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GB/T 20320—2006

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**Measurement and assessment of power quality characteristics of
wind turbines generator systems**

(IEC 61400-21 :2008 ,Wind turbines—
Part 21 :Measurement and assessment of power quality characteristics
of grid connected wind turbines ,IDT)

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‘ maximum measured power for wind turbines

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‘ network impedance phase angle

$$\psi_2 = \arctan\left(\frac{X_2}{R_2}\right)$$

‘ ‘

X_2 999

R_2 999

3 7

‘ normal operation for wind turbines

3 8

‘ operational mode for wind turbines

3 9

‘ output power for wind turbines

1 3 0

‘ point of common coupling PCC

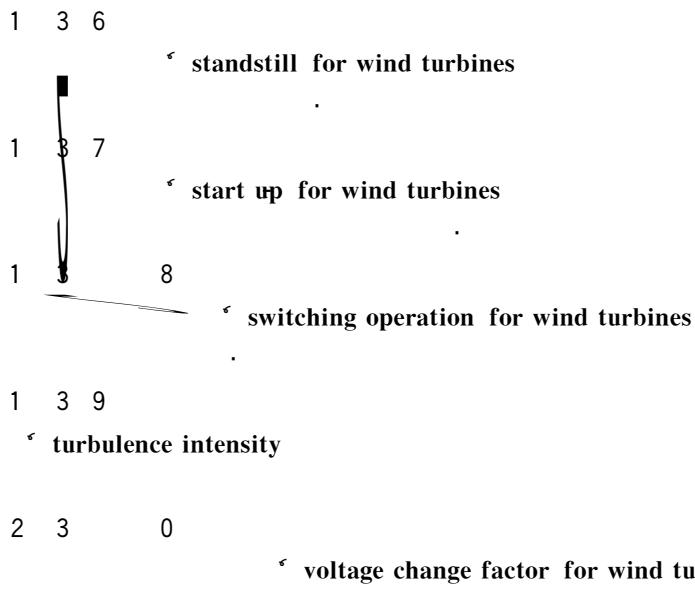
11 3

‘ power collection system for wind turbines

12 3

‘ rated apparent power for wind turbines

$$S_3 = \sqrt{}$$



$$k_U(\psi_2) = \sqrt{\frac{U_{NE,UT} - U_{NE,UB}}{U_3}} \times \frac{S_{2,NE}}{S_3}$$

