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Mass balance

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Emission factors

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Pig Iron

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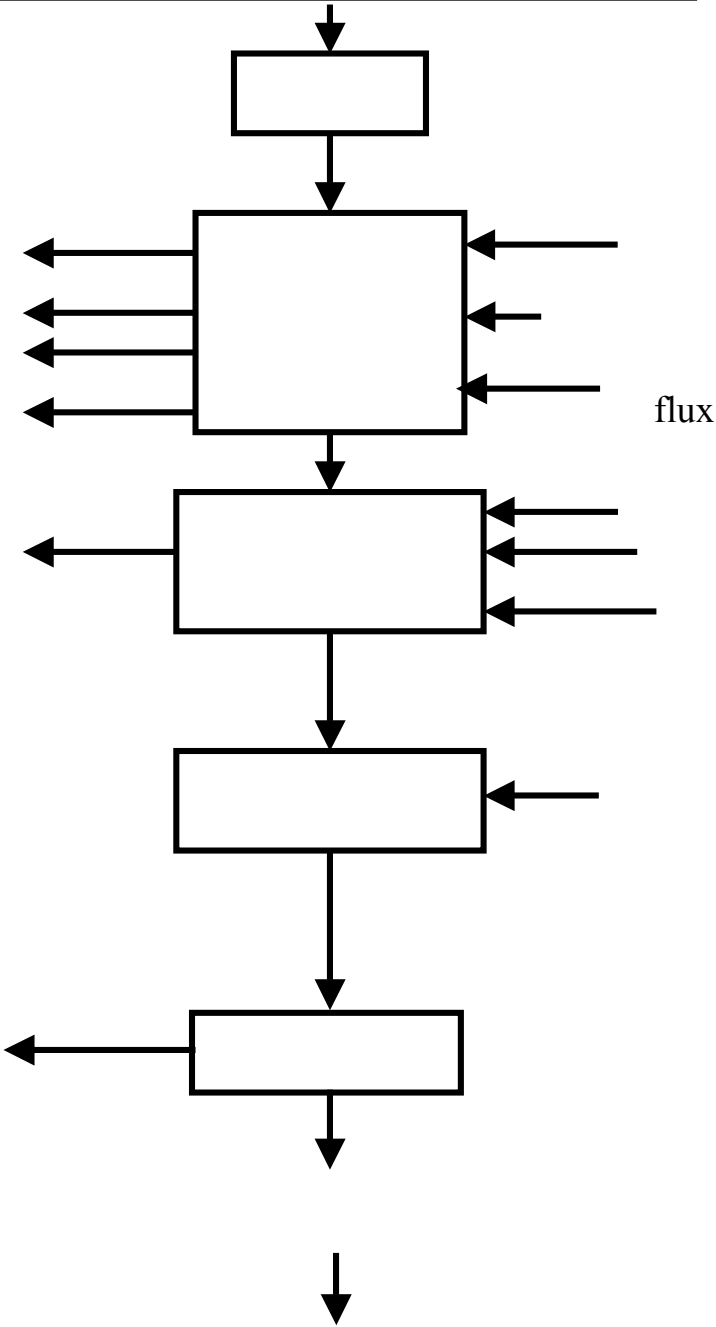
(lance)

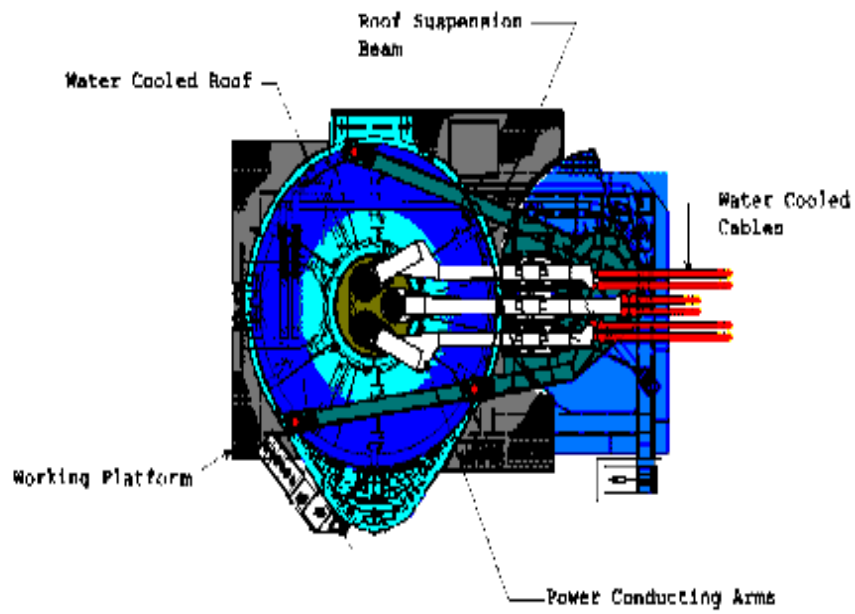
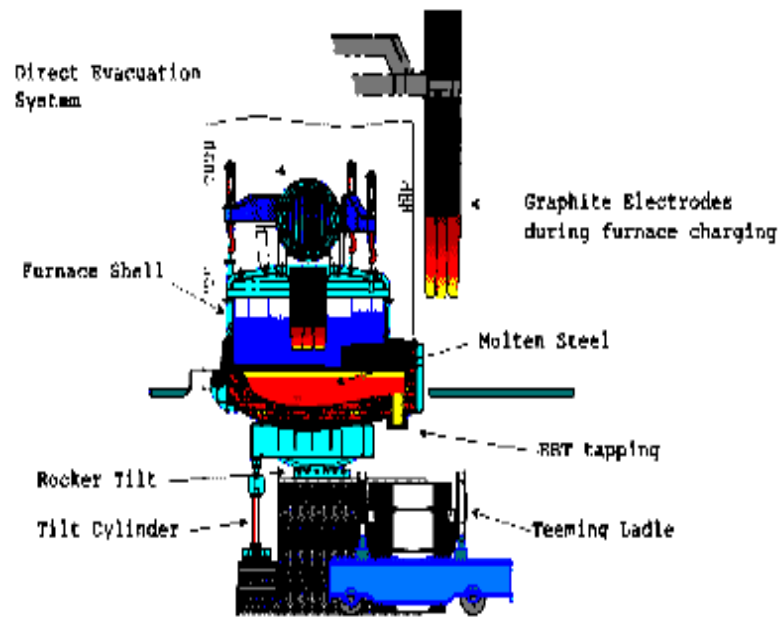
(bars,)

rounds, slabs, billets, and blooms)

(CO, CO₂, SO₂, NO_x)

