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(54) Title: FILM REACTOR FOR A GAS-LIQUID, IN PARTICULAR A SULFONATION, OR SULFATATION, REACTION

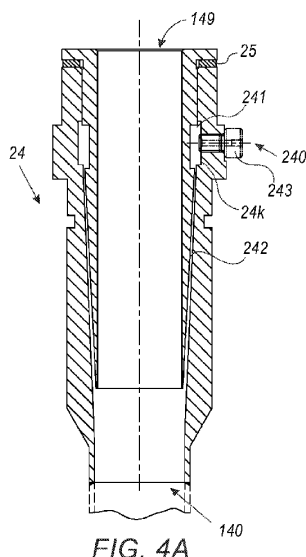


FIG. 4A

(57) Abstract: A continuous falling film reactor (10) to obtain a product through a gas-liquid, in particular a sulfonation, or sulfatation, reaction, comprises a reactor body, or outer shell, (12) adapted to house a plurality of chambers, in particular elongated and/or tubular chambers, (14) for a reaction between a first reagent and a second reagent; said reaction chambers (14) having a respective inner surface (140), in particular for the sliding of said first reagent in the form of a thin film, or layer, means (16) for the introduction of said first reagent, in particular in the liquid phase, especially in the form of an organic raw material, into the respective, in particular elongated and/or tubular, reaction chamber (14), and means (18) for inputting said second reagent, in particular in the gaseous phase, especially in the form of sulphuric anhydride, in the respective one of said reaction chambers (14). Means, or head, (24) are provided for the introduction of said first reagent, in particular in the liquid phase, especially in the form of an organic raw material, in the respective, in particular elongated and/or tubular, reaction chamber (14), which inlet means, or head (24) comprise corresponding nozzle means (240) that are in the form of said nozzle means so calibrated as to cause a predetermined load loss of said first reagent.

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