$U_{NE,UB}$ 999
 $U_{NE,UT}$ 999
 U_3 999
 S_3 999
 $S_{2,NE}$ 999

k_U k_U k_U k_U

21 3
 wind turbine WT

22 3
 wind turbine terminals

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$$\frac{U_{res}}{U_3}$$

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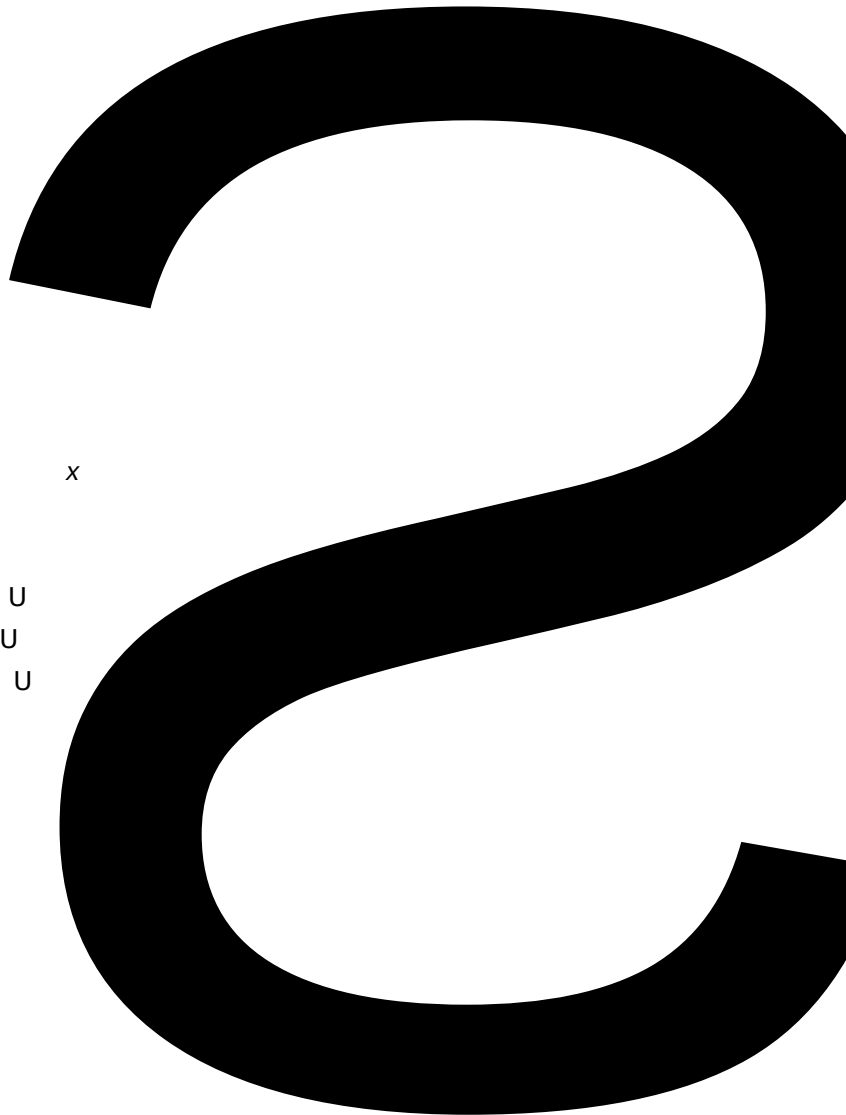
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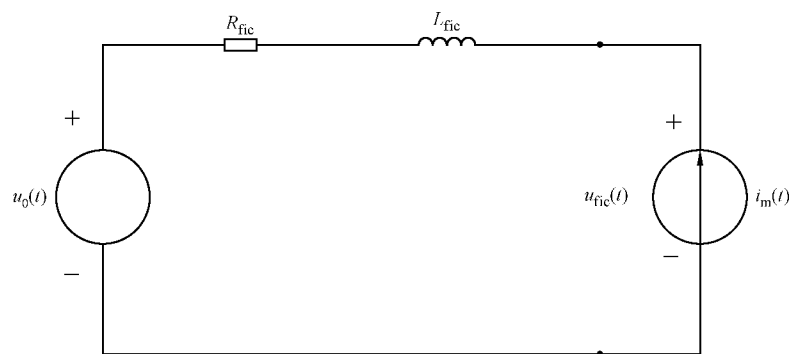
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$u(t)$
 $i_U(t)$

R_{Nt}

L_{Nt}

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$$N_{U\ i}^{999} \quad i$$

$$N_U^{999}$$

$$V_{\text{HUB}}$$

$$U \ \Omega$$

$$U \ \Omega$$

$$f_{S\ i} \quad f_{U\ i}$$

$$w_i = \frac{f_{S\ i}}{f_{U\ i}}$$

$$C \ \psi_{\text{a}} \ V_{\text{b}}$$

$$P_{\eta}(c \ x) = \frac{\sum_{i=1}^{N_{\text{DB}}} w_i \times N_{U\ i\ c \ x}}{\sum_{i=1}^{N_{\text{DB}}} w_i \times N_{U\ i}}$$

$$N_{U\ i\ c \ x}^{999} \quad i$$

$$N_{\text{DB}}^{999}$$

$$x$$

$$P_{\eta} \ c \ x$$

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U48

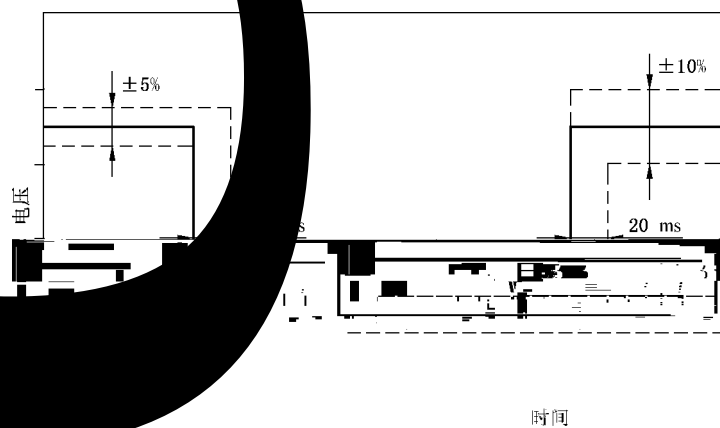
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$P_3 \%$ P_3

P_3

U_B P U_B P Ω P

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V_t

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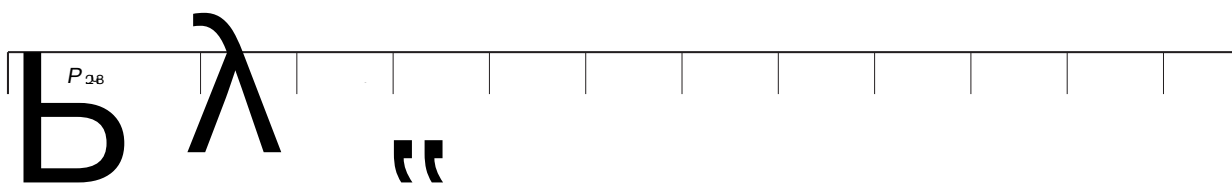
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	N_{U}				
	N_{U}				
	$\psi_{\mathfrak{A}} \mathcal{K}$				
	$k_{\text{r}} \psi_{\mathfrak{A}}$				
	$k_{\text{U}} \psi_{\mathfrak{A}}$				



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A 33

Figure 1 is a horizontal timeline diagram. It consists of a horizontal line with several vertical tick marks. Below the line, the segments are labeled from left to right: P_{26} , f_{26} , I_h , and a final unlabeled segment.

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$P_3 \quad \% \quad P_3$

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P_3

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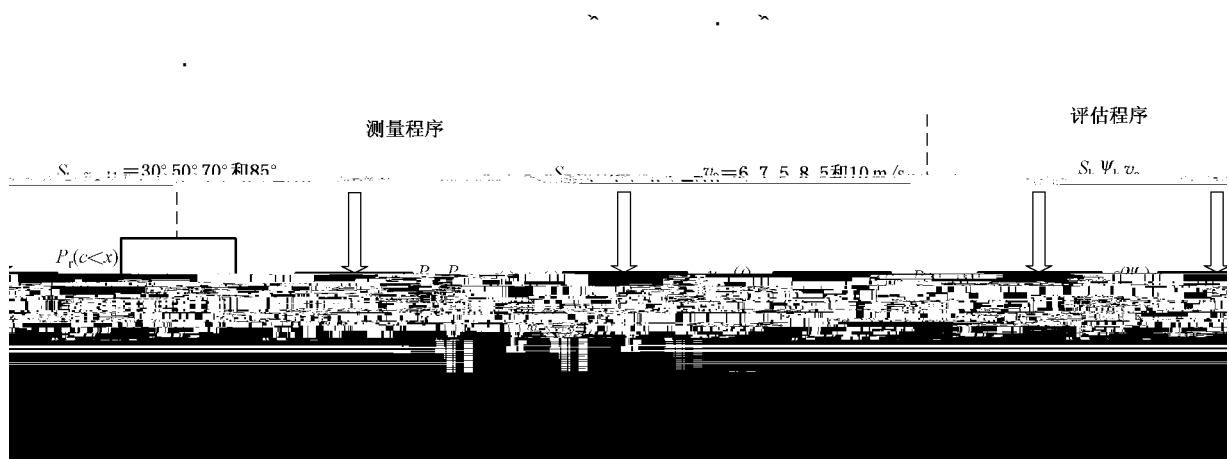
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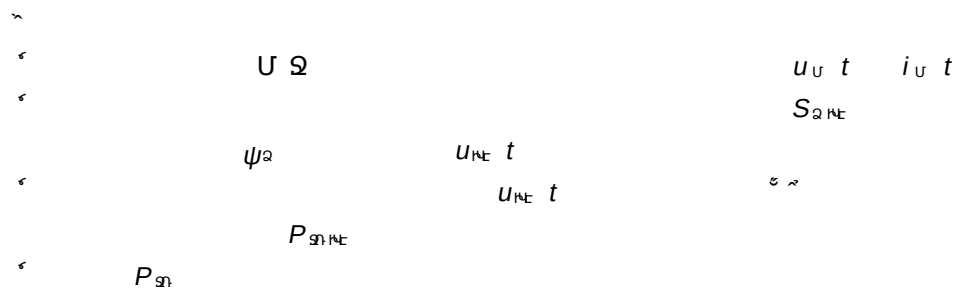
	2	UB	UB
2			
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“ ” B

