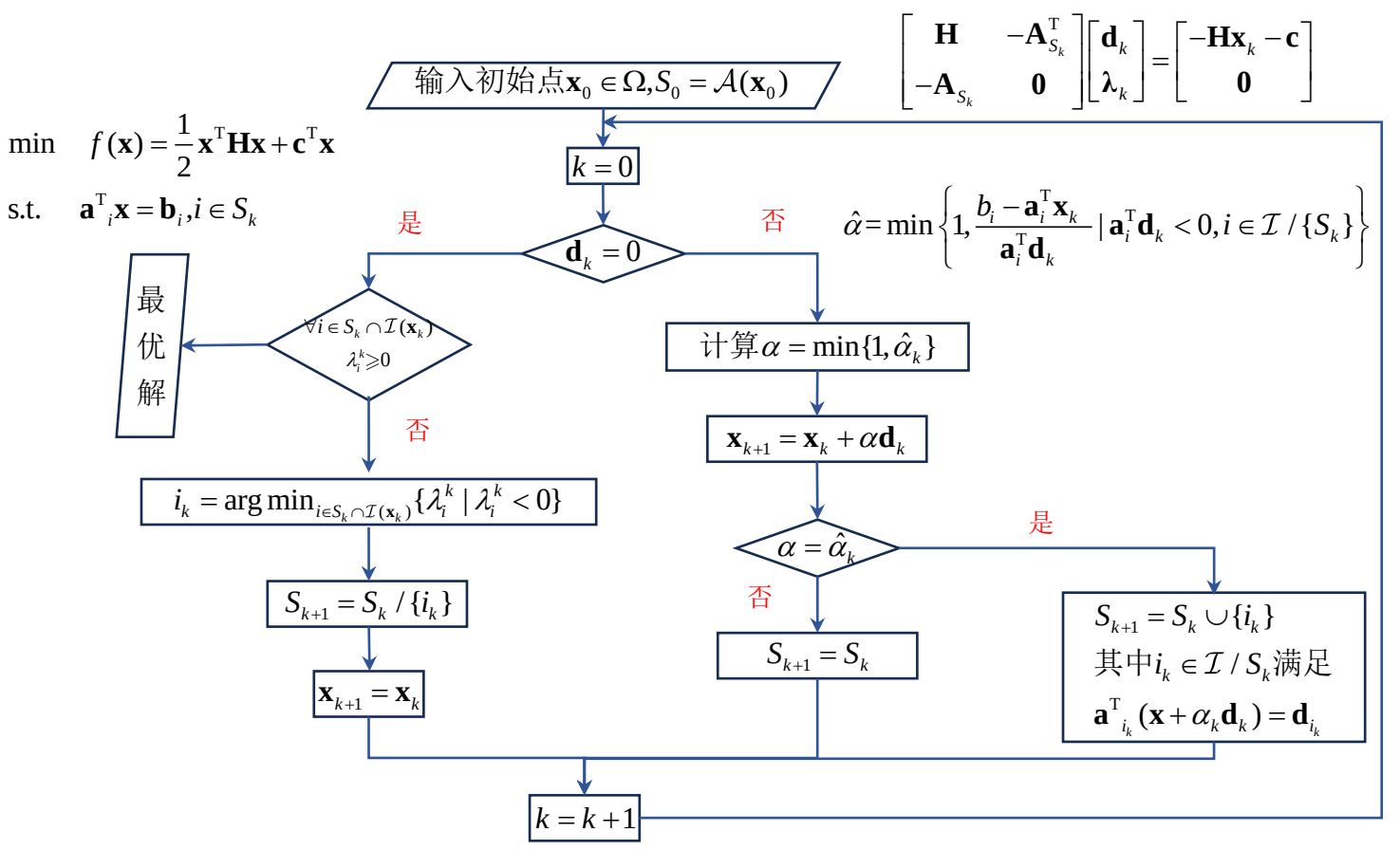
min $f(\mathbf{x})=\frac{1}{2}\mathbf{x}^{\mathrm{T}}\mathbf{H}\mathbf{x}+\mathbf{c}^{\mathrm{T}}\mathbf{x}$
s.t. $\mathbf{a}^{\mathrm{T}}{}_i\mathbf{x}=\mathbf{b}_i, i\in S_k$
$\begin{bmatrix}\mathbf{H} & -\mathbf{A}_{S_k}^{\mathrm{T}}\\ -\mathbf{A}_{S_k} & \mathbf{0}\end{bmatrix}\begin{bmatrix}\mathbf{d}_k\\ \boldsymbol{\lambda}_k\end{bmatrix}=\begin{bmatrix}-\mathbf{H}\mathbf{x}_k-\mathbf{c}\\ \mathbf{0}\end{bmatrix}$
输入初始点$\mathbf{x}_0\in\Omega, S_0=\mathcal{A}(\mathbf{x}_0)$
$k=0$
$\mathbf{d}_k=0$
是
否
最优解
$\forall i\in S_k\cap\mathcal{I}(\mathbf{x}_k)$ $\lambda_i^k\geqslant 0$
否
$i_k=\arg\min_{i\in S_k\cap\mathcal{I}(\mathbf{x}_k)}\{\lambda_i^k\mid\lambda_i^k<0\}$
$S_{k+1}=S_k/\{i_k\}$
$\mathbf{x}_{k+1}=\mathbf{x}_k$
$\hat{\alpha}=\min\left\{1,\frac{b_i-\mathbf{a}_i^{\mathrm{T}}\mathbf{x}_k}{\mathbf{a}_i^{\mathrm{T}}\mathbf{d}_k}\mid\mathbf{a}_i^{\mathrm{T}}\mathbf{d}_k<0, i\in\mathcal{I}/\{S_k\}\right\}$
计算$\alpha=\min\{1,\hat{\alpha}_k\}$
$\mathbf{x}_{k+1}=\mathbf{x}_k+\alpha\mathbf{d}_k$
$\alpha=\hat{\alpha}_k$
是
否
$S_{k+1}=S_k\cup\{i_k\}$
其中$i_k\in\mathcal{I}/S_k$满足
$\mathbf{a}^{\mathrm{T}}{}_{i_k}(\mathbf{x}+\alpha_k\mathbf{d}_k)=\mathbf{d}_{i_k}$
$S_{k+1}=S_k$
$k=k+1$