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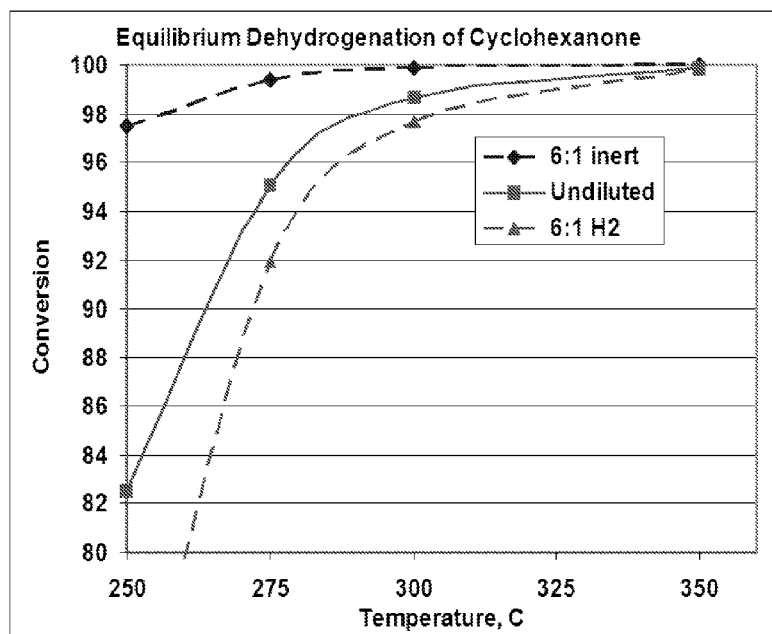


FIGURE 1

[Continued on next page]



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(57) Abstract: In a process for producing phenol, cyclohexylbenzene is oxidized to produce cyclohexylbenzene hydroperoxide and then the resultant cyclohexylbenzene hydroperoxide is cleaved to produce an effluent stream comprising phenol and cyclohexanone. At least a portion of the effluent stream is then fed to at least one dehydrogenation reaction zone, where the effluent stream portion is contacted with a dehydrogenation catalyst under conditions effective to convert at least part of the cyclohexanone in the effluent portion into phenol and hydrogen.