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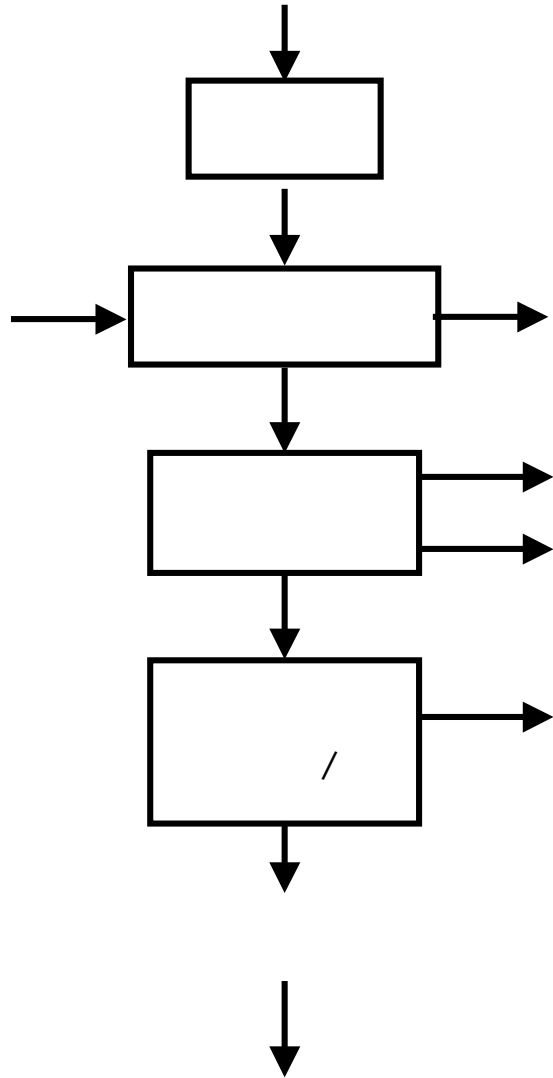
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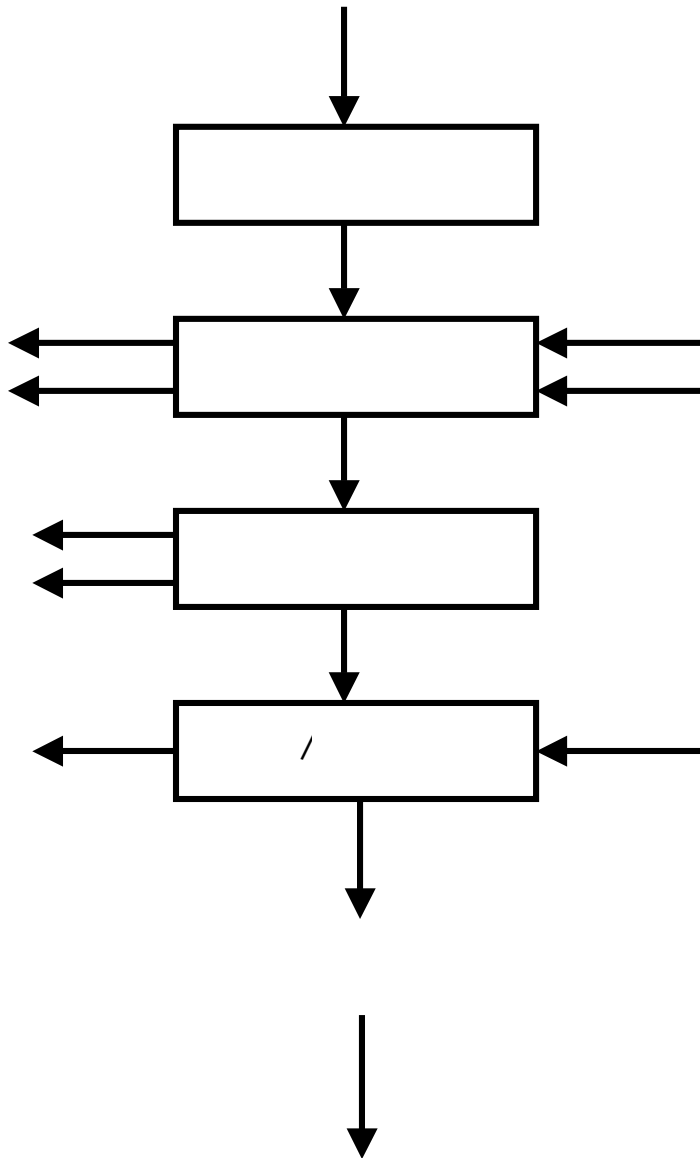
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(tundish)

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(blooms)

(billets)

(slabs)

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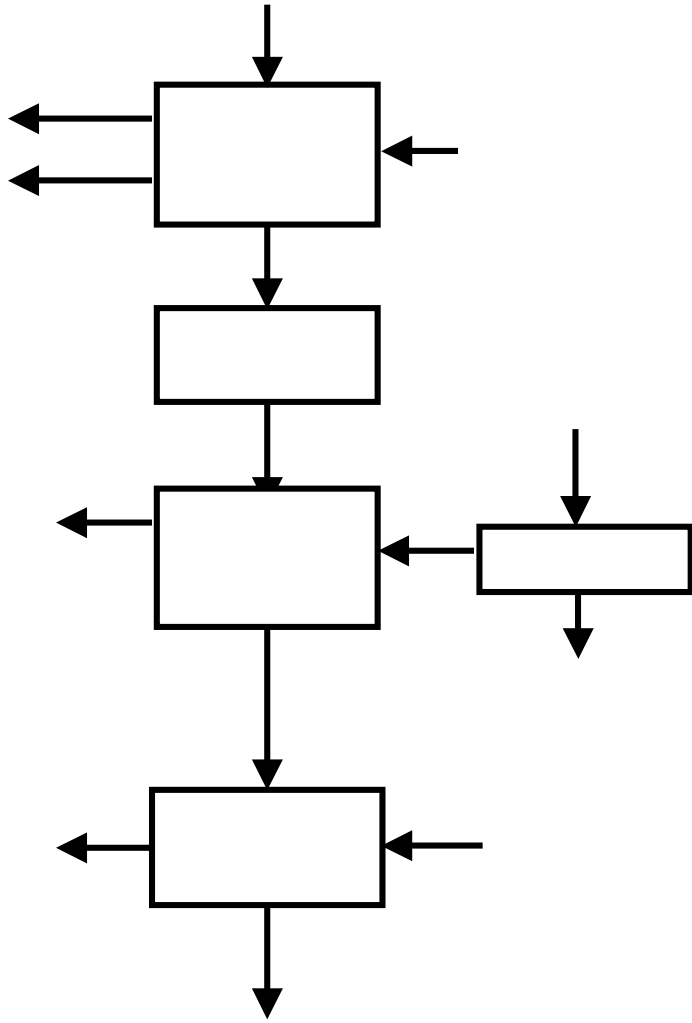
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(tundish)

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(flame cutters)



(Slaps)

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(sea coal)

