

APPARATUSES, COMPUTER-IMPLEMENTED METHODS, AND COMPUTER  
PROGRAM PRODUCTS FOR PLANTWIDE OPTIMIZATION WITH MULTISTAGE  
PRE-BLENDING

ABSTRACT

Embodiments of the present disclosure provide for improved plantwide optimization with multistage pre-blending. Some embodiments generate a virtual representation of a plant that aggregates multiple stage components of the plant, process at least the virtual representation via a single-stage optimization process, cause production based on the results of the single-stage optimization process, generate an indicator of whether quality data for a preblended product, and cause routing, further processing, and/or the like, based on the specification satisfaction indicator. In this regard, some such embodiments optimize operation of a processing plant in circumstances where multistage blending is performed, such as due to expected and/or unexpected errors in operation for producing a particular final product.

[FIGURE 1]