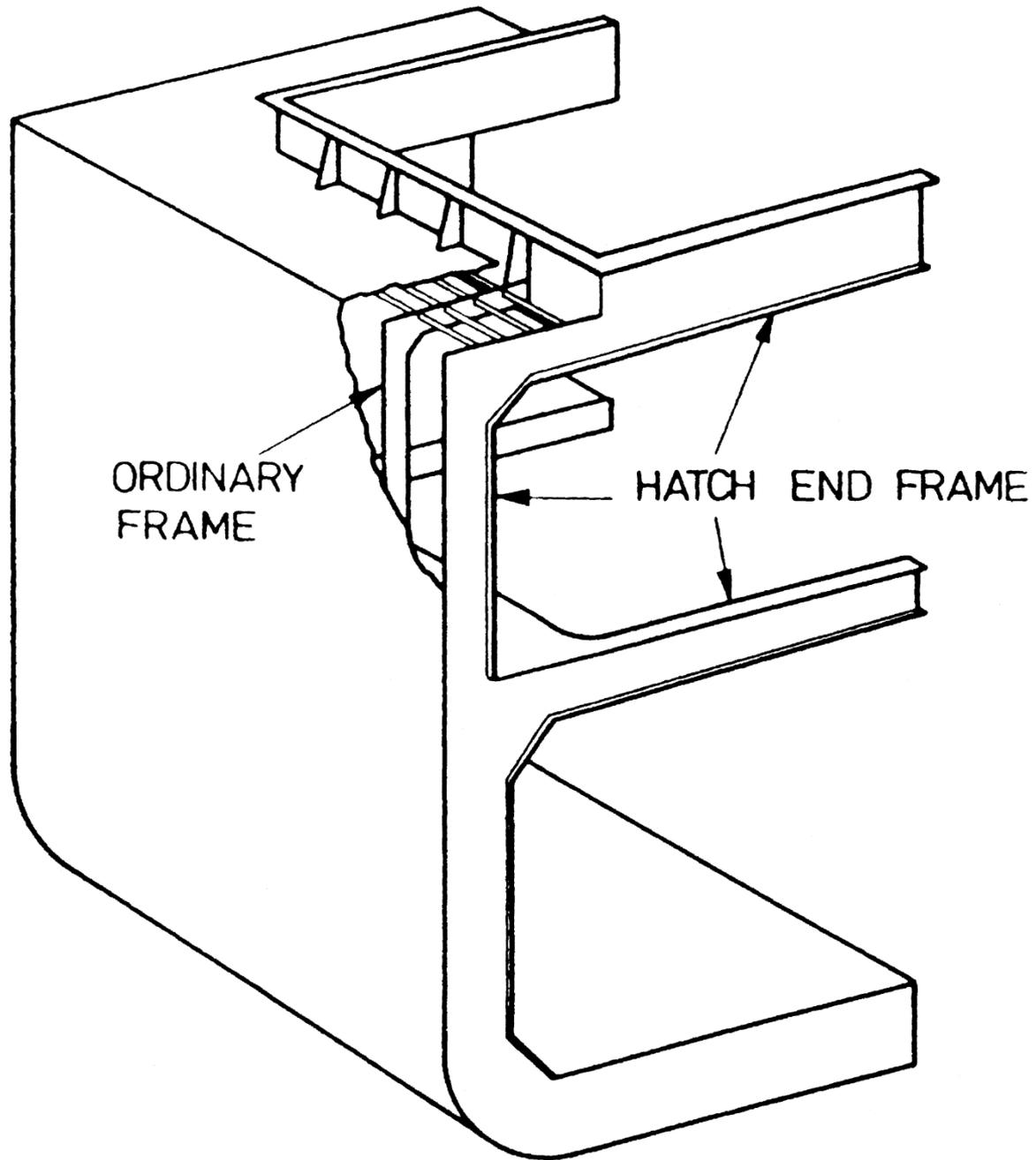


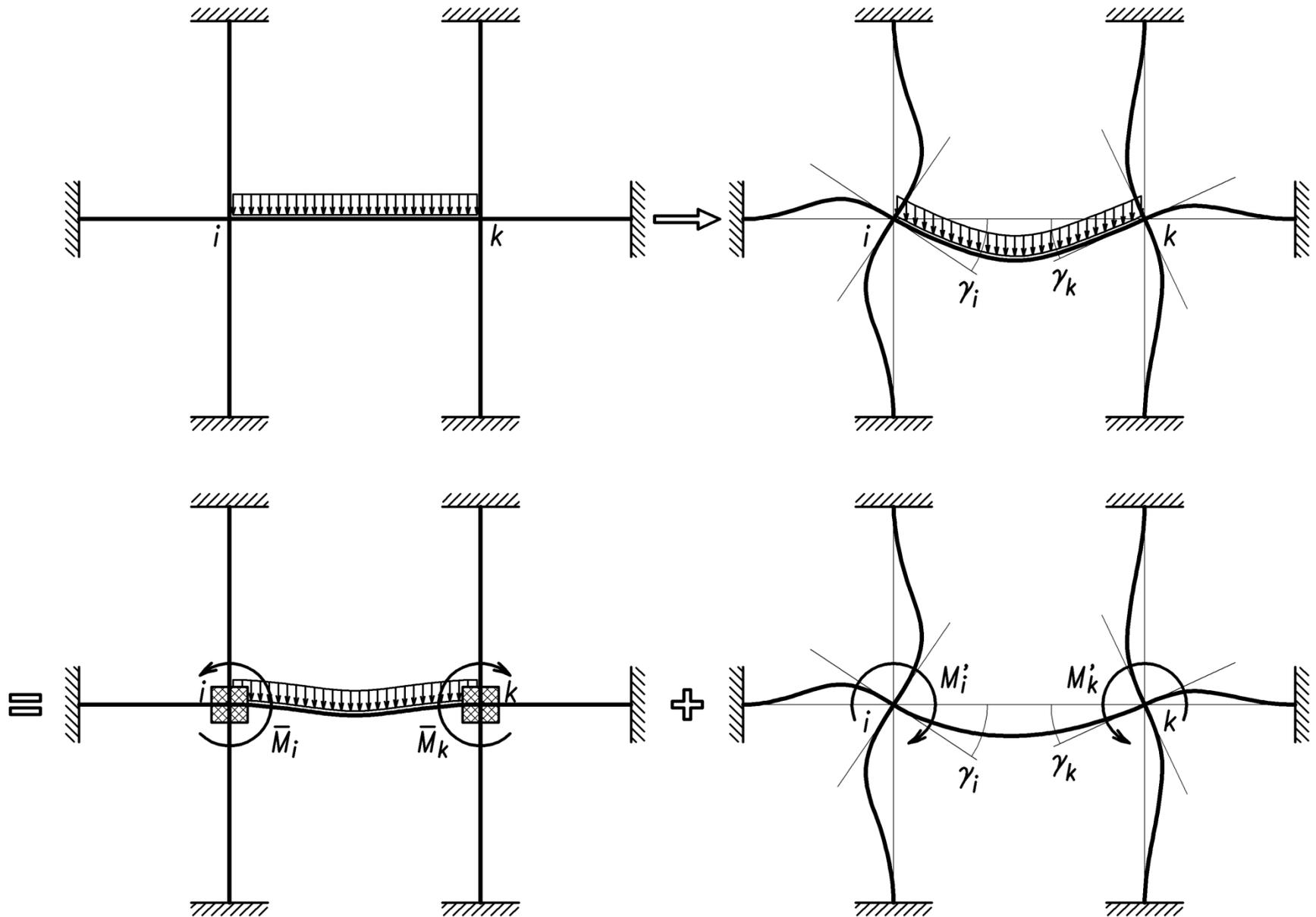
