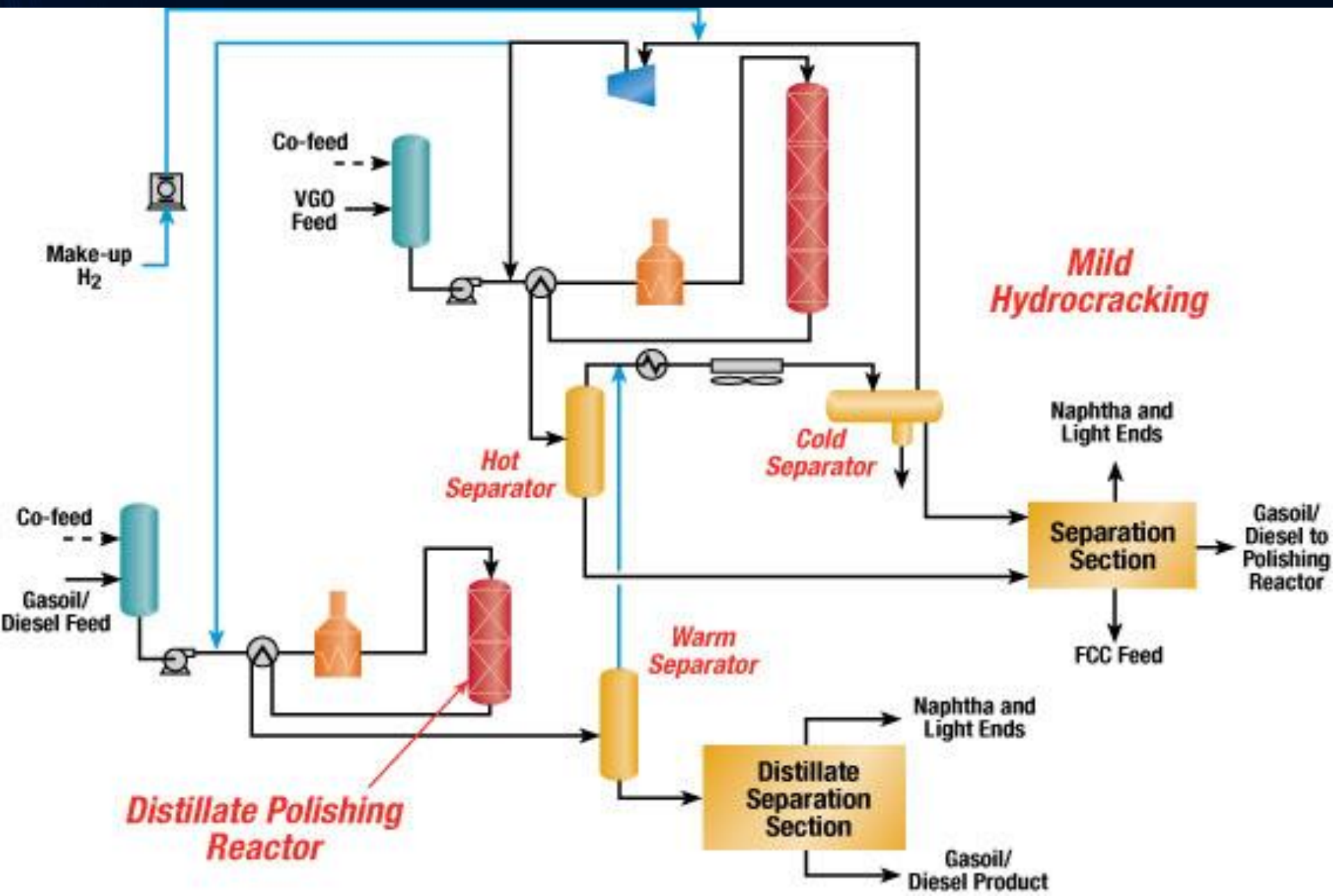


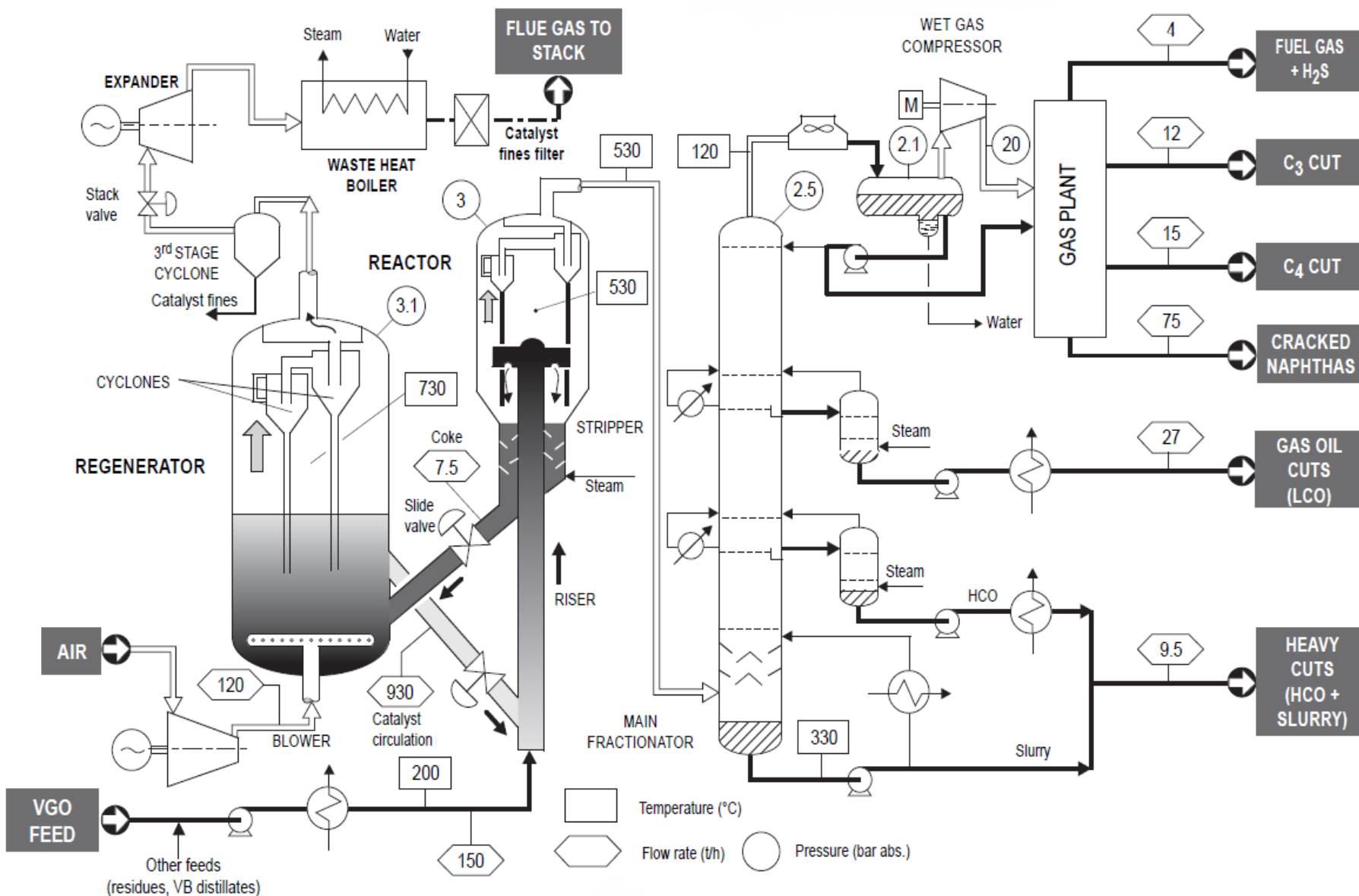
Reacteur	Catalyst	Reactions
HDT	Ni-Mo on alumina	Desulfuration Denitrogenation Hydrogenation
CONVERSION	Ni-Mo on zeolithe	Hydrocracking

Μονάδα Υδρογονοδιάσπασης (Hydrocracker)