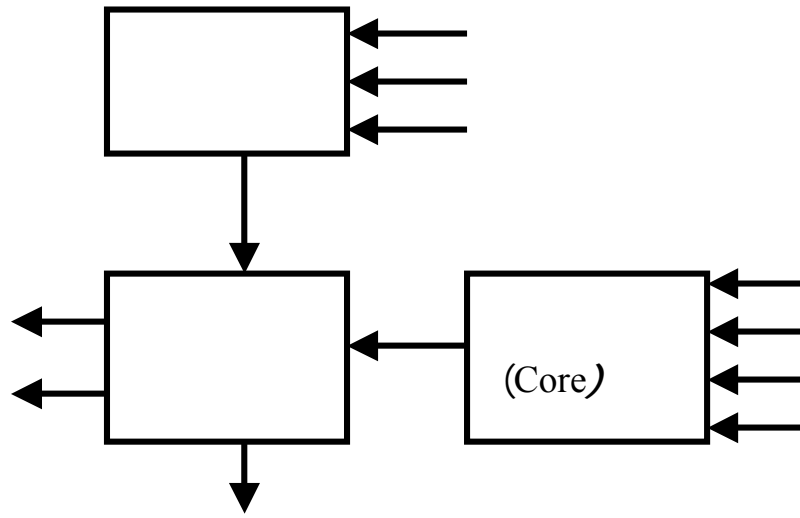
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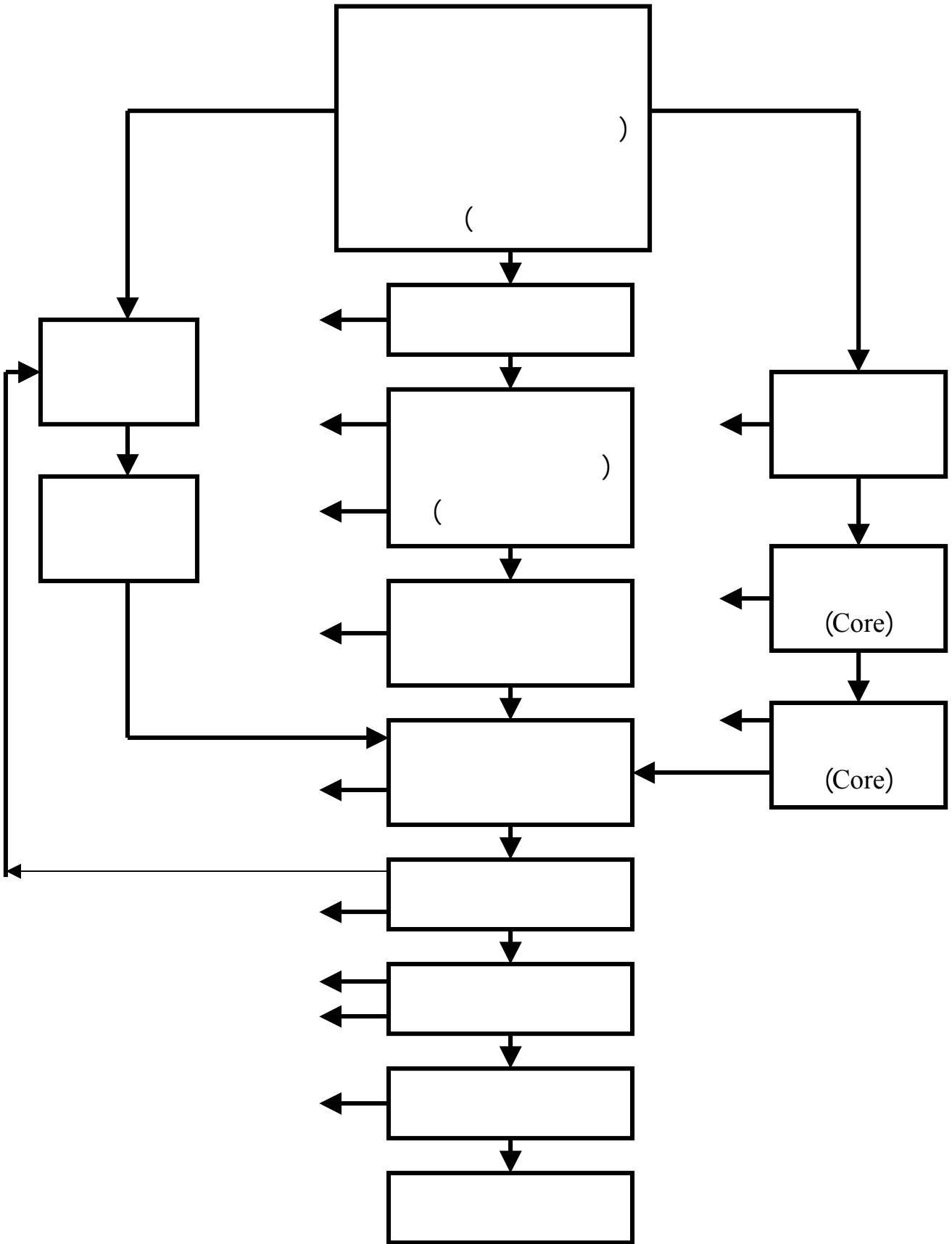
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(bars, slabs, blooms and billets)

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(slabs, bars, rounds, blooms and billets)

(ingot) /

ingot rolling

(soaking ()

ingots /

ingots /

pits)