COSTRUZIONI NAVALI II

3

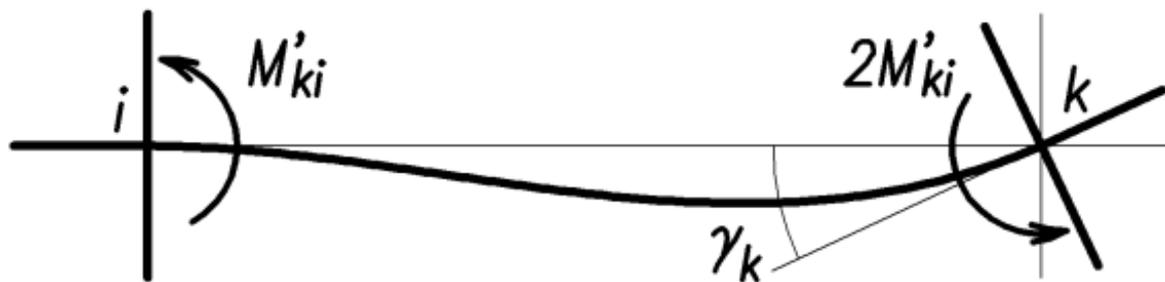
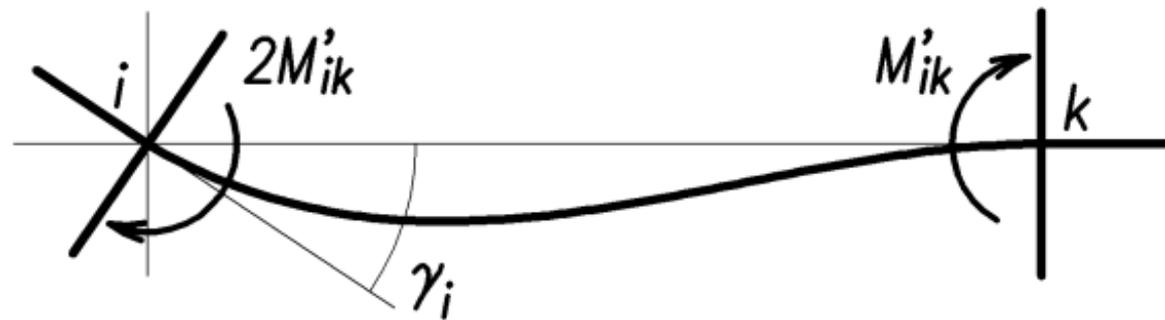
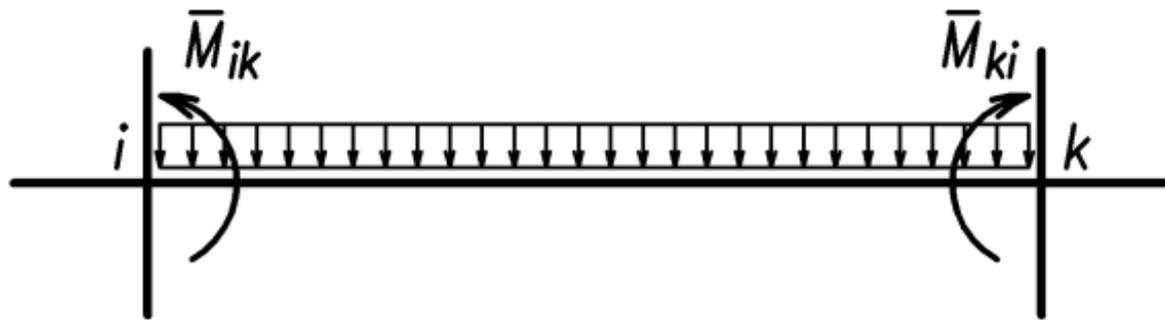
(metodo di kani)



