

3.
- <http://mid.gov.kz>.

4. 22 2015 33.
3 2015 10363. – «
» 05.05.2015 . 83 (27959).
5. 2.05.06-85.
6. : 188-V: 11
2014 .
7. : 20-V:
22 2012 .

RESUME

In the this article, based on statistical data on the emergencies of technogenic character reasons of origin of accidents and incidents, we analyze on main gas pipelines, the degree of danger of these productive objects is determined, and also the ways of increase of industrial strength security are set in the process of their exploitation.

621.313

• ”
• ”
• ”

[1].

- 1.
- 2.
- 3.
- 4.
- 5.

• f ;

$U, \%$;

$k_2, \%$;

$k_0, \%$;

n-

$k_n, \%$;

$k_u, \%$.

f_y

f

$f=f_y-f$

, $U_1=U_{1n}=const$

$M_{cm}=M$

$$U_1=4,44fwk_0$$

, f -

f_y -

f_y

$$M=kfI_2\cos^2$$

$$M_{cm}=const$$

I_2

I_1

f_y

$$\frac{f_y}{U_1}=f$$

U_1

$f_y = \text{const}$

$$M_{cm} = M$$

$$U_1 < U_1$$

$$U_1$$

$$U_1$$

$$I_\mu$$

$$I_\mu$$

[2].

$$M_{cm} = \text{const}$$

$$I_2 \cos \alpha$$

S

$$U_1$$

$$f_2$$

$$I_2^2$$

$$I_2$$

$$2$$

$$I_1$$

$$I_1$$

$$U_1$$

$$I_{12}$$

$$(-I_2^3)U_1$$

$$I_{12}$$

$$I_1$$

$$I_2^3$$

$$I_1$$

$$\cos$$

$$(\cos)$$

30-40%

$$U_1 > U_1$$

[3].

$$U_1 > U_1$$

$$U_1$$

$$I_{12}$$

183-74

10%

1010

40°

\cos

30°

40°

1010

2103-8, 2=101, U=220/380 ; 370633
(1).

1 -

	$U = 220$ $f = 50$	$U = 209$ $f = 50,5$	$U = 220$ $f = 47,5$	$U = 209$ $f = 47,5$
I_s , A	109,11	115	112	113
M , /	192,2	212,3	199	210
η	130	136,3	140	140
$\cos \varphi$	0,935	0,909	0,914	0,907
n , /	0,871	0,867	0,865	0,862
$S\%$	734	730	699	696
	2,218	2,66	2,24	2,59

5%-

- 2,7%-

21

5- 10%-
15- 20 U/f $M_c = 0$, $M_c = M$

120°

1 . . . / . . . 2-
 ,, . . . :- :: . . . ,2002. - 336 .
 2 . . . ,, . . . ,2002. - 267 .
 3 . . . :- :: -
 :: ,2002. - 40 .

RESUME

This article contains the best conditions for asynchronous motor start. Elimination of inrush current surges and torque fluctuations, smooth step less acceleration mechanism. The universal solution is the use of frequency converters.

699.812.3

. . . ”
 . . . ”

[1].

()