roughing

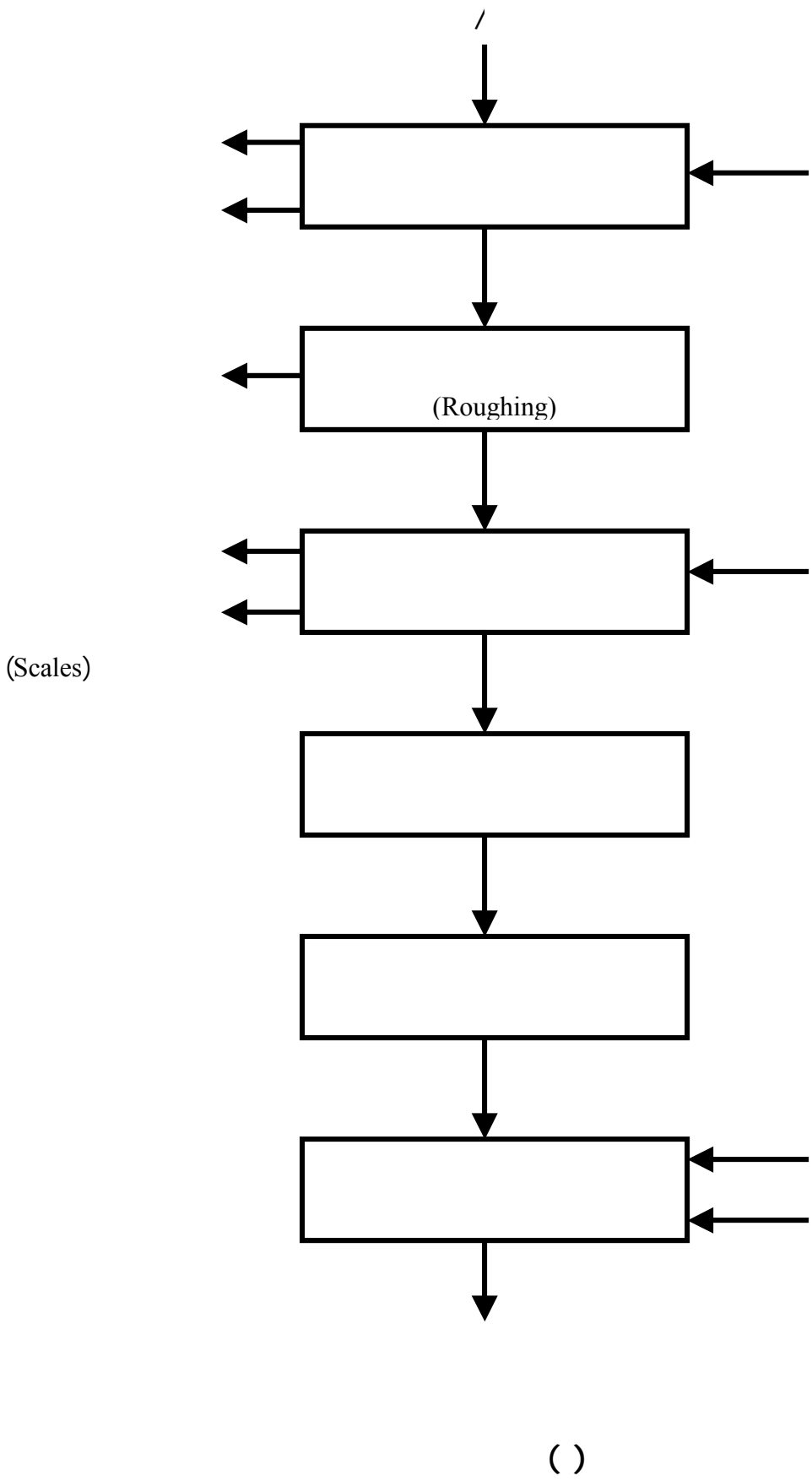
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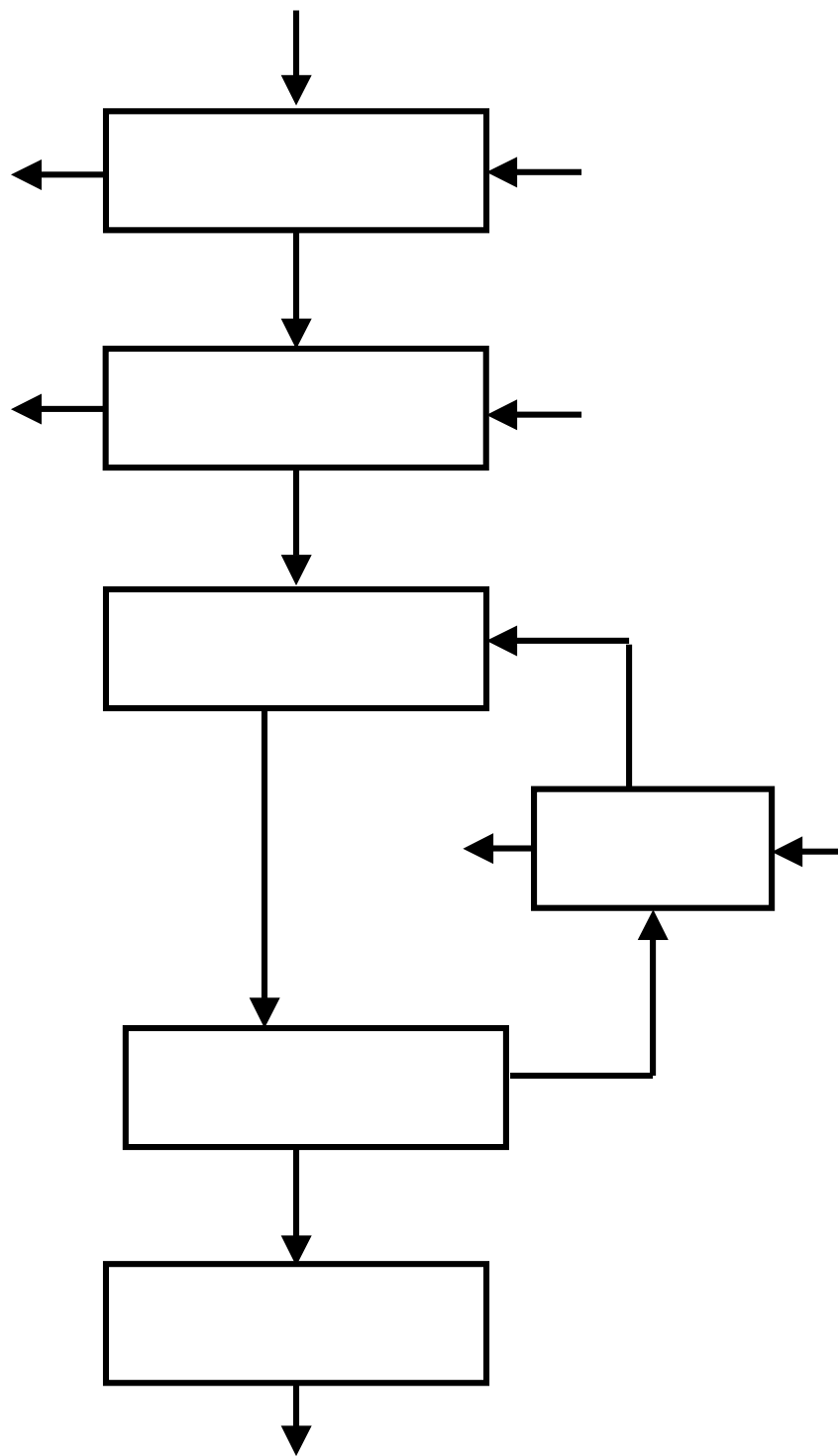
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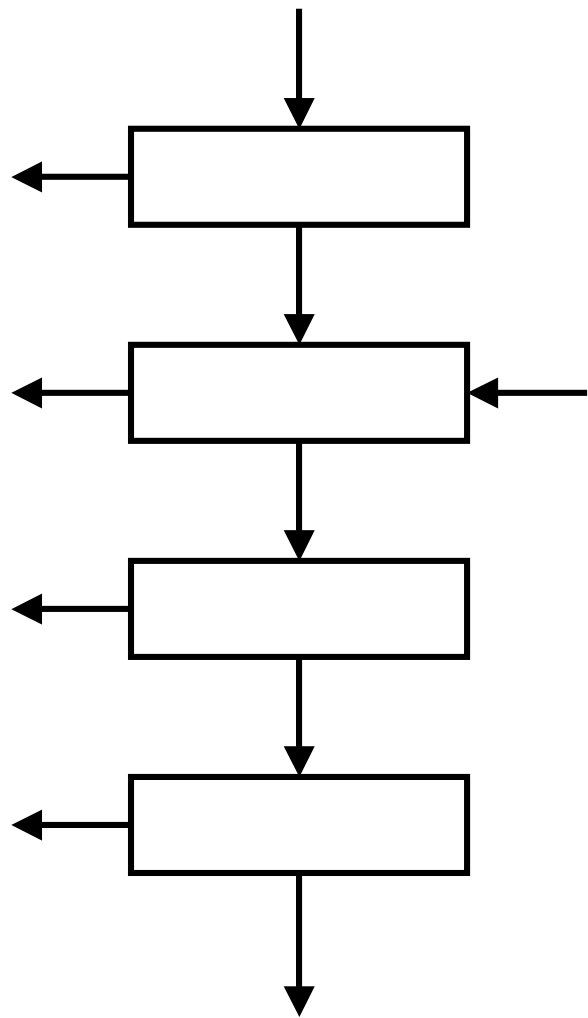
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(make-up water)