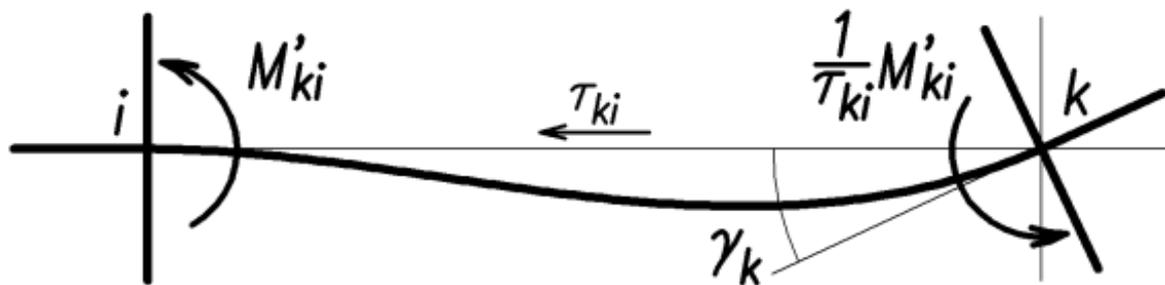
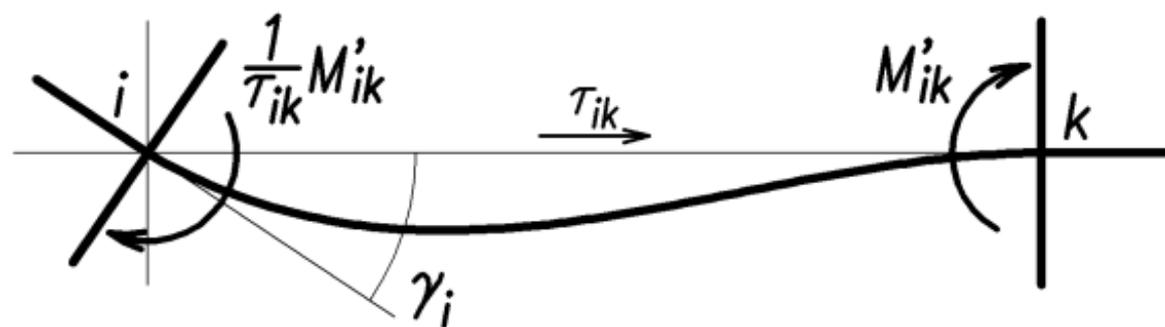
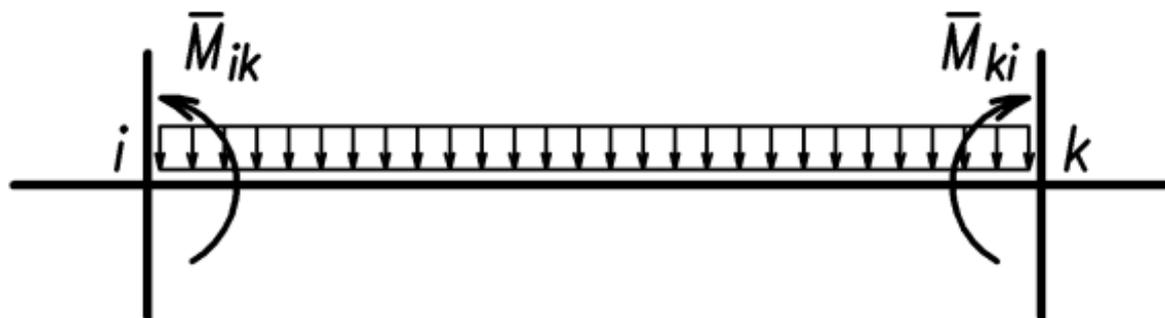
Metodo di Gaspar Kani (1947): telai a nodi fissi