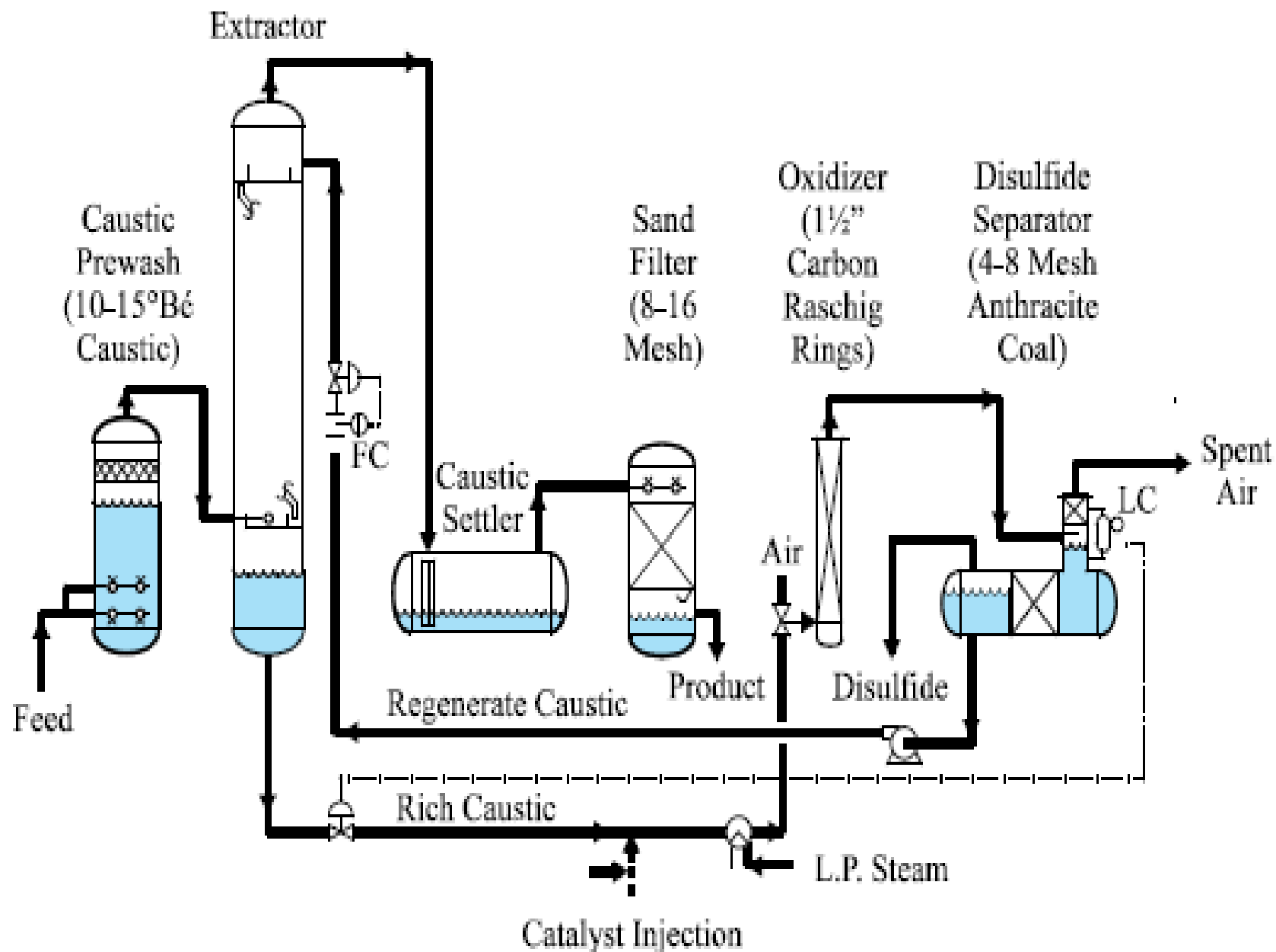


Μονάδα ήπιας Υδρογονοδιάσπασης (Mild Hydrocracker)

