Bypass control for heat exchanger networks based on frequency domain stability analysis

Abstract:

Key words:

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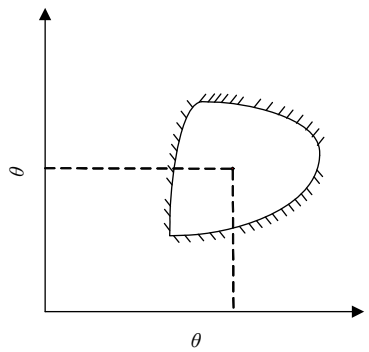
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θ

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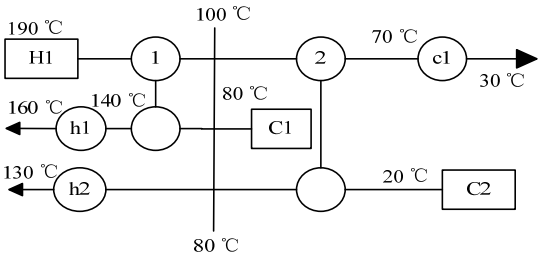
Table 1 Basic stream parameters

	℃	℃	℃



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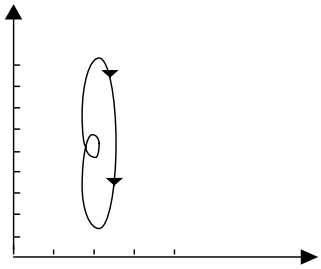

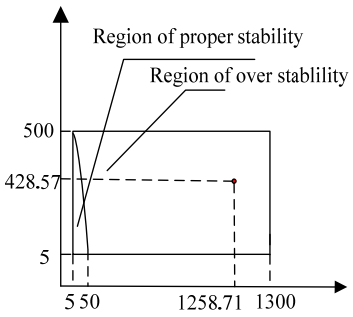

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3.1

G

ω ***G*** ***G*** ω

Λ ***G*** ***G***

G^{ϕ} ω ***G*** ω ***Λ*** ω ***Λ***

Λ

$\boldsymbol{\Lambda}$ ω ω ω

$\sqrt{}$

λ ω ω

$\overline{}$

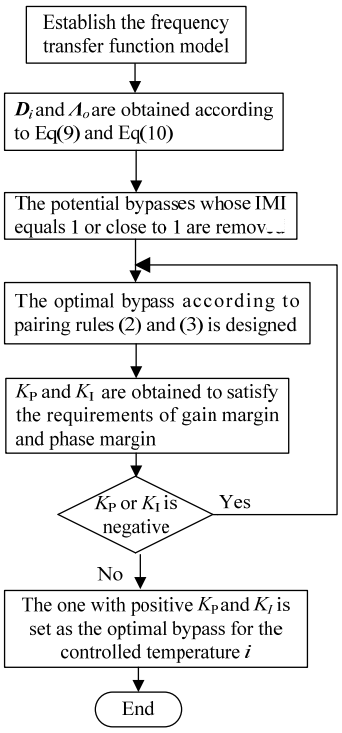
$\boldsymbol{\Lambda}$ ω ω $\boldsymbol{\Lambda}$ ω ω