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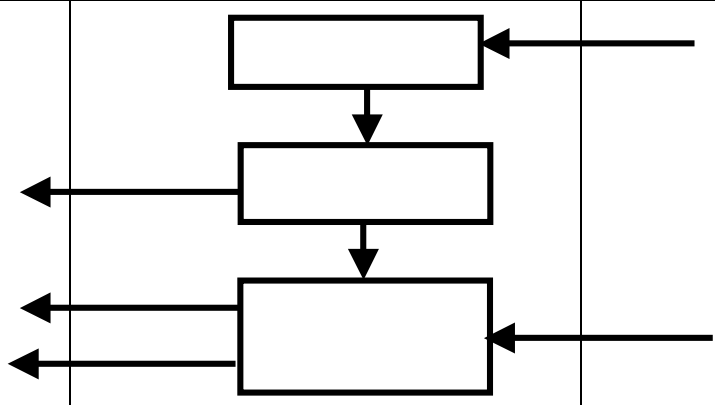

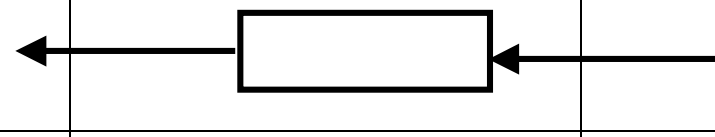
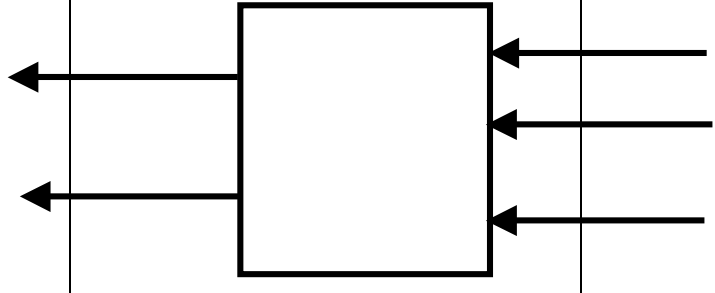

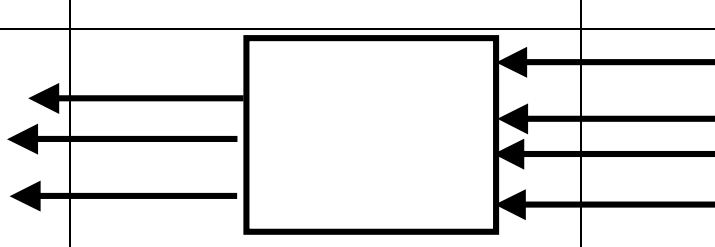
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(furnace sput)

(tapping)

slabs or)

(blooms, bars, billets and rounds

(CO, CO , SO , NOx)

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(fabric filter)

(pulse jet baghouses)

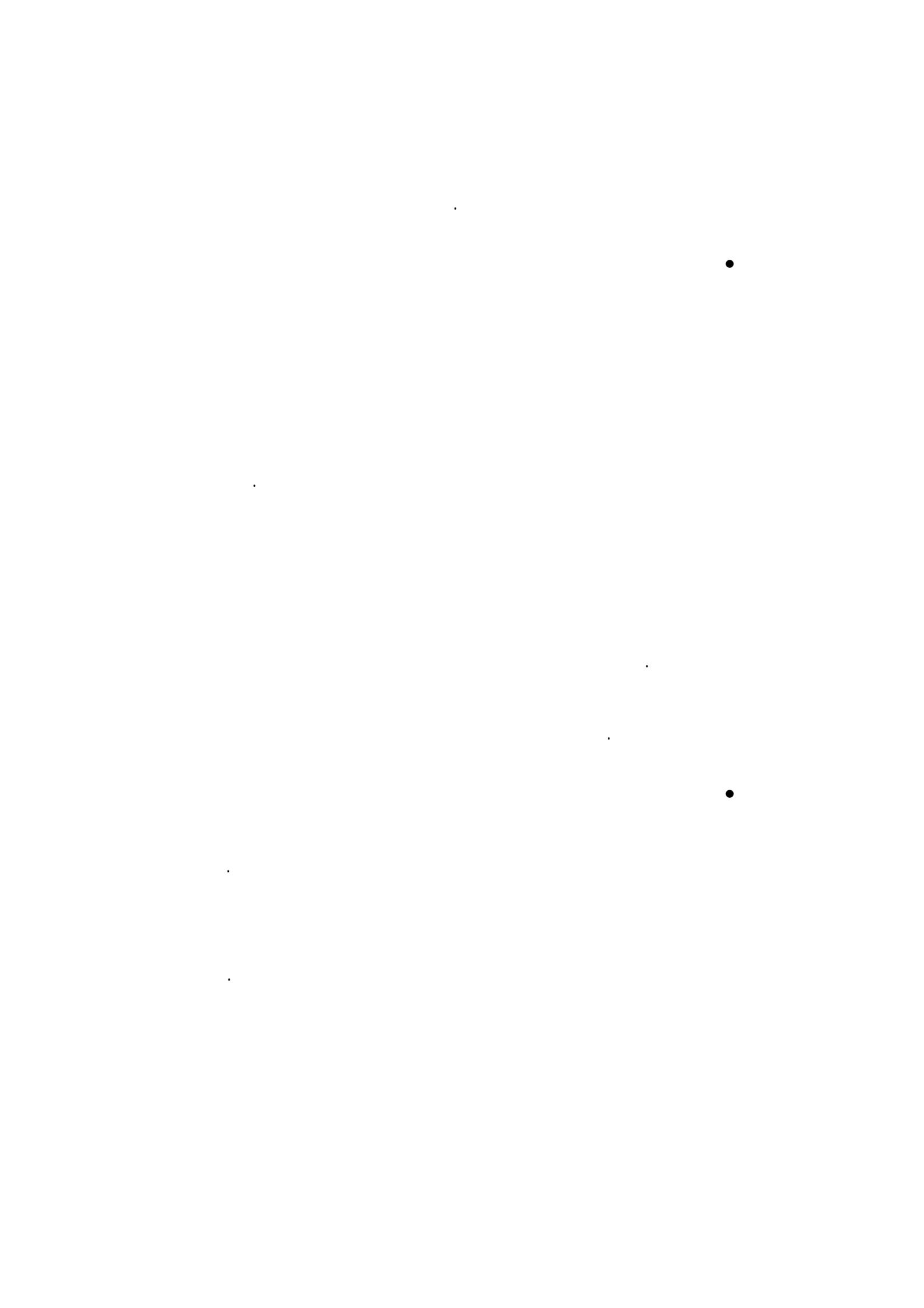
(bagehouse hopper)

(scrubbers)

(sludge)

(after burning)

(incineration)



