

Process Flow Direction Analysis Method Using Block Stream Matrix(BSM) and Loop Stream Matrix (LSM)

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Almost all of approach methodology using matrix consists of block X block matrix. That means stream is not enough considered in these methodology. Branch and Bound Algorithm is inefficient way to find Tearing set. Because it considers whole stream. I think Unit Loop, Stream Loop and Tearing Set are associated each other, but there are no sequential finding algorithm, only criteria exist. In this thesis, it will be shown to find general rules to find Unit Loop, Stream Loop and Tearing Set using Block Stream Matrix (BSM) and Loop Stream Matrix(LSM) which is designed by In Hyuck Choi(Author). BSM and LSM also show process oscillation and material flow information. There are another three ways to show certatin P&ID. Through this method, you can find three important value, Unit Loop, Stream Loop and Tearing Set. When the Block-Stream-Matrix component 1 has changed to flow rate, this analysis also makes easy to show material movement in the whole process.