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## A Procedure for Solid Mass Balancing of Zarand Coal Washing Plant

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### Abstract

For solid mass balancing of Zarand coal washing plant, a procedure was developed. This includes distinguishing each main processing unit as a black box, simplification of circuit by neglecting unnecessary streams, sampling of main streams, mass balancing and adjusting the errors. Full-stream/Partial-component was selected as sampling scheme since it was the first mass balancing project. Balancing was done in two steps: 1) for feed and product streams and 2) for streams inside the black boxes. By using this procedure the plant was balanced and proportion of feed rate of each unit was obtained 22, 40, 44.5, 2.4 and 0.08 percent for heavy media, jig, flotation, dynawhirhpool, and spiral units, respectively.

**Keywords:** Mass balancing, Sampling, Zarand coal washing plant

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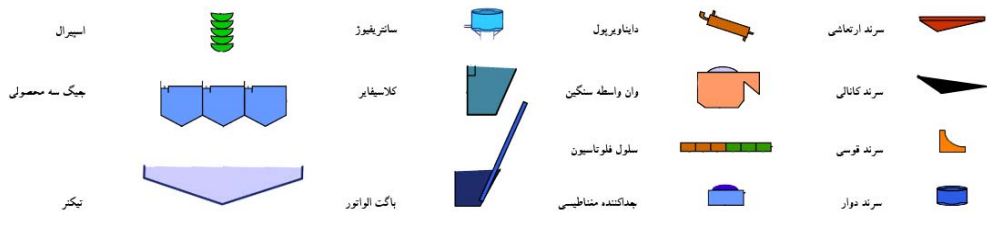
