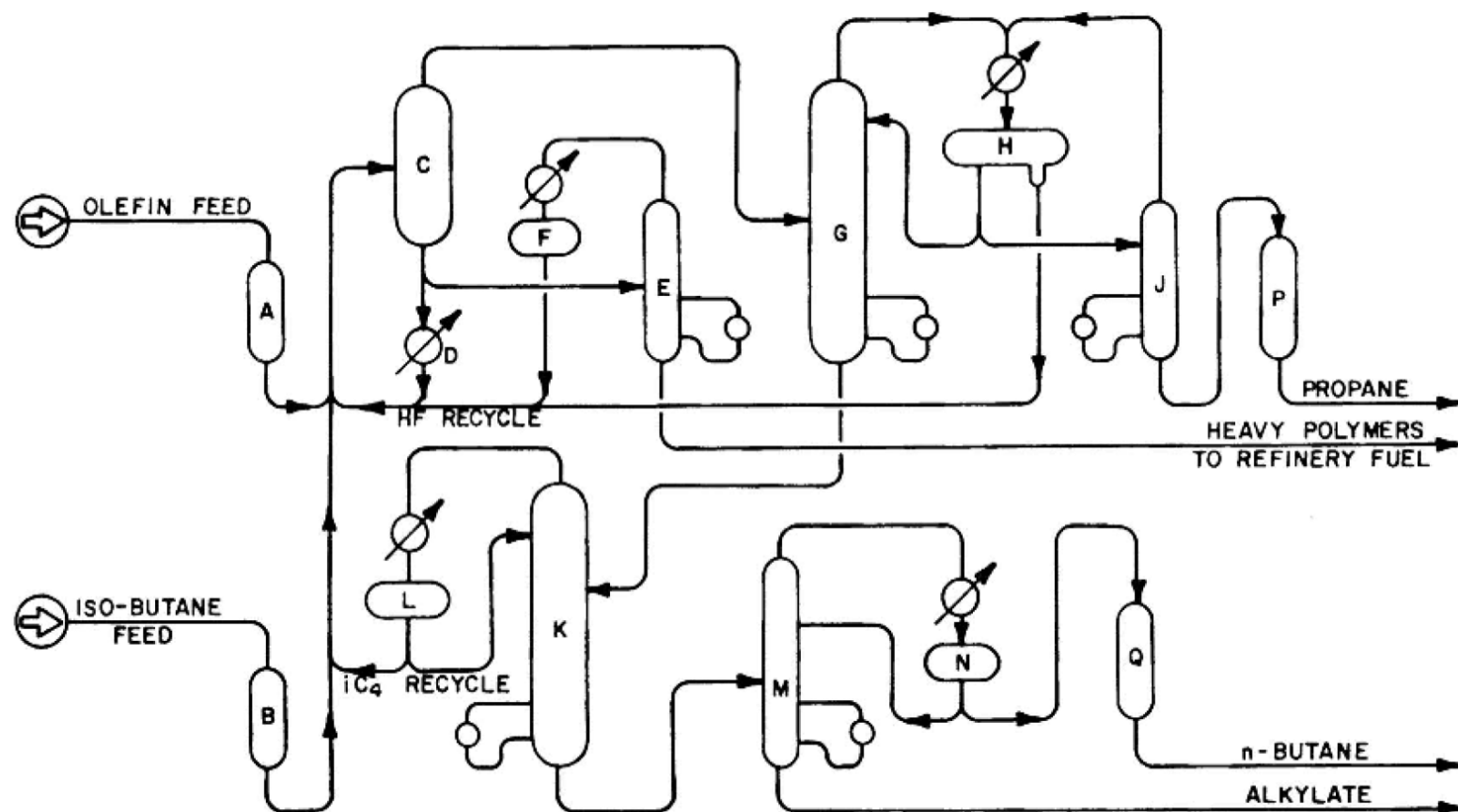
