Type testreport three phase squirrel-cage motors DM1-112M6

Windg. calc. card.:				motor No.	1						
type:	DM1-112M6		Output:	2,2	kW			Duty type:	S1		
Voltage:	400	V	conn.	Y	frequency:	50	Hz	cosφ	0,76	IM	B3
current:	5,3	A	speed:	935	rpm	eff.	79,0	%	M of I	0,0129	kgm^2
remarks:	PTC150^{0}C inside the motors										

Statorwinding resistance measurement (cold) :

Connection:	Y	R_{u1-v1} :	6,126	Ω		
Winding temp:	19,0 °C	R_{v1-w1} :	6,091	Ω	R_{av} =	6,104 Ω ;
room temp:	19,0 °C	R_{w1-u1} :	6,096	Ω		

No-load test

R_{begin} = 7,027 Ω
R_{end} = 6,922 Ω

				Losses		
U_0 V	I_0 A	P_0 W	cosφ$_0$	V_{cu1} W	V_{fe} W	V_w W
473	4,6	514	0,136	220	281	13
438	3,5	338	0,127	127	198	13
400	2,7	221	0,118	76	132	13
358	2,2	149	0,109	50	86	13
310	1,7	106	0,116	30	63	13
253	1,3	76	0,133	18	45	13
179	0,9	43	0,154	8	22	13
127	0,7	28	0,182	5	10	13

sound pressure level in dB(A) (at 1m) : 63,8
sound power level in dB(A) : 71,8
vibration level (mm/s) : x = 0,8 y = 0,5 z = 0,3