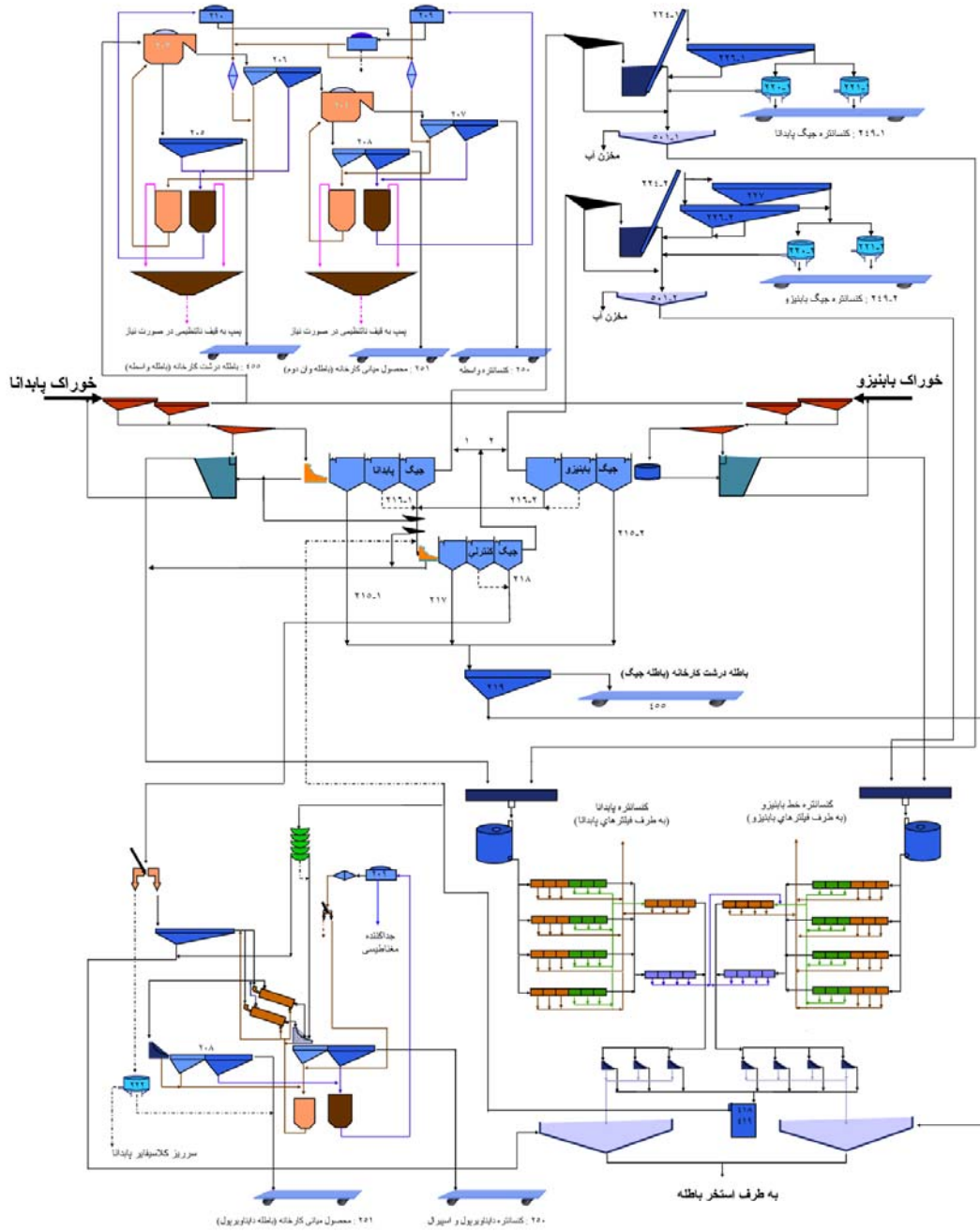
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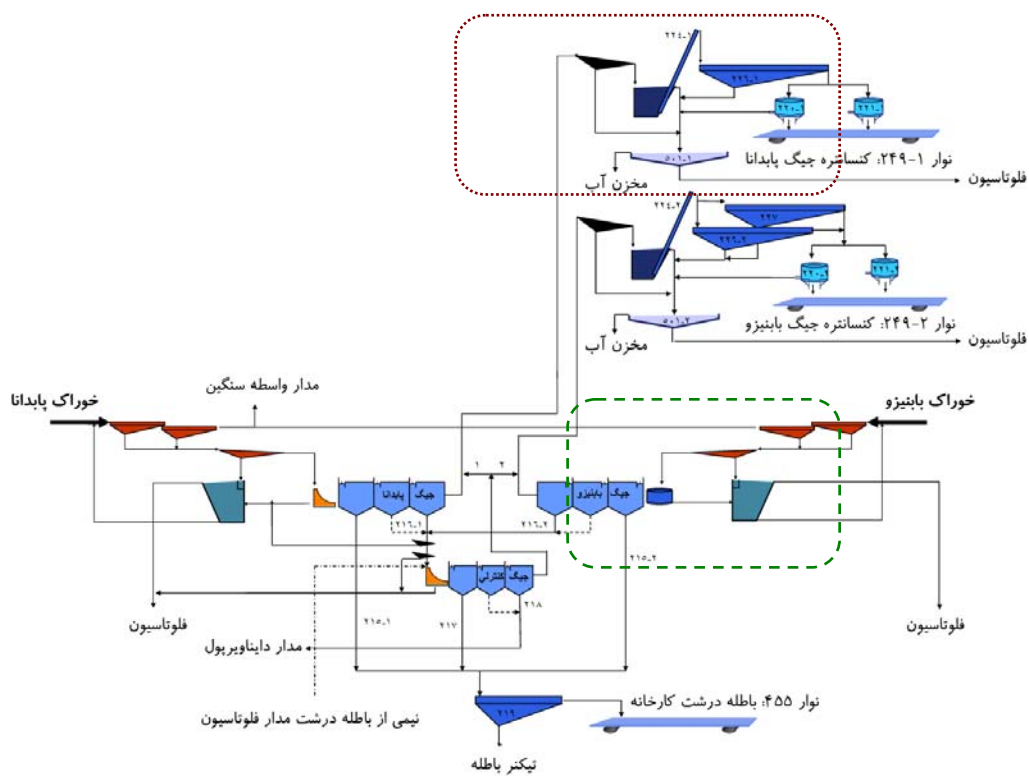
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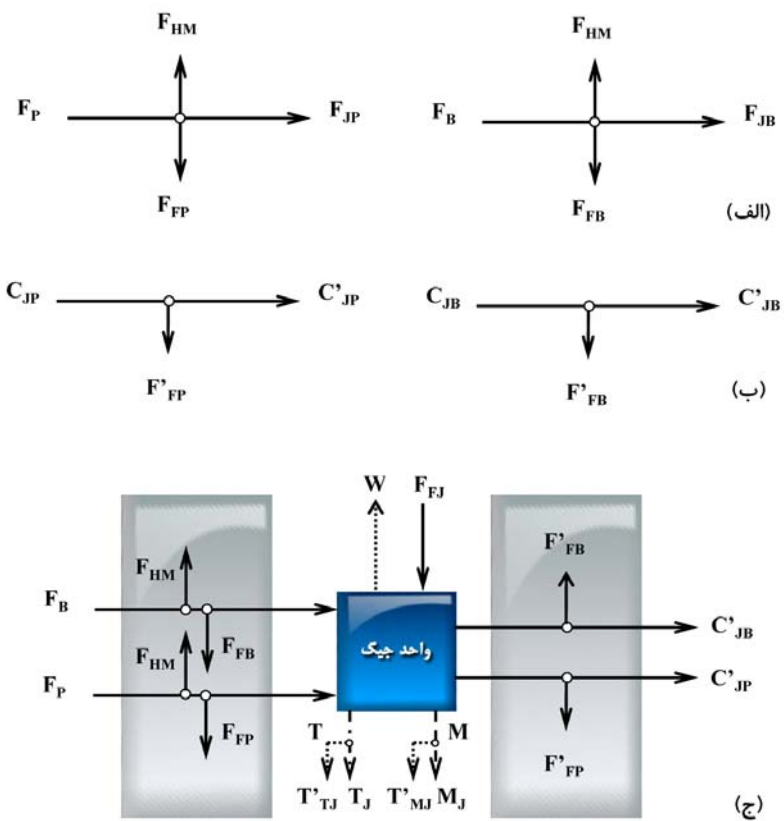
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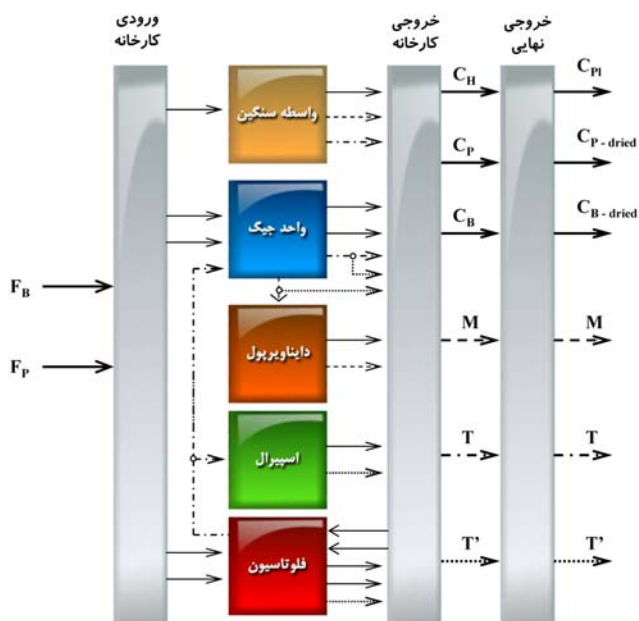
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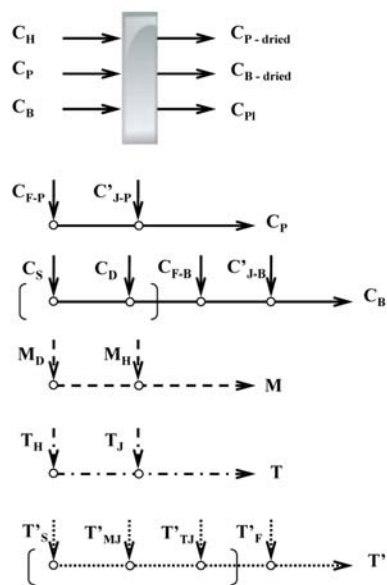
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