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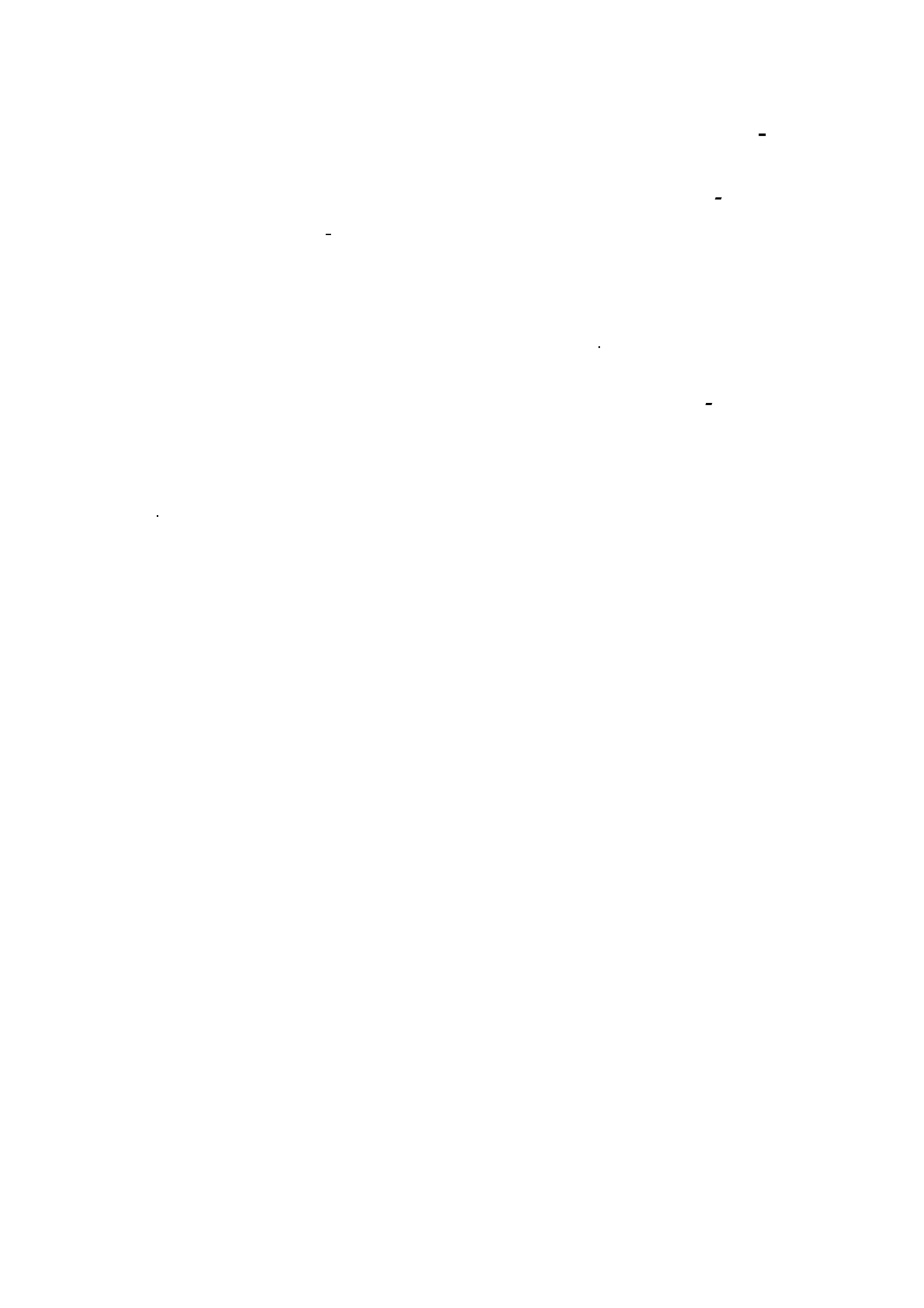
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(SMS)