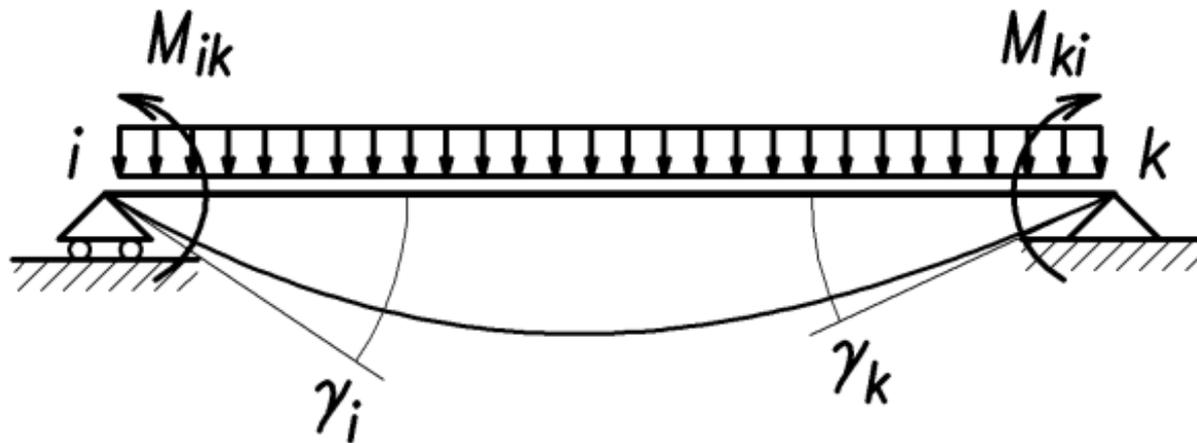
Metodo di Kani: trave a sezione costante



Metodo di Kani: trave a sezione variabile

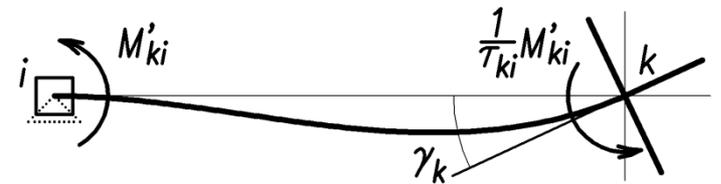
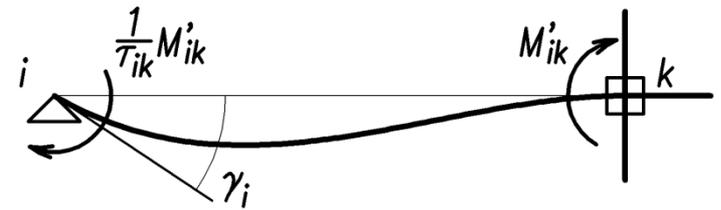
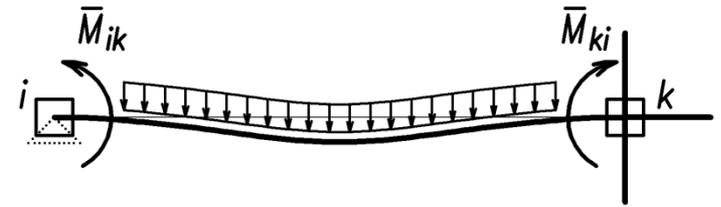
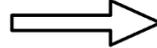
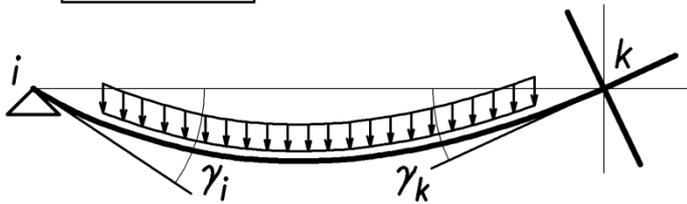