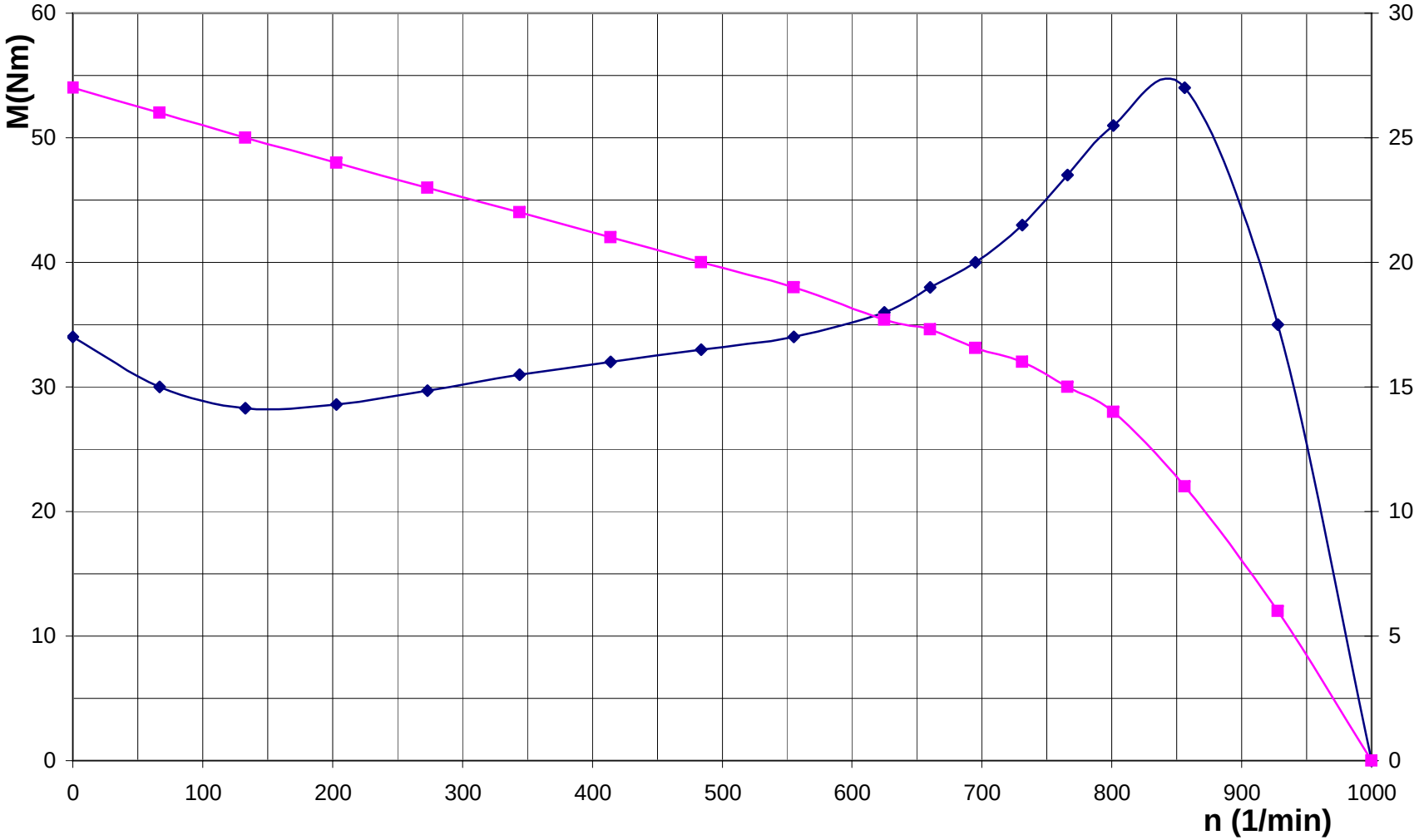
Temperature rise test

voltage : 400 V frequency: 50 Hz current 5 A connection : Y

		Room	$R_{wdg.}$	wdg.	wdg.	measured Temperature (^{o}C) with ETD*			
According to IEC 34 -1	time	Temp. ^{o}C	Ω	Temp. by $R_{wdg.}$	temp. rise (K)	wdg.	bearing DE	bearing NDE	frame
begin	12:33	22,0	6,126	22,9					22,2
	14:35	23,0							69,0
End	15:05	23,0	7,763	88,0	65,0		75	75,0	69,0

* ETD = embedded temperature detector

DM1-112M6 ST.400V 50HZ 2,2kW



Load test DM1-112M6

frequency : 50 Hz connection : Y $t_{wdg,av}$ = 88,2 °C R_{av} = 7,77 Ω

							Losses							
P_2 approx.	**U**	**I**	**P_1**	**cosφ**	**n**	**s**	**V_{fe}**	**$V_{cu,1}$**	**V_e**	**$V_{cu,2}$**	**V_w**	**V_v**	**P_2**	**η**
%	V	A	kW		min^{-1}	%	W	W	W	W	W	W	kW	%
25	400	3	0,81	0,387	991	0,90	132	105	5	5	13	260	0,54	67,67
50	400	3,4	1,41	0,600	976	2,40	132	135	6	27	13	314	1,10	77,79
75	400	4,1	2,01	0,706	961	3,90	132	196	9	65	13	416	1,59	79,28
100	400	5,1	2,79	0,790	942	5,80	132	303	15	136	13	599	2,19	78,55
125	400	6,2	3,61	0,840	920	8,00	132	448	21	241	13	855	2,75	76,31
150	400	7,6	4,55	0,864	892	10,8	132	673	32	401	13	1251	3,30	72,49
100	440	5,3	2,82	0,698	957	4,30	202	327	16	98	13	656	2,17	76,75
100	420	5,1	2,78	0,749	952	4,80	163	303	15	110	13	604	2,18	78,28
100	380	5,1	2,79	0,831	938	6,20	108	303	15	147	13	585	2,21	79,03
100	360	5,2	2,83	0,874	928	7,20	91	315	15	174	13	608	2,23	78,55

Torque/speed and Current/speed test

voltage : 400 V frequency: 50 Hz connection : Y

n	T	I	n	T	I	n	T	I
min^{-1}	Nm	A	min^{-1}	Nm	A	min^{-1}	Nm	A
1000	0	0,01	695	40	16,6	344	31	22
928	35	6	660	38	17,3	273	30	23
856	54	11	625	36	17,7	203	29	24
801	51	14	555	34	19	133	28	25
766	47	15	484	33	20	67	30	26
731	43	16	414	32	21	0,01	34	27

Locked rotor test

wdg. temp.	U	I	P_1	cosφ	T
°C	V	A	kW		Nm
19	400	27,4	11,35	0,598	41
36,4	350	22,5	7,97	0,584	27
41,1	300	18,2	5,30	0,560	15
42,1	250	14,2	3,27	0,531	7
38,3	200	10,7	1,81	0,489	3
32,7	100	4,9	0,36	0,424	4

DUTCHI MOTORS® quality of high class

Date: 19-6-1998
Name: HvD
Signature: