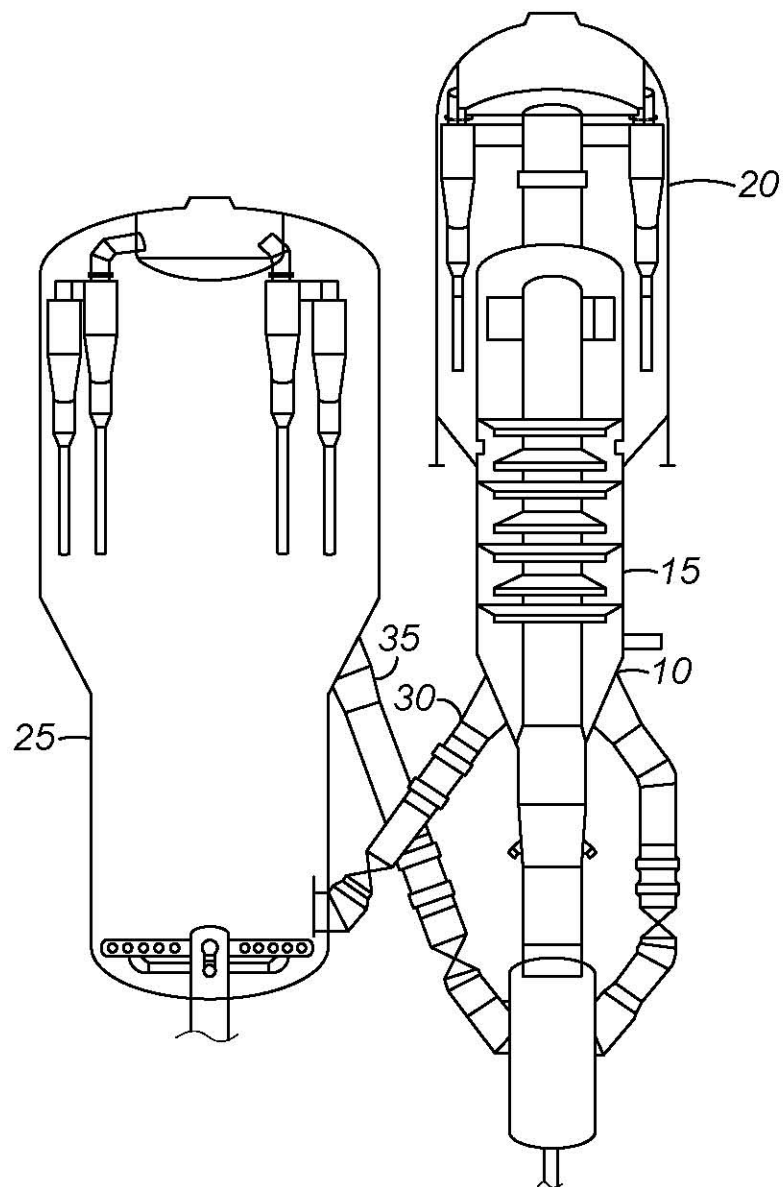
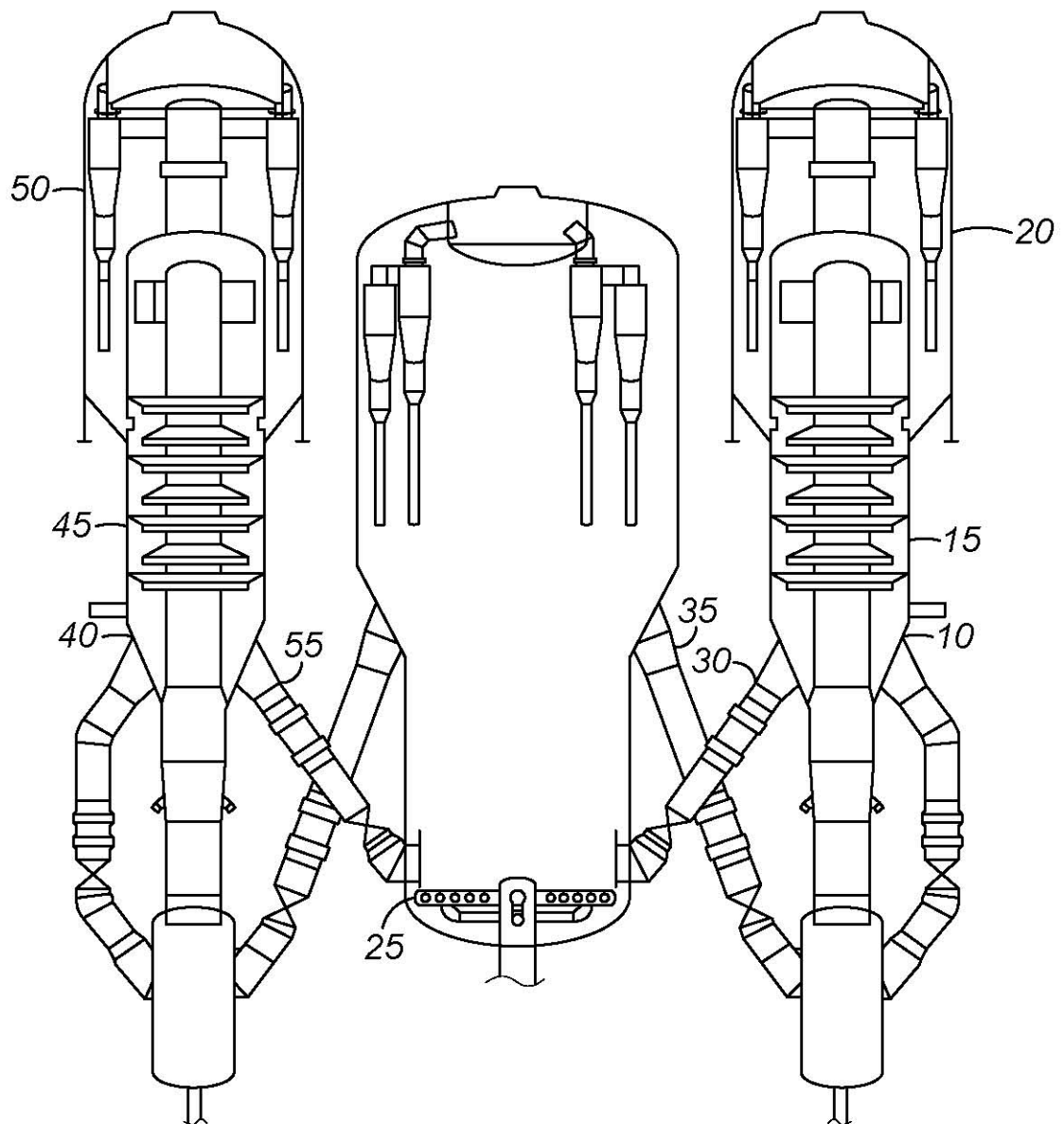


## ABSTRACT

A process and catalyst for improving the yield of propylene from residual oil feedstock includes obtaining residual oil feedstock from a vacuum distillation tower. The residual oil feedstock has contaminant metals such as sodium or vanadium. The residual oil feedstock is contacted with a cracking catalyst in a catalytic cracking zone to make products. A ZSM-5 zeolite, a binder, a filler and a metal trap are components of the cracking catalyst. The metal trap has a trapping agent in an outer shell of the catalyst, a trapping agent in the ZSM-5 binder or combinations thereof. After reacting, the cracking catalyst is separated from the products in a separator zone, then regenerated by combusting coke deposited on a surface of the cracking catalyst in an oxygen-containing environment. The cracking catalyst is returned to the catalytic cracking zone. The catalyst with the metal trap is also disclosed.



**FIG. 1**



**FIG. 2**