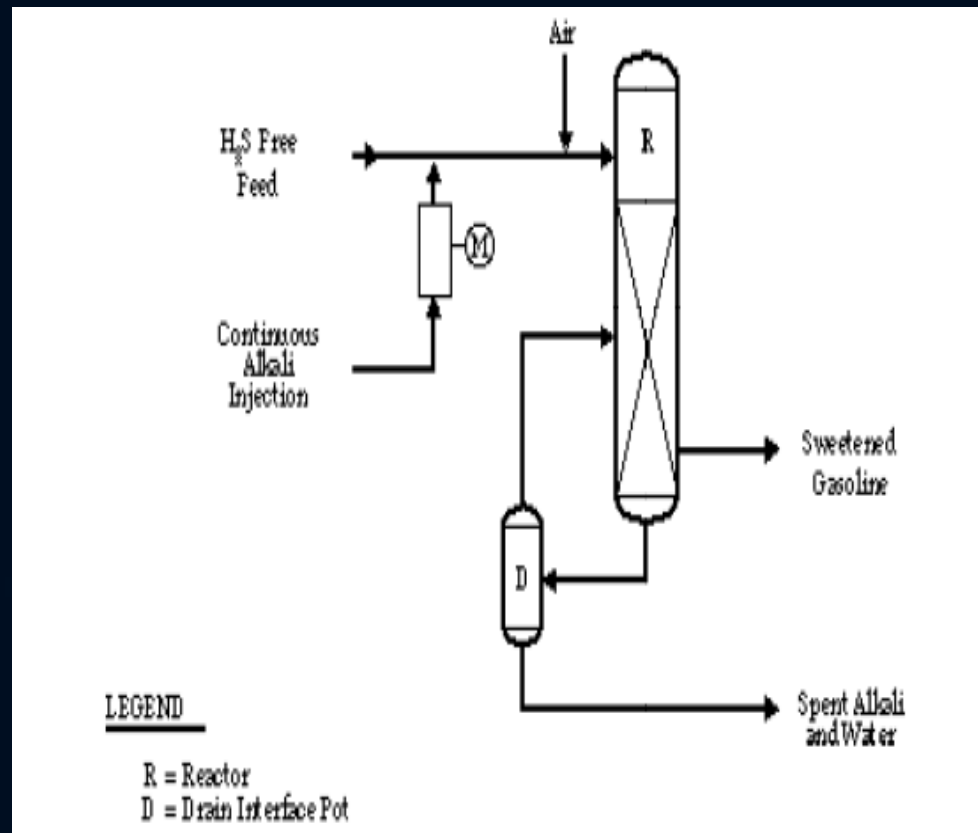
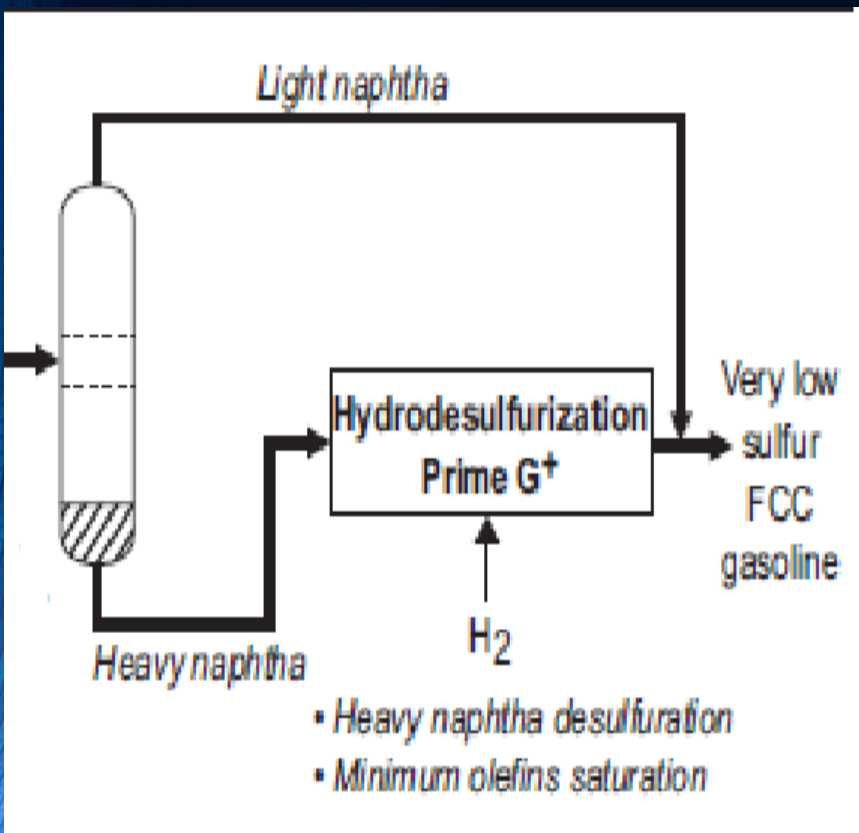






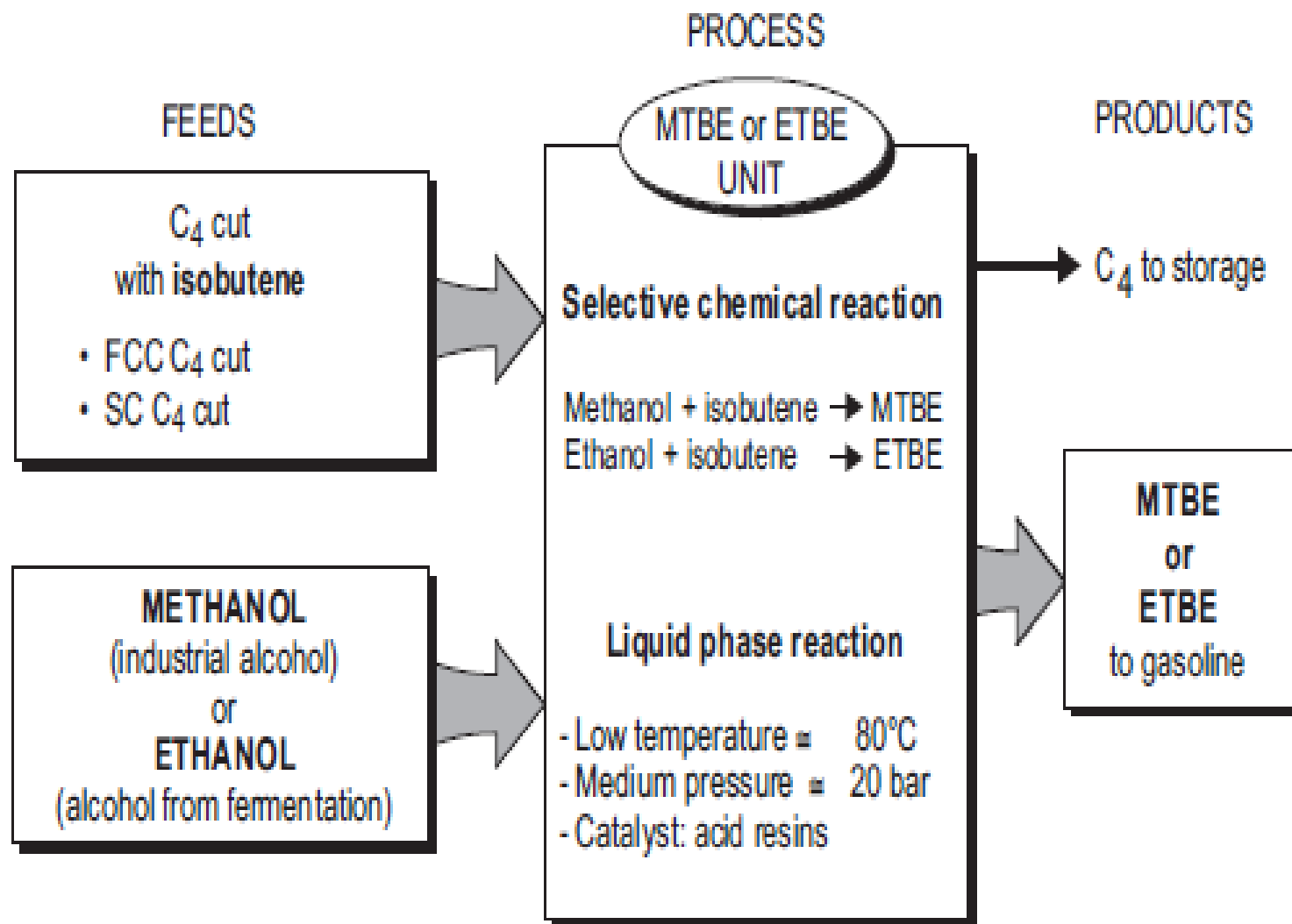


Μονάδες αποθείωσης Βενζίνης FCC και MEROX κατεργασίας Βενζίνης FCC

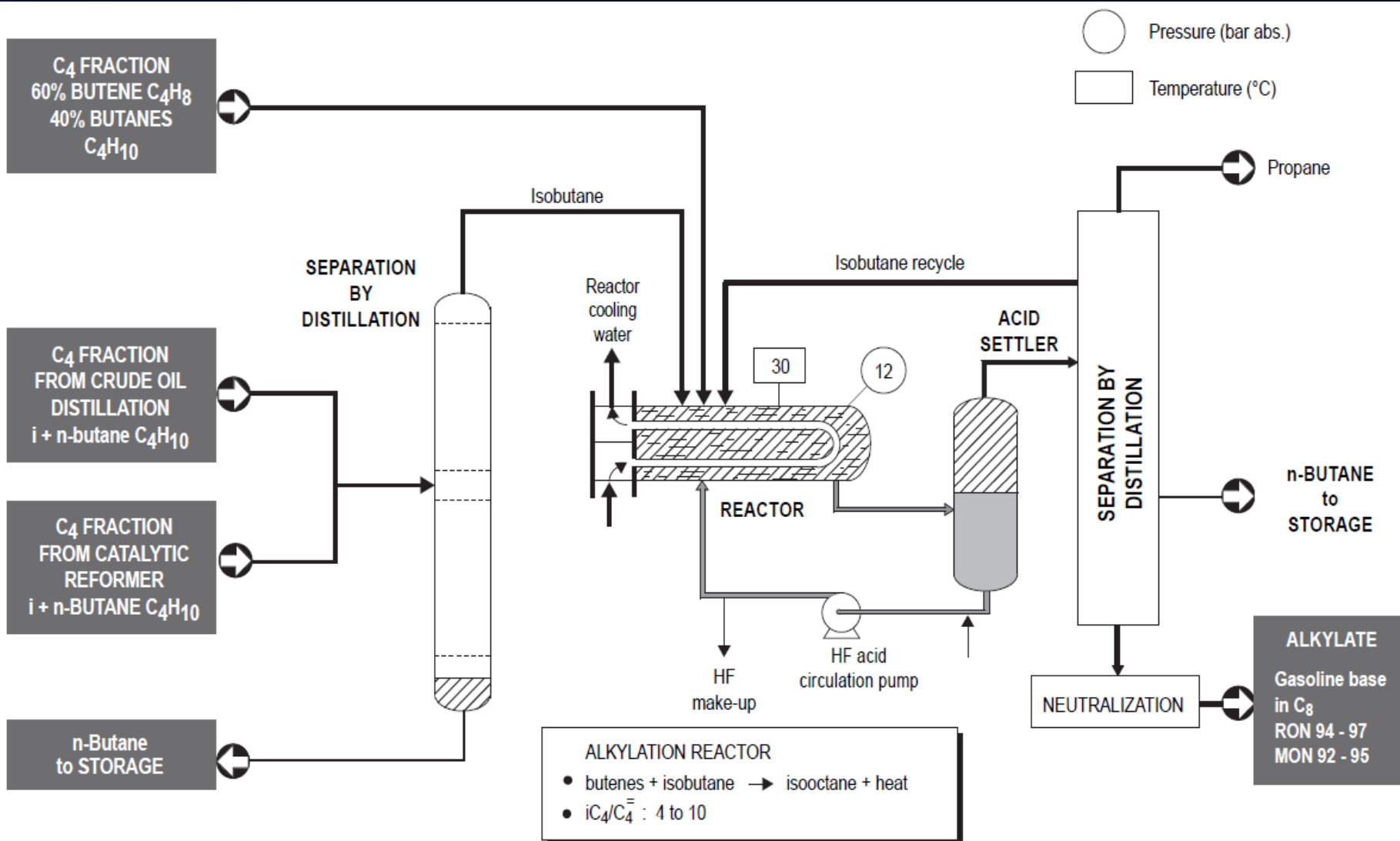




Μονάδα MTBE

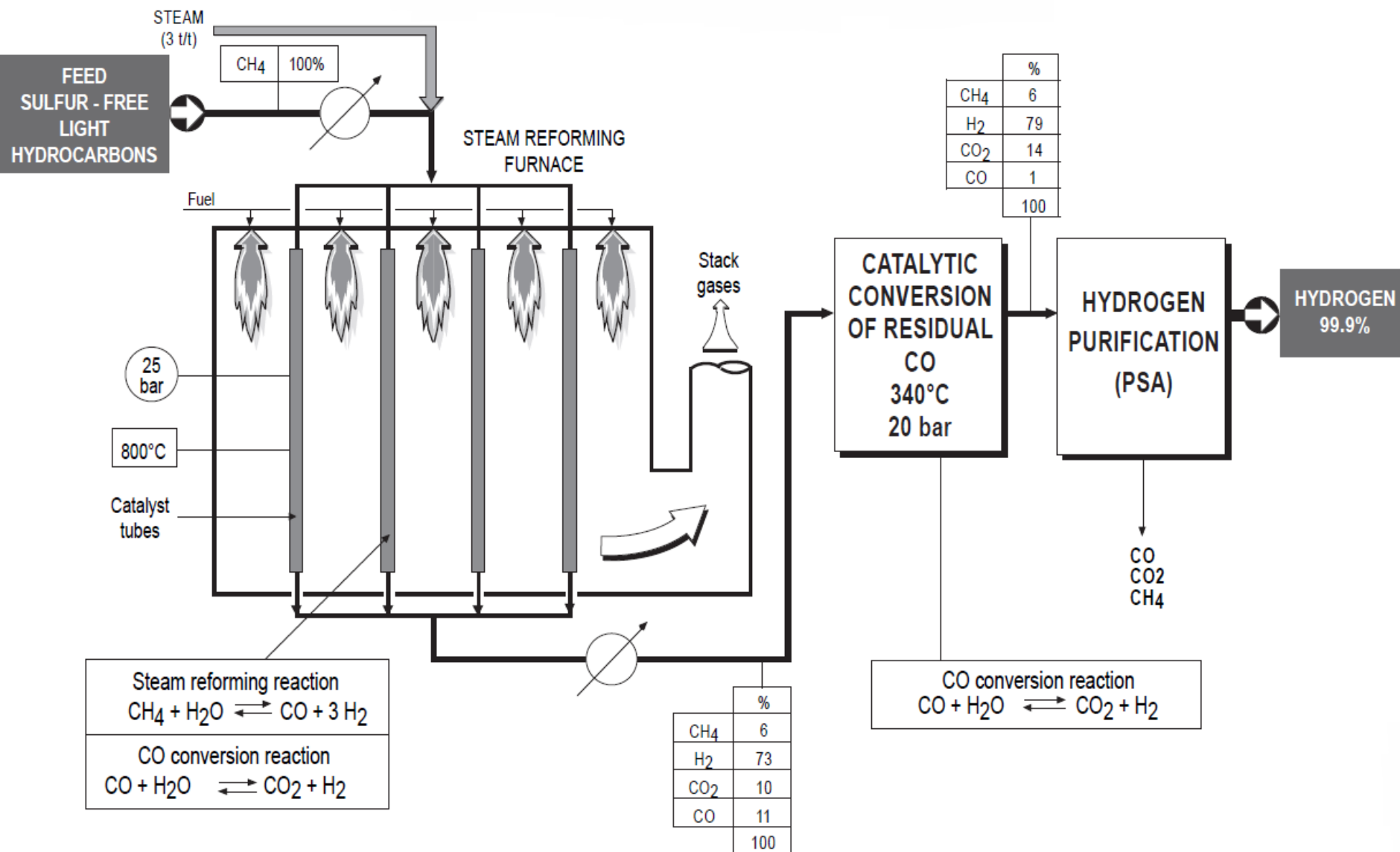


Μονάδα Αλκυλίωσης (HF Alkylation)