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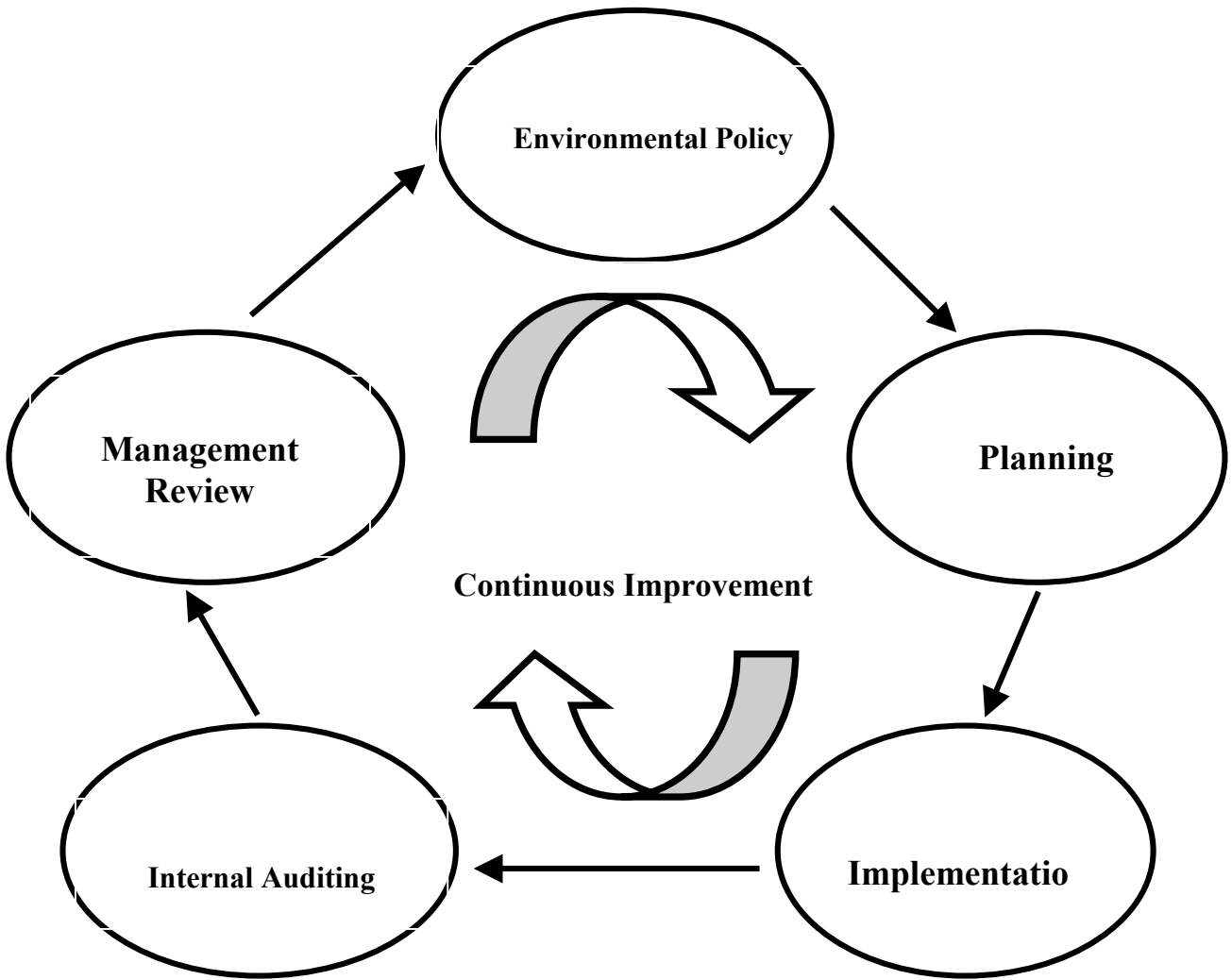
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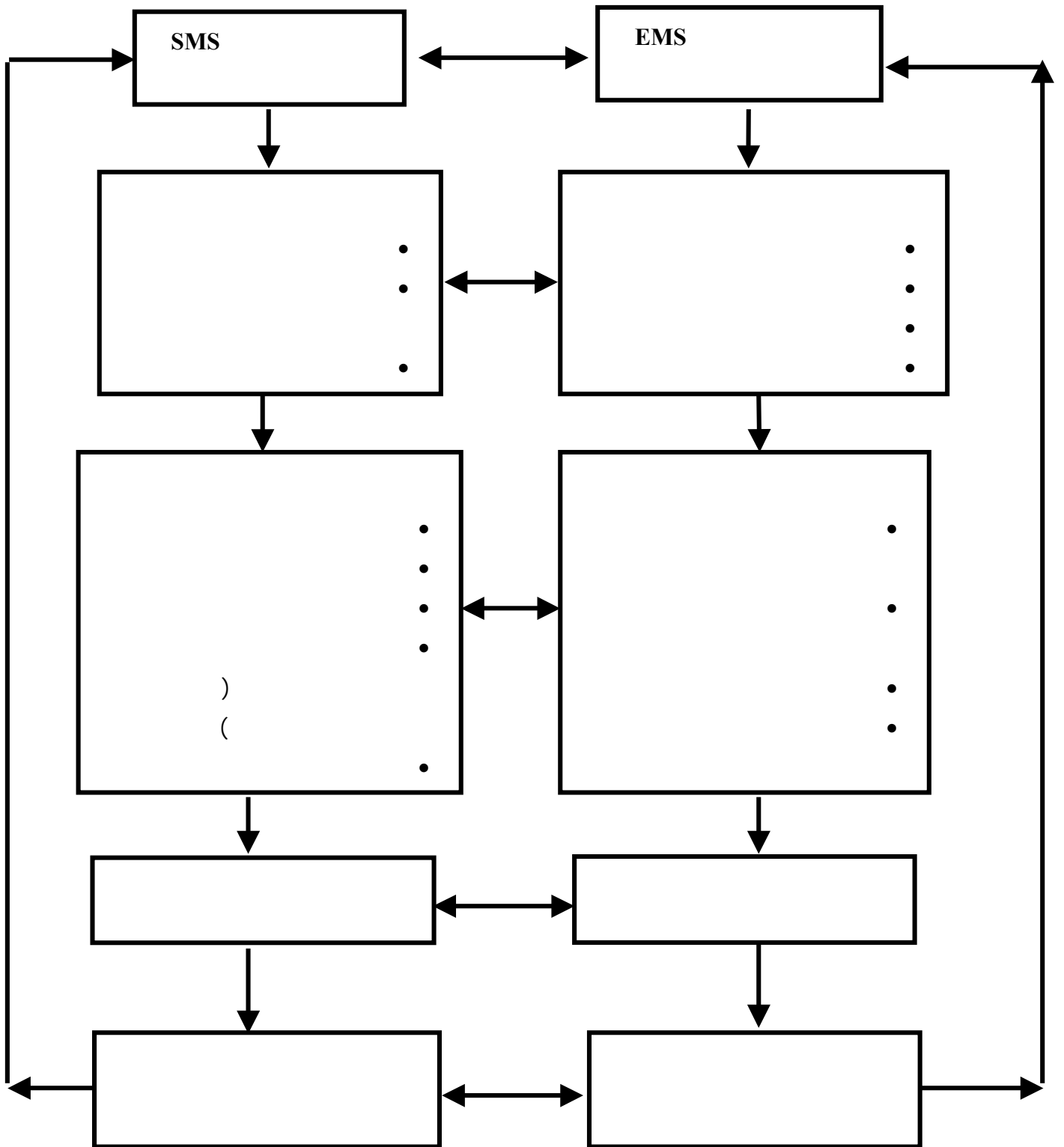
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Cost - Benefit Analysis

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(QA/QC)

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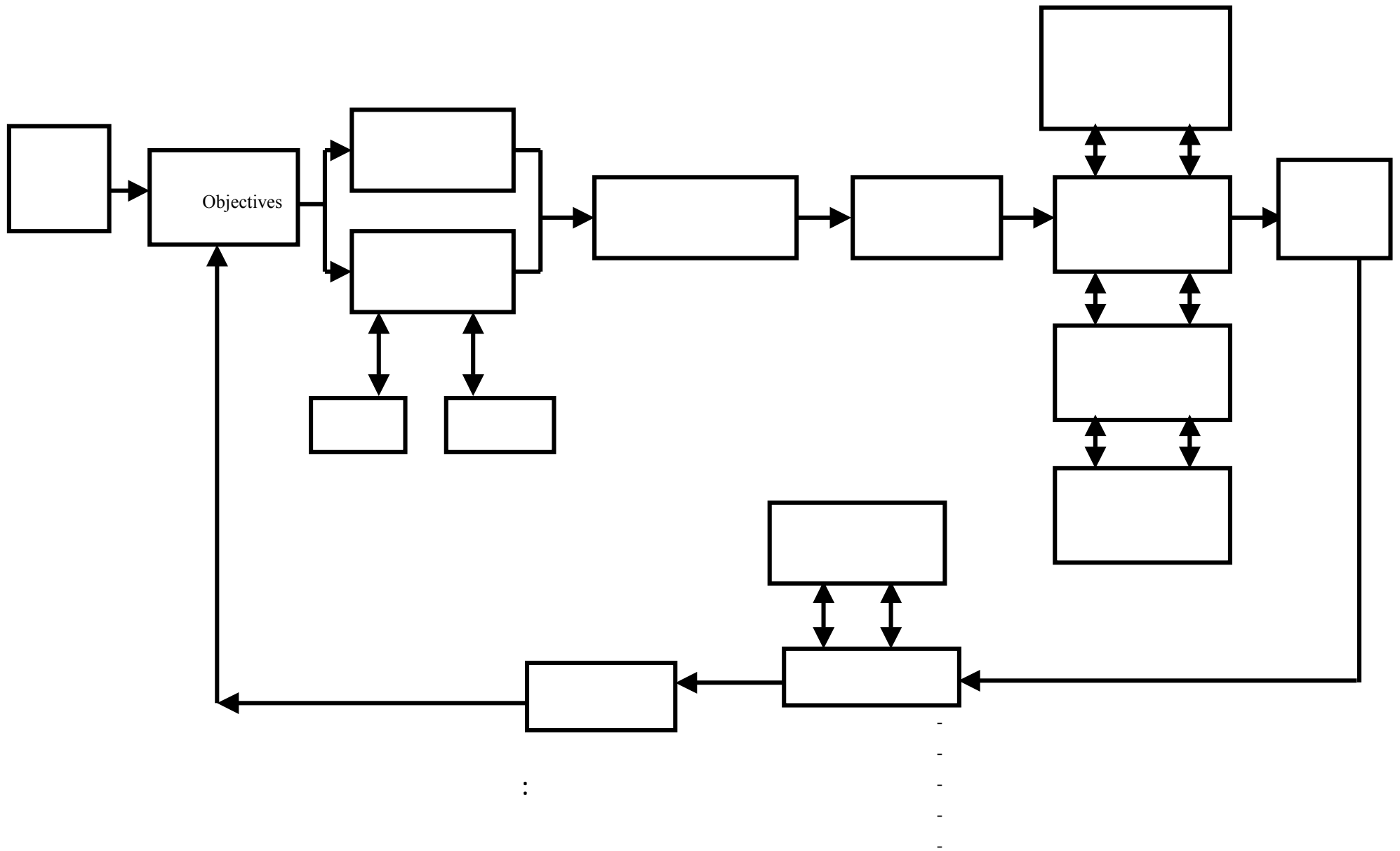
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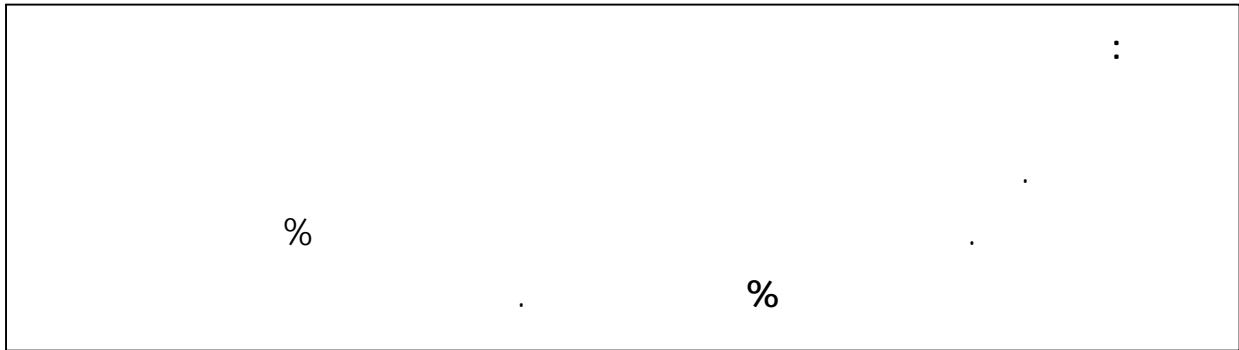
.Mass balance
.Emission Factors

