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The structure of an expert system that operates in real time and is part of the information technology group range, current diagnosis of induction motors. Based on neural-fuzzy inference system identifies the key input parameters. The proposed decision support system based on a set of expert system, which aims to timely diagnosis of electrical equipment. For the developed system of monitoring based on the consideration of varieties, for building expert systems is proposed using a multi-level fuzzy - neural network hybrid system, which will consist of subnetworks of different architectures (neural network and fuzzy logic).

Keywords: consulting model, monitoring, information technology, neural network.

[1].

50%

().

70%

[3].

[3]:

$$P\{A_i | B\} = \frac{P\{B | A_i\}P\{A_i\}}{\sum_{i=1}^n P\{B | A_i\}P\{A_i\}}, \quad (1)$$

[4; 5].

[6].

(S1),

S1(t) S2(t).

$$y = f(s) = f\left(\sum_{i=0}^n x_i w_i\right), \quad (2)$$

$f(s)$ — , y — , w_i — , x — .
 ()
 1- () $(l = \overline{1, k})$,

$x_n]$; $(j(j = \overline{1, N}) -$ $[x_0;$
 $);$ $(x_k ($
 $), a_k -$
 $\sim_{A_k}(x_k)$ $A_{ki}(k = \overline{1, N_l}, j = \overline{1, N_c}),$
 $:$

$$\sim_{A_{kj}}(x_k) = \frac{1}{1 + e^{-akj}} \quad (3)$$

$[0; 1].$

$$z_m^h = f_m^s \left(\sum_{j=0}^{N_c} w_{jm}^s \cdot \sim_j^s(x_1, \dots, x_N) \right) \quad (4)$$

$s = 2, 3 -$ $, h = 1, 2 -$ $, f_m^s -$

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