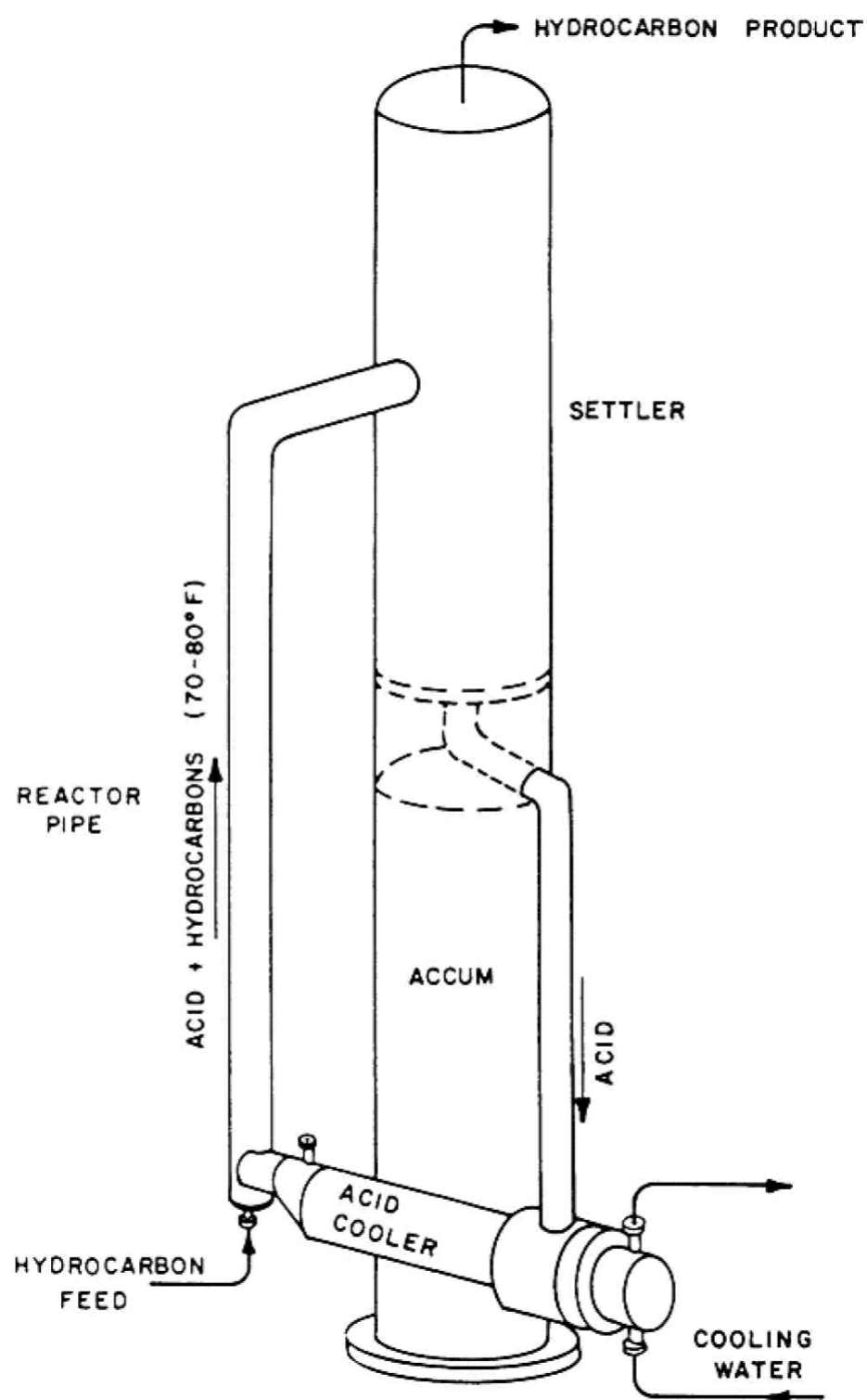