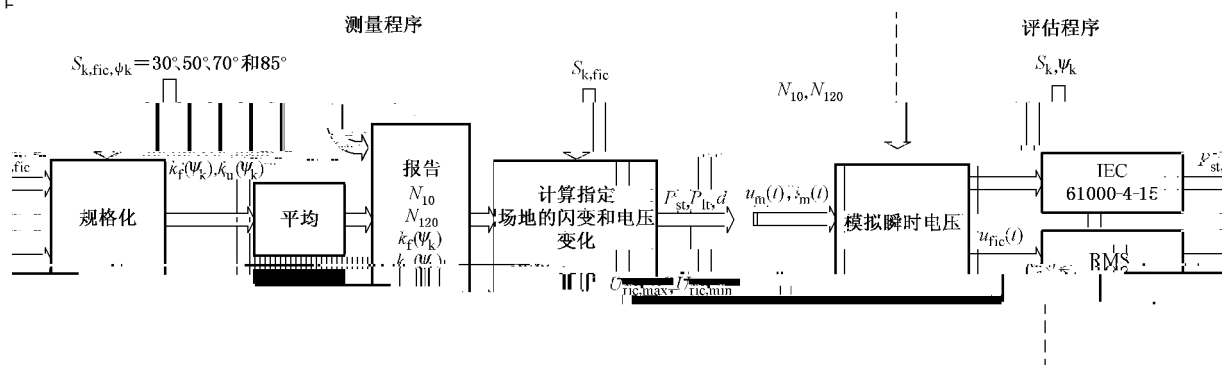
B “ ” 1



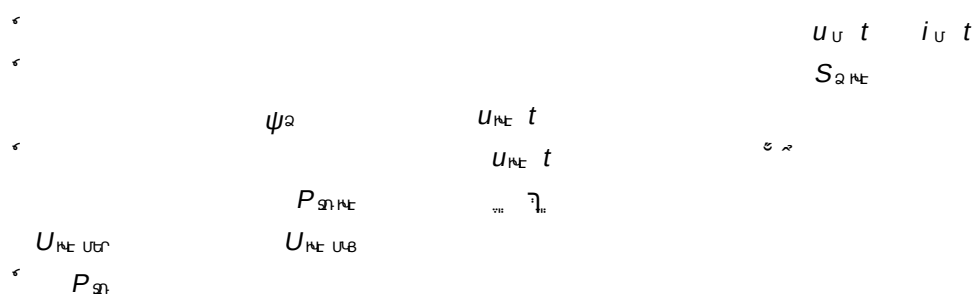
B “ ” 1



F



B 6 2



F

3m

TM

B 2

U 2	w_i U 2	w_i U 2	w_i U 2	w_i U 2
%				
%				
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“ “ ~ .

B “ 3

V_b U 2				
$\sum_{i=1}^{N_{2B}} w_i \times N_{U_i}$				

“ “ TM $C \psi_2$ TMTM “ ~ $U_M 2\%$ U 2 TM
 $C \psi_2$ “ $C \psi_2$
 $P_{\eta} c$ TM $\hbar$ ~ N TM un TM $\dot{\omega}$ $\dot{I}$

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$$U = \sqrt{-(u_{\text{gB}} + u_{\text{tQ}})} \quad , \quad , \quad , \quad , \quad , \quad , \quad , \quad , \quad ,$$

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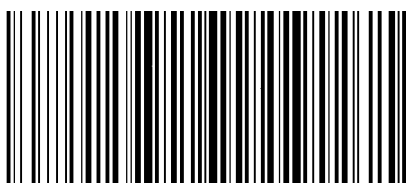
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“ ၁၂။ တပ်မတော် အောက်ခံ အဖွဲ့အစည်းများသည် ပါးစပ်တော်ဝင် အဖွဲ့အစည်းများနှင့် ပူးပေါင်း ဆောင်ရွက်ရန် အားပေး ခံကူပေးရန် အမိန့်ချထားပါသည်။ ”

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