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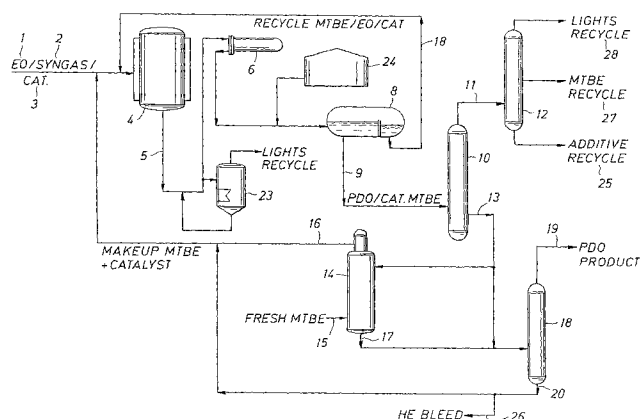
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(54) Title: ONE STEP HYDROFORMYLATION AND HYDROGENATION PROCESS FOR PREPARING A 1,3-PROPANE-
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(57) Abstract: Process for one-step hydroformylation and hydrogenation synthesis of 1,3-propanediol which comprises: (a) contact-
ing a mixture of ethylene, oxide, carbon monoxide, hydrogen, a non-water-miscible reaction solvent and a hydroformylation catalyst
composition; (b) heating said reaction mixture to produce a single-phase reaction product mixture containing 1,3-propanediol such
that phase separation can be induced by temperature reduction; and (c) inducing phase separation by at least one method selected
from the group consisting of: (i) temperature reduction combined with addition of a phase split-inducing agent to the mixture, (ii)
temperature reduction combined with first adding a miscibilizing cosolvent and then removing the miscibilizing cosolvent, (iii) first
adding a miscibilizing cosolvent and then removing the miscibilizing cosolvent, and (iv) adding a phase split-inducing agent to the
reaction product mixture wherein the phase separation results in a first phase comprising a major portion of the reaction solvent, at
least 50 wt% of the catalyst composition, plus unreacted ethylene oxide, and a second phase, which comprises a major portion of
1,3-propanediol.