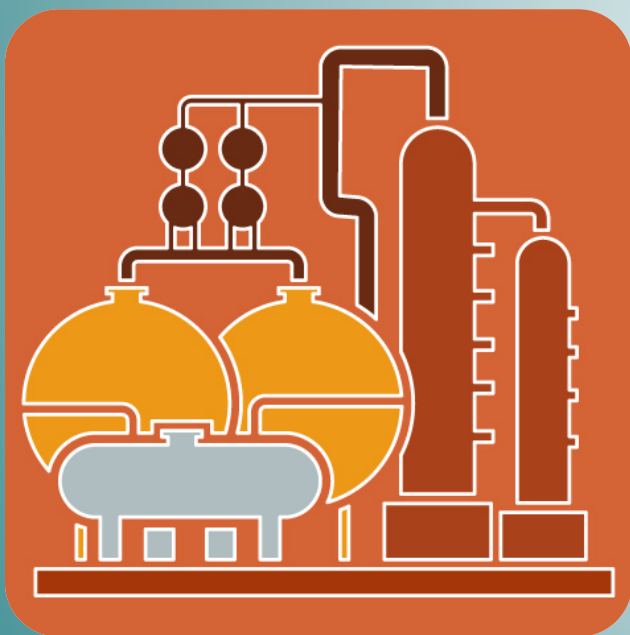


Chemical Process Design / Diseño de Procesos Químicos

Topic 4.5. Splitter



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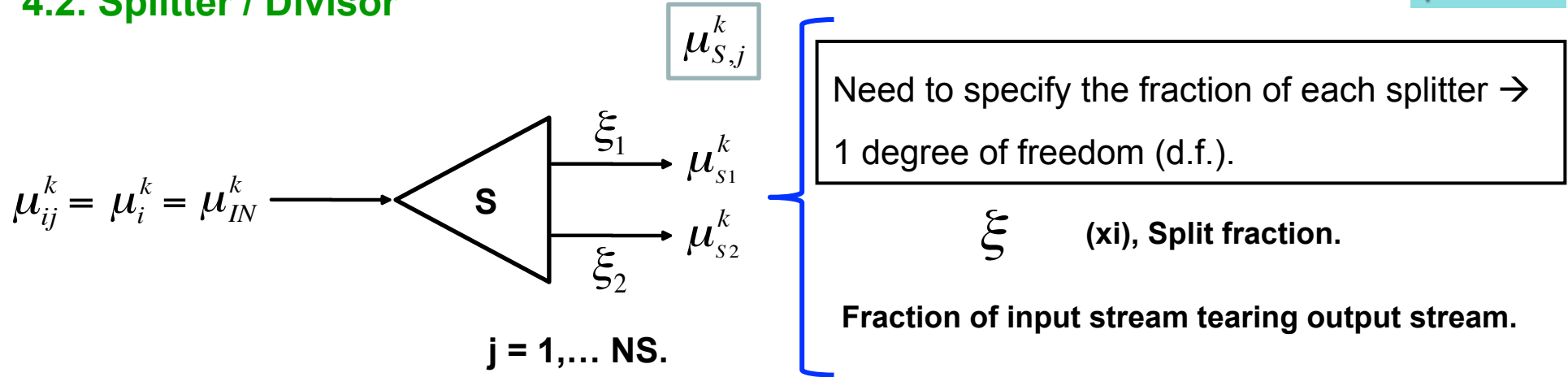
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4.- Development of Linear Mass Balance (LMB) models

ξ	x_i
μ	m_i

4.2. Splitter / Divisor



$$\mu_{S,j}^k = \xi_j \mu_i^k$$

For all k.

$$\mu_{S,NS}^k = \left(1 - \sum_{j=1}^{NS-1} \xi_j\right) \mu_i^k$$

If NS = 2

$$\mu_{S,1}^k = \xi_1 \mu_i^k$$

For all k.

$$\mu_{S,2}^k = (1 - \xi_1) \mu_i^k = \xi_2 \mu_i^k$$

- This could be a vessel or part of a pipe, i.e.
- The split fraction may have a high impact in the [recycle stream to the reactor](#).