$\boldsymbol{\Lambda}$ —— $\boldsymbol{\Lambda}$

ω ω

3.2

φ



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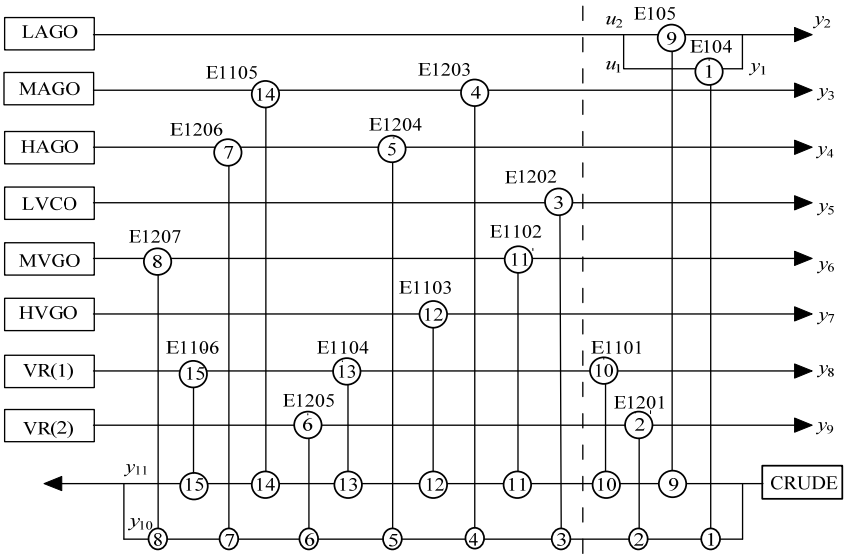

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Table 2 Basic stream parameters of crude oil heat exchanger

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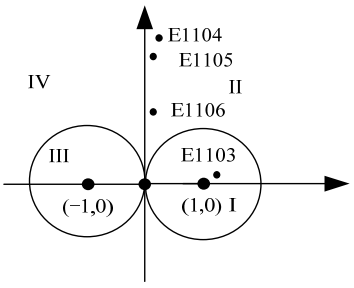

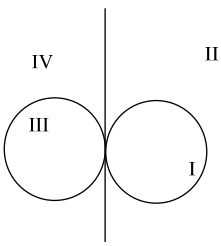

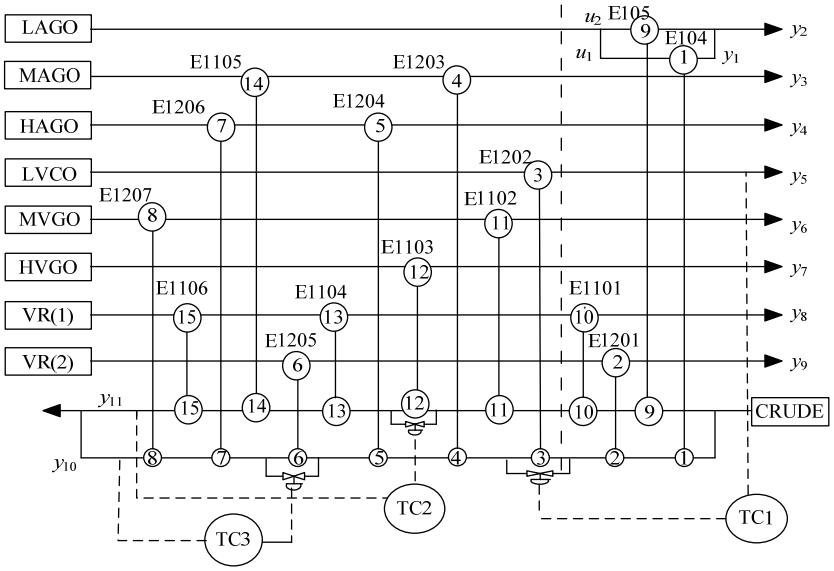

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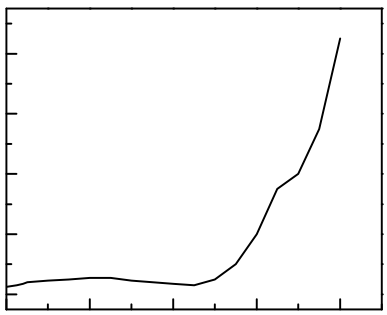

5 PI

Table 5 PI parameters and stability margins

℃

6

Table 6 Comparison of control from different references

℃ ℃

℃
℃ ℃
℃ ℃
℃

5

:

G

$G\ \omega$
$G^{\phi}\ \omega$ $G\ \omega$ ℃
$G\ \omega$ ℃

$\Lambda\ \omega$
ω
ω
Λ
φ

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