Metodo di Kani

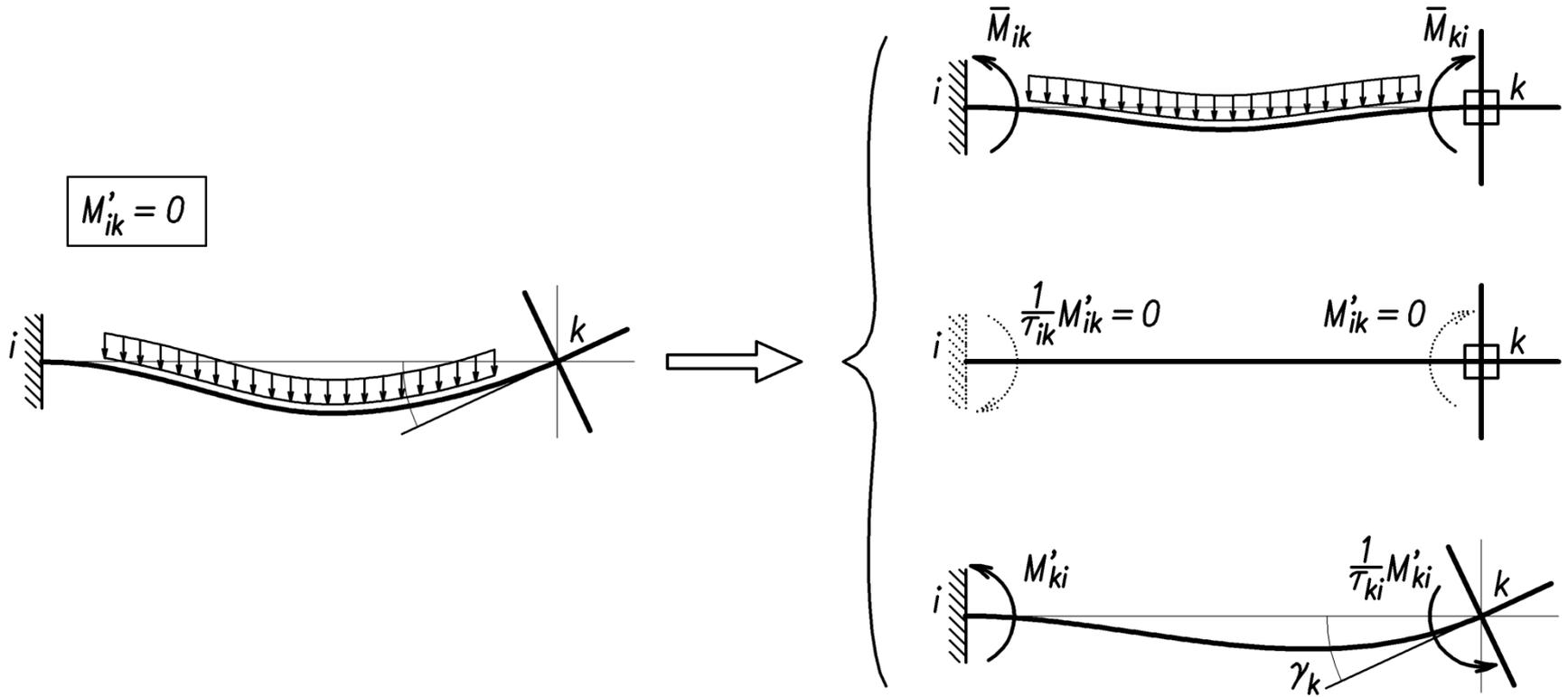


Metodo di Kani: appoggio esterno

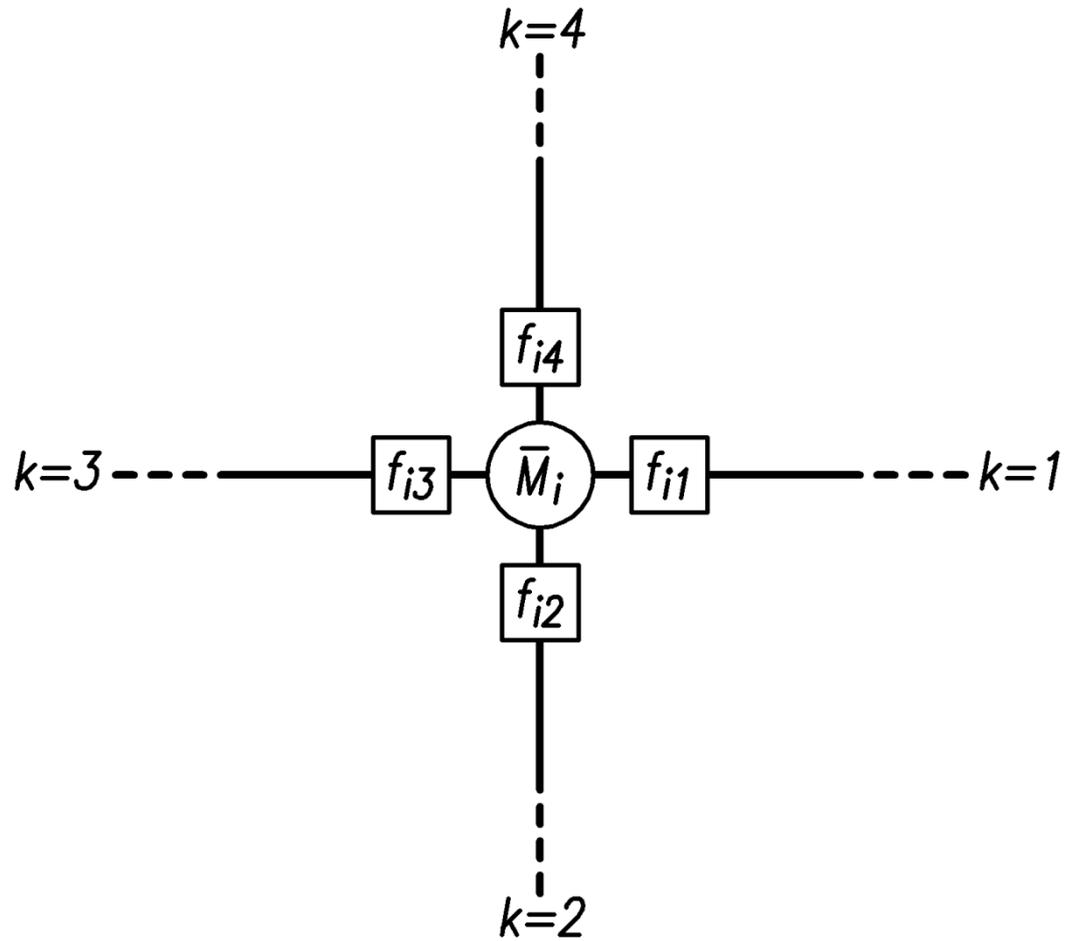
$$\begin{aligned}
 k_{ik} &= 1 \\
 f_{ik} &= -\tau_{ik} \\
 \bar{M}_i &\equiv \bar{M}_{ik} \\
 \sum M'_{ki} &\equiv M'_{ki} \\
 M_{ik} &= 0
 \end{aligned}$$



Metodo di Kani: incastro esterno



Metodo di Kani



Metodo di Kani (telai con travi a sezione costante)

$\bar{M}_{ik}, \bar{M}_{ki} \Rightarrow$ momenti di incastro perfetto

$\gamma_i, \gamma_k \Rightarrow$ rotazioni effettive dei nodi

$M'_{ik} \Rightarrow$ momento parziale di rotazione "vicino" (al nodo i)

$M'_{ki} \Rightarrow$ momento parziale di rotazione "lontano" (dal nodo i)

$\bar{M}_i = \sum \bar{M}_{ik} \Rightarrow$ momento di bloccaggio del nodo i

$M'_i = \sum 2M'_{ik} \Rightarrow$ momento di rotazione del nodo i

$2M'_{ik} = k_{ik} M'_i \Rightarrow$ momento di rotazione dell'estremo ik

$k_{ik} = \rho_{ik} / \sum \rho_{ik} \Rightarrow$ coefficiente di ripartizione per l'estremo ik

$M_{ik} = \bar{M}_{ik} + 2M'_{ik} + M'_{ki} \Rightarrow$ momento di estremità ik

$\sum M_{ik} = 0 \Rightarrow$ condizione di equilibrio al nodo i

$f_{ik} = -(1/2) k_{ik} \Rightarrow$ fattore di rotazione all'estremo ik

$M'_{ik} = f_{ik} [\bar{M}_i + \sum M'_{ki}] \Rightarrow$ equazione fondamentale del kaniano