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- (71) **Applicant:** **BASF SE** [DE/DE]; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE).
- (72) **Inventors:** **BLEI, Stefan**; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE). **EL-TOUFAILI, Faissal-Ali**; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE). **RAVIKUMAR, Vikram**; Dreve Richelle 161, 1410 Waterloo (BE). **KOTANJAC, Zeljko**; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE). **LARYEA, Esther Matyka**; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE). **FELDEN, Marc**; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE). **GAUER, Jochen**; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE). **GASSMANN, Michel**; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE). **HETZ-HUNSINGER, Alexander**; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE). **DIENES, Christian**; Carl-Bosch-Strasse 38, 67056 Ludwigshafen am Rhein (DE).
- (74) **Agent:** **ALTMANN STÖBEL DICK PATENTANWÄLTE PARTG MBB**; Dr. Andreas Altmann, Isartorplatz 1, 80331 München (DE).
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(54) **Title:** PROCESS FOR SEPARATING HIGH BOILERS FROM POLYAMIDE 6 DEPOLYMERIZATION MIXTURES

(57) **Abstract:** A process for separating one or more organic compounds X from an aqueous liquid stream S_{L0} comprising monomeric ϵ -caprolactam and said one or more compounds X, the process comprising (i) providing the stream S_{L0} having a temperature T_{L0} and exhibiting a total concentration $c_{L0}(X)$ of the one or more compounds X and a concentration $c_{L0}(C)$ of monomeric ϵ -caprolactam; (ii) producing in an evaporation unit U_{E1} from the stream S_{L0} an aqueous at least partially vaporous stream S_{V1} and a liquid stream S_{L1} , the stream S_{V1} having a temperature T_{V1} with $T_{V1} \leq T_{E1}$ and exhibiting a total concentration $c_{V1}(X)$ of one or more compounds X and a concentration $c_{V1}(C)$ of monomeric ϵ -caprolactam with $c_{V1}(C) > c_{L0}(C)$ and $c_{V1}(X) < c_{L0}(X)$, and the stream S_{L1} having a temperature T_{L1} with $T_{L1} = T_{E1}$ and exhibiting a total concentration $c_{L1}(X)$ of one or more compounds X and a concentration $c_{L1}(C)$ of monomeric ϵ -caprolactam with $c_{L1}(C) < c_{E1}(C)$ and $c_{L1}(X) > c_{L0}(X)$; (iii) producing in a separation unit U_{S1} from the stream S_{V1} an aqueous vapor stream S_{V2} and a liquid stream S_{L2} , the stream S_{V2} having a temperature T_{V2} with $T_{L0} < T_{V2} \leq T_{V1}$ and exhibiting a total concentration $c_{V2}(X)$ of one or more compounds X and a concentration $c_{V2}(C)$ of monomeric ϵ -caprolactam, and the stream S_{L2} having a temperature T_{L2} with $T_{L2} = T_{V2}$ and exhibiting a total concentration $c_{L2}(X)$ of one or more compounds X and a concentration $c_{L2}(C)$ of monomeric ϵ -caprolactam with $c_{L2}(X) > c_{V2}(X)$ and $c_{L2}(C) < c_{V2}(C)$; (iv) passing the aqueous stream S_{V2} to a water separation unit U_{WS2} .

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