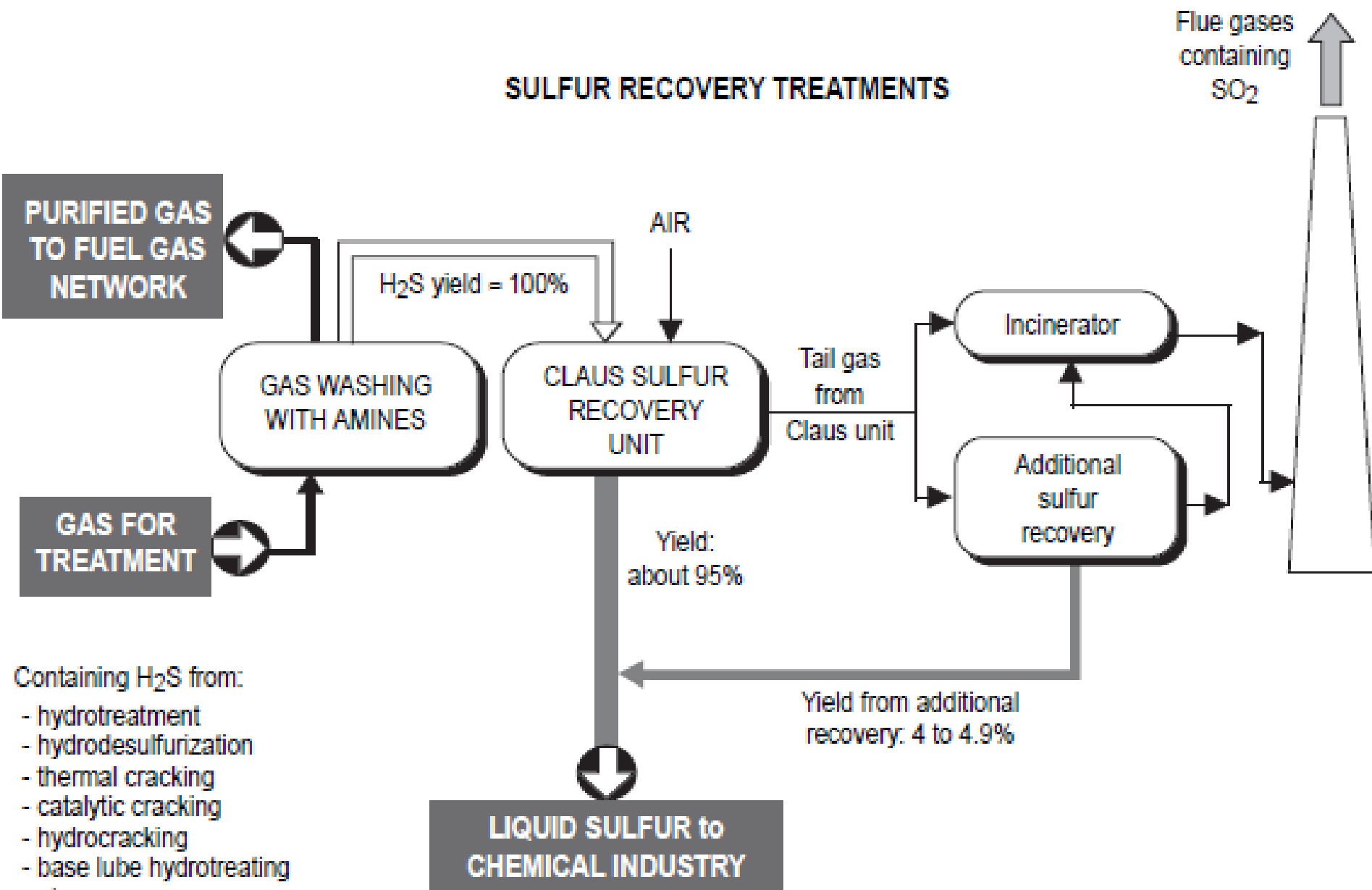


Μονάδα Παραγωγής Υδρογόνου

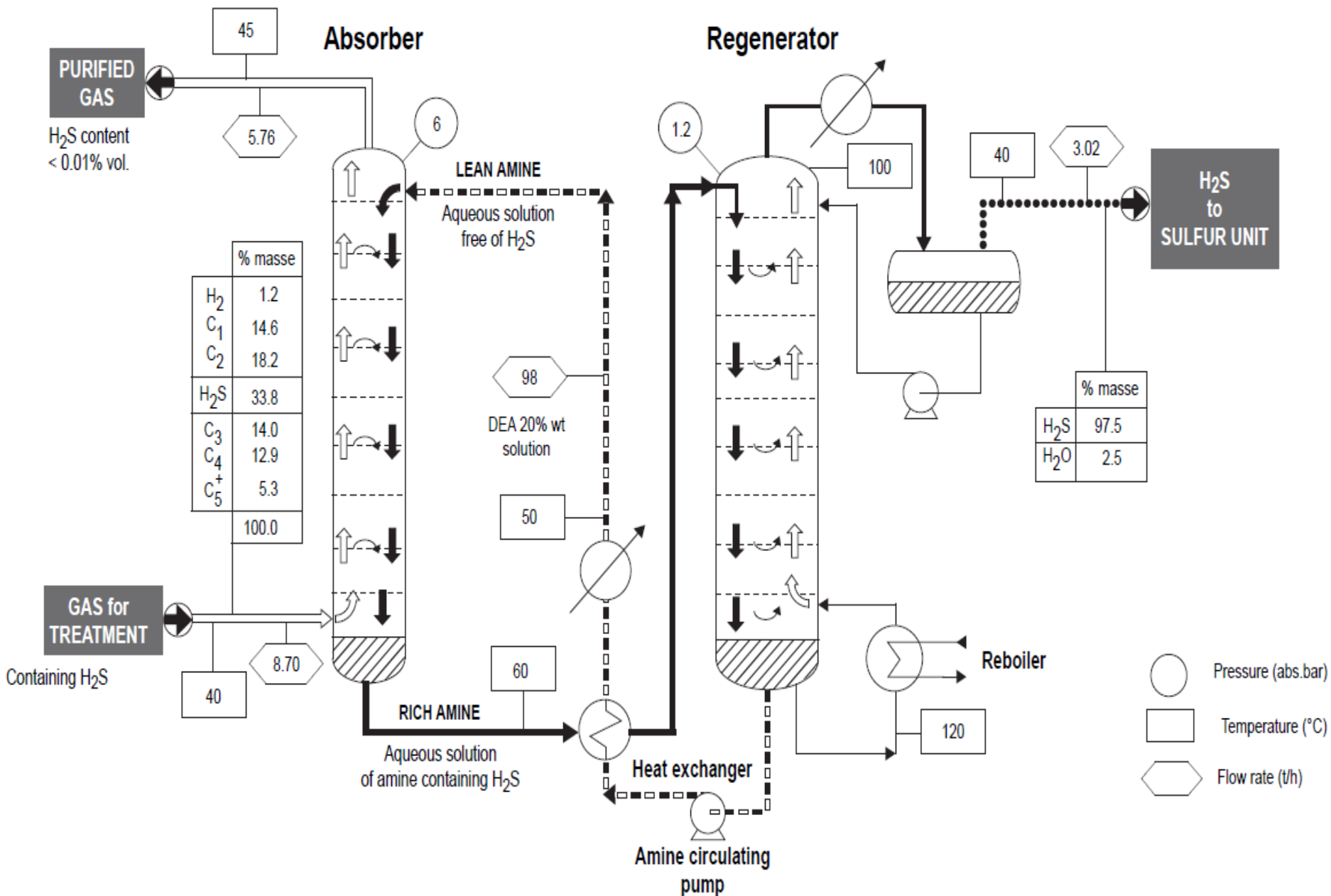




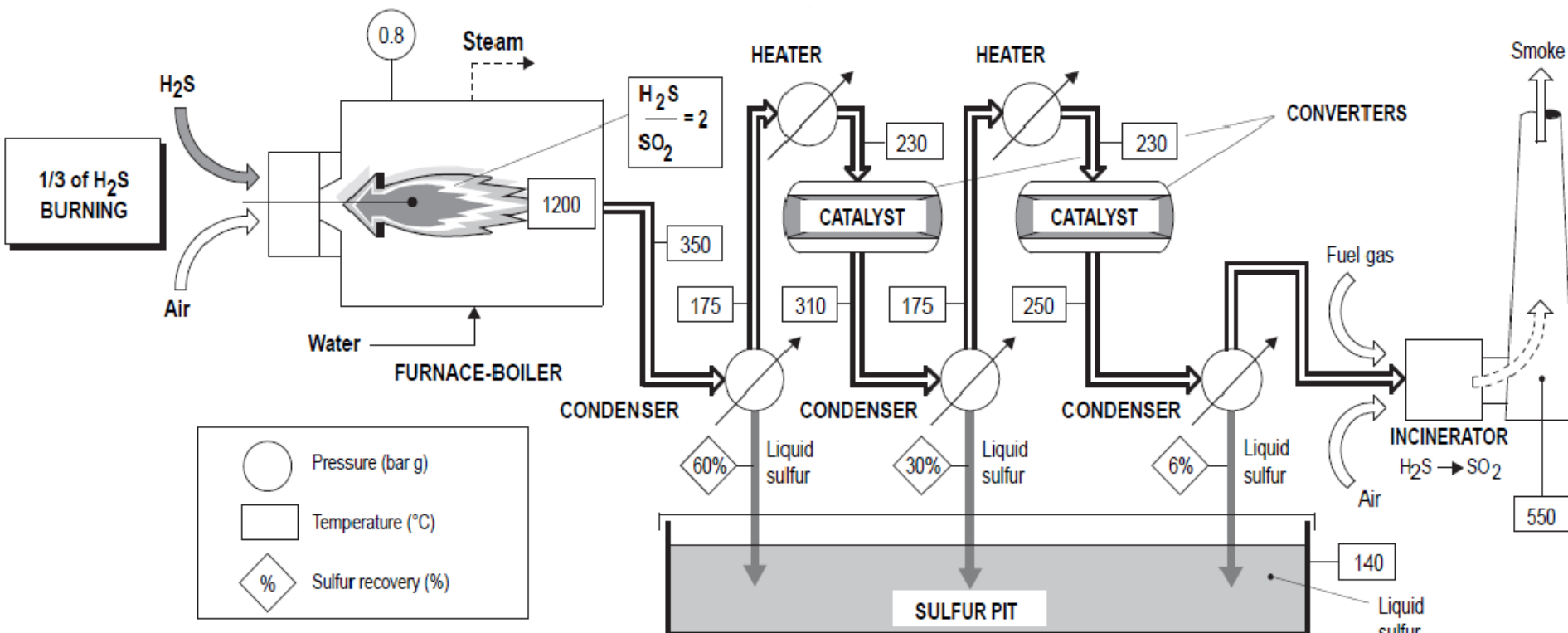