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(corrosive substances

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(VOCs)

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Mass balance ()

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Emission factors

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TSS, COD, BODS

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(grab sample)

TSS,COD

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(BOD, COD)

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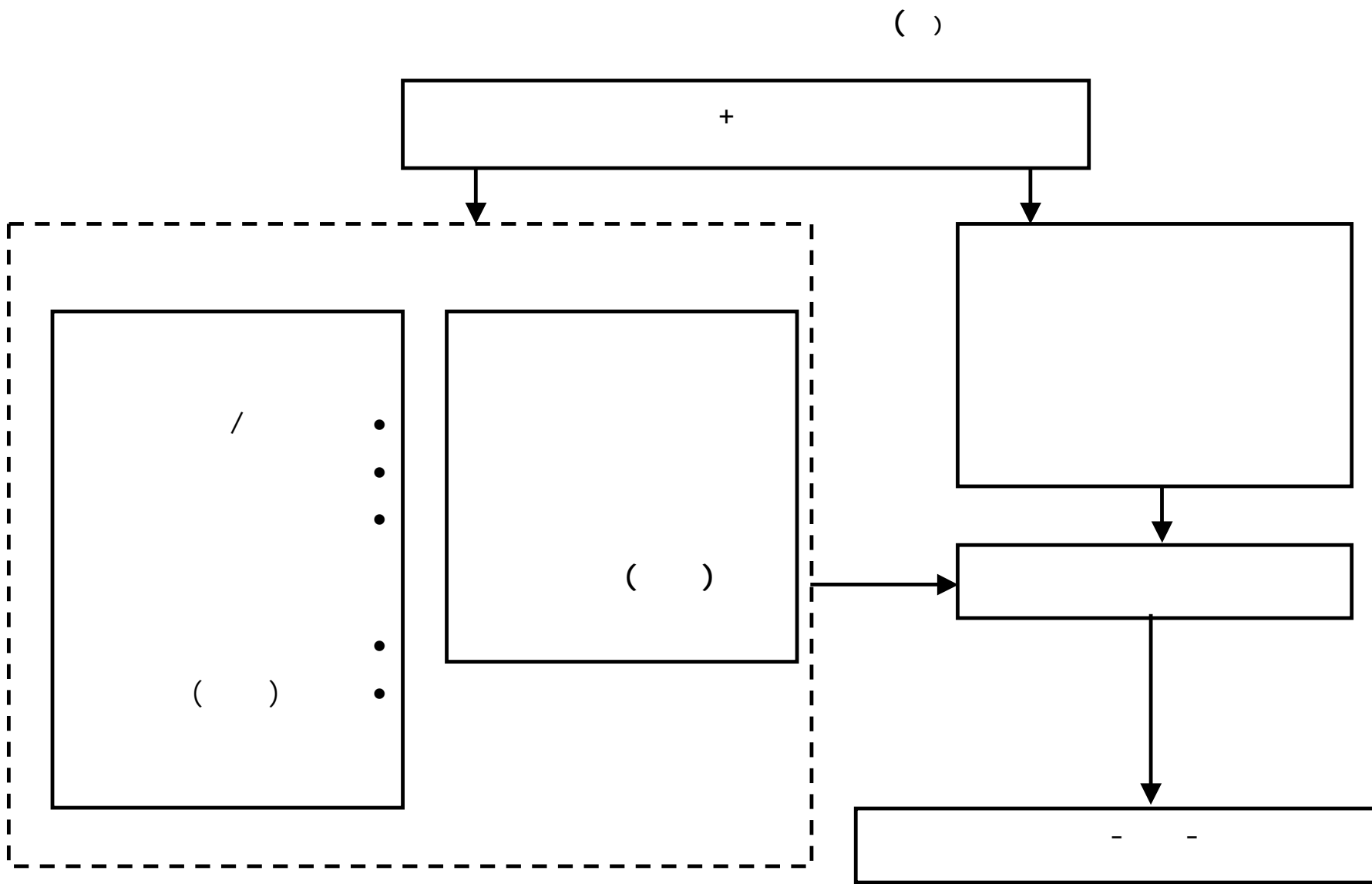
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Quality Control and Quality Assurance

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Certification

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- *“Monitoring and Control Practices of Emissions in Pulp and Paper Industry in Finland”*, , Saarinen K., Jouttijarvi T. and Forsius K., Saarinen K., Finnish Environment Institute

- *“Data Production Chain in Monitoring of Emissions”*, , Saarinen K, Finnish Environment Institute.