**Figure 10.1** Catalytic reforming, semiregenerative process.

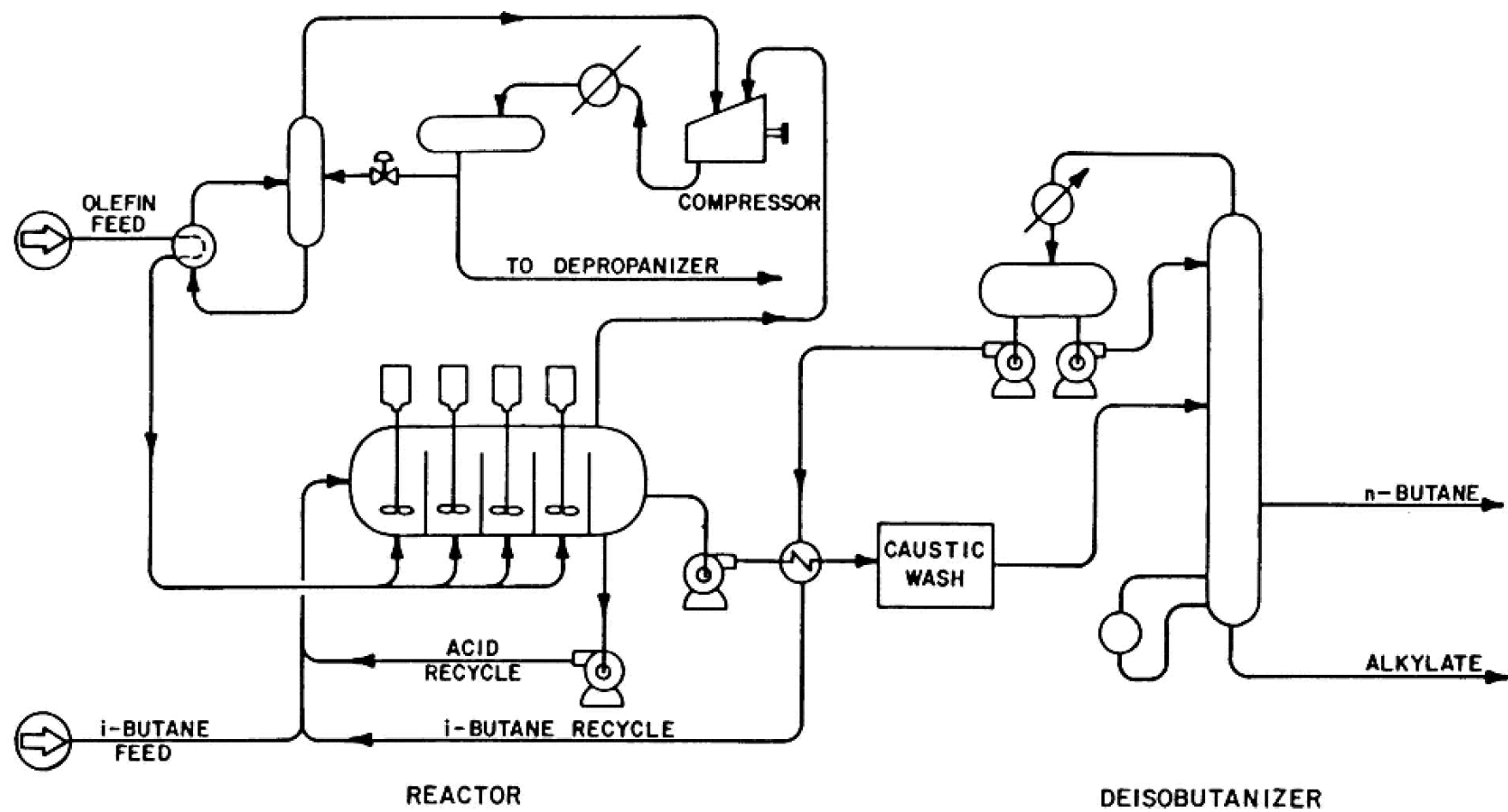


HF alkylation. A: olefin feed drier; B: isobutane feed drier; C: acid settler; D: acid cooler; E: acid rerun column; F: acid accumulator; G: depropanizer; H: depropanizer accumulator; J: acid stripper; K: deisobutanizer; K: deisobutanizer accumulator; M: debutanizer; N: debutanizer accumulator; P: propane caustic treater; Q: butane caustic treater.

**Figure 11.2** Phillips hydrofluoric acid alkylation unit.



**Figure 11.3** Phillips HF reactor.



**Figure 11.4** Autorefrigeration sulfuric acid alkylation unit.