SULFUR RECOVERY TREATMENTS



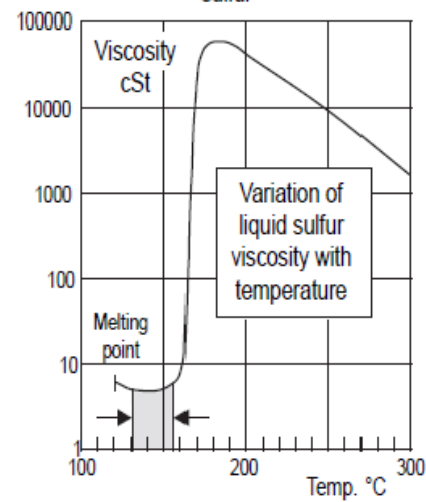
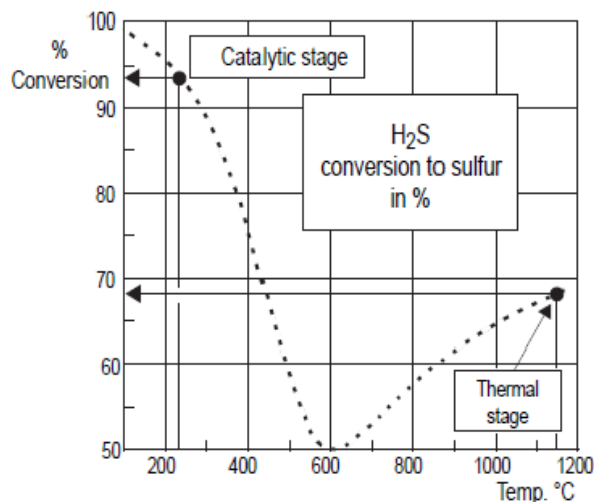
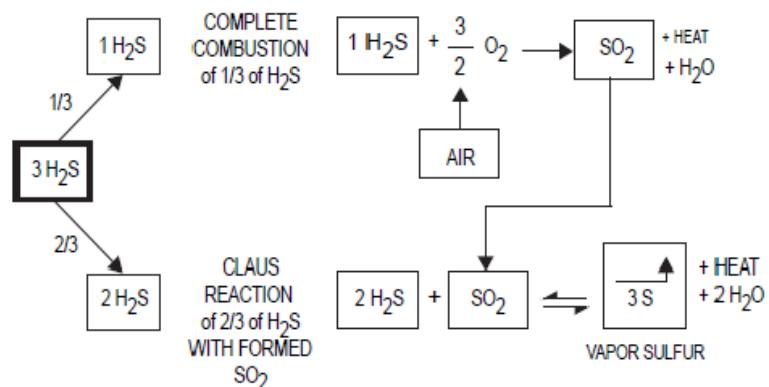
Μονάδα έκπλυσης με αμίνη



Μονάδα ανάκτησης θείου (Claus Unit)



Chemical reactions of the sulfur production process





Ευχαριστώ για την προσοχή σας

