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1951. 2. : 1. 8. — 3.  
 , 2007. 4. , 1983.

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20 – 30 % ,

10 – 15 %  
 [1].

[2].

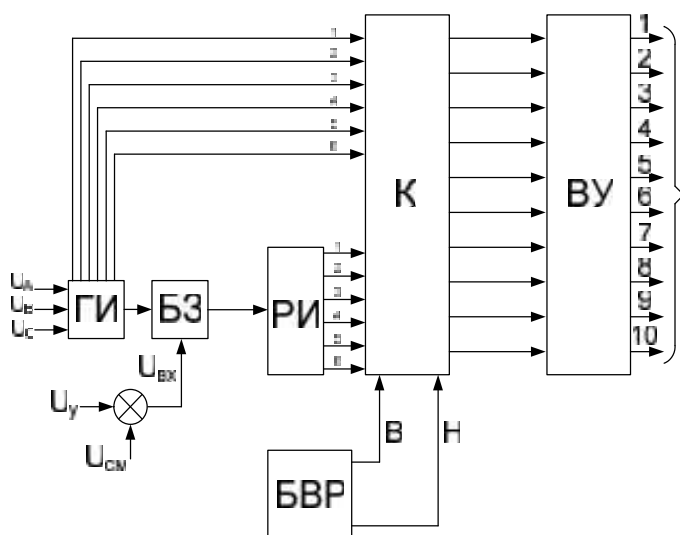
15 - 20 %

[3]

( - ).

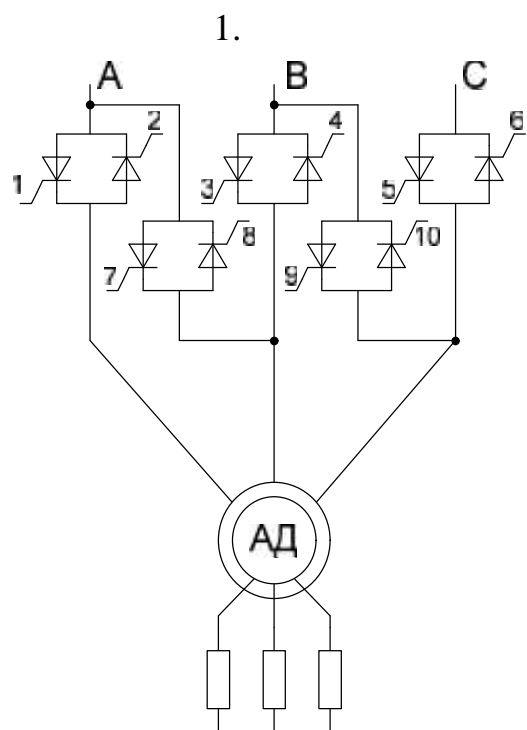
90 ÷ 120 .

[4,5]



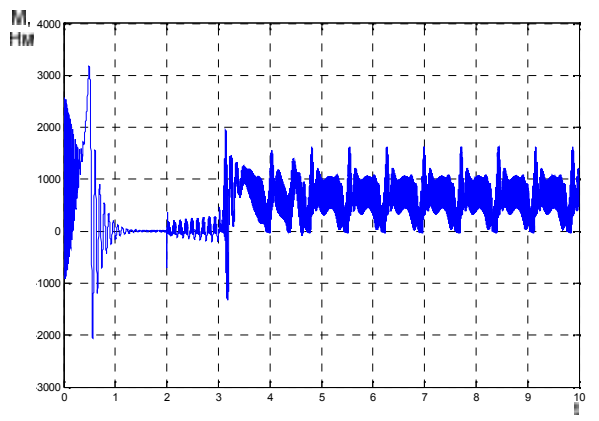
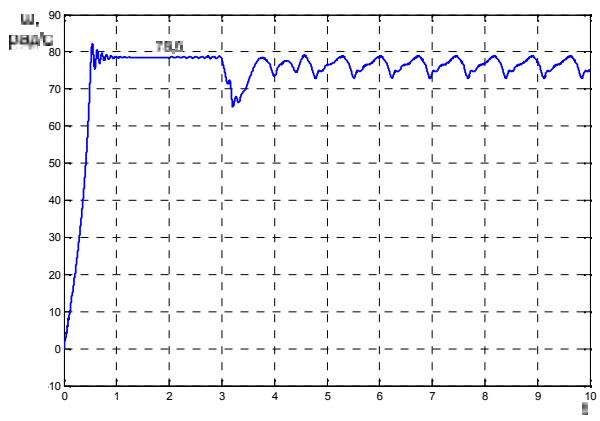
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Matlab



2 3.

Simulink  
SimPowerSystem,



)  
 . 2. )  
 $J=J$  ,  $\alpha=90^\circ$  )  
 $\beta=0,5$  )

fuzzy-  
 : 1. « »  
 99- -3. 2.  
 10-77-94. 3. «  
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 » . - : « », 2007, - .137 – 139. 4.  
 - 1998. . 50. - . 5.  
 . - : « », 